1	Q.	Provide a Table showing (a) the total amount which would have been paid by
2		the Industrial Customers in 1998, 1999, 2000 and 2001 in the absence of
3		Order No. P.U. 20 (1997-98), (b) the total amount billed to the Industrial
4		Customers in those years resulting from the implementation of Order No.
5		P.U. 20, and (c) the difference between those amounts for each of those
6		years related only to the implementation of Order No. P.U. 20 (1997-98). (In
7		the case of the year 2001, an estimate will be satisfactory).
8		
9	Α.	Total amount billed to the Industrial Customers (Excludes RSP, HST, and
10		Interest on Overdue amounts):

Including the	Excluding the

<u>P.U.20 (1997-98)</u>	<u>P.U.20 (1997-98)</u>	<u>Difference</u>
\$36,269,044	\$36,449,213	(\$180,169)
\$43,453,323	\$43,792,817	(\$339,494)
\$40,275,587	\$40,636,683	(\$361,096)
\$41,871,815	\$42,262,373	(\$390,558)
	effect of Order No. <u>P.U.20 (1997-98)</u> \$36,269,044 \$43,453,323 \$40,275,587	effect of Order No. P.U.20 (1997-98) effect of Order No. P.U.20 (1997-98) \$36,269,044 \$36,449,213 \$43,453,323 \$43,792,817 \$40,275,587 \$40,636,683

1	Q.	Provide a table showing the net balance in the RSP for each of Hydro's							
2		classes of customers as of December 31 and June 30 in each of 1992, 1993,							
3		1994, 1995,	1994, 1995, 1996, 1997, 1998, 1999 and 2000.						
4									
5	Α.	The followin	The following table provides the balance in the RSP split between the Retail						
6		and Industri	al Customers which	are the only 2 classes of c	ustomers in the				
7		RSP.							
8									
9				Retail	Industrial				
10		June	1992	(3,149)	1,958				
11		December	1992	593	3,505				
12		June	1993	2,313	4,845				
13		December	1993	3,825	5,636				
14		June	1994	(3,734)	2,953				
15		December	1994	(5,610)	1,575				
16		June	1995	4,066	4,776				
17		December	1995	6,900	6,016				
18		June	1996	17,468	8,213				
19		December	1996	21,002	9,160				
20		June	1997	26,606	12,967				
21		December	1997	27,644	13,734				
22		June	1998	33,547	16,201				
23		December	1998	33,009	15,776				
24		June	1999	29,472	14,201				
25		December	1999	21,436	12,892				
26		June	2000	19,926	13,630				
27		December	2000	22,684	12,918				

1	Q.	If there is a positive balance in the RSP, is the money held in the RSP
2		invested by Hydro? If so, what was the rate of return of the investment for
3		each of 1992, 1993, 1994, 1995 1996, 1997, 1998, 1999 and 2000 and
4		where were the funds invested in those years?
5		
6	Α.	The RSP transactions are part of Hydro's overall debt structure. Interest is
7		collected or charged to the plan monthly at Hydro's embedded cost of debt
8		rate as shown in NP-47.

- Q. What amount of interest was credited to the RSP in each of the years 1992 2000 inclusive?
- 3
- 4 A. Please see response to IC-73.

1	Q.	Does Hydro charge a management fee of any sort to administer the RSP? If
2		so, how is it calculated and what was charged to each class of customers for
3		each of the years 1992-2000, inclusive?
4		
5	A.	Hydro does not charge a management fee of any sort to administer the RSP.

1	Q.	If there is a negative balance in the RSP, is interest charged to the RSP? If
2		so, what was the rate of interest charged the RSP in the years 1992 - 2000,
3		inclusive and to whom was such interest paid?
4		

5 A. Please see response to IC-11.

1	Q.	Explain why it has taken 8 years for Hydro to apply to the Public Utilities
2		Board to implement the Cost of Service Methodology approved by the Board
3		in 1993, given the power policy of the Province set out in Section 3(a)(i) of
4		the Electrical Power Contract Act, 1994 providing that the rates charged
5		"should be reasonable and not unjustly discriminating."
6		
7		
8	Α.	The Public Utilities Board in 1993 approved the Cost of Service Methodology
9		for implementation at Hydro's next rate application. Since that time, Hydro,
10		from a financial perspective, has not had a requirement to request approval
11		from the Public Utilities Board, for an alteration in rates that it charges its
12		customers.

1	Q.	Provide the average cost per kilowatt hour charged to each of the Industrial
2		Customers inclusive of RSP contributions in 1992, 1995, 1998, 1999 and
3		2000, the forecast average cost per kilowatt hour for each Industrial
4		Customer in 2001 and the forecast average cost per kilowatt hour for each
5		Industrial Customer for 2002.
6		
7		
8	Α.	See the attached table.

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Newfoundland and Labrador Hydro Average Cost per kW.h - Including RSP

						Newfoundland Processing /		
	Corner Brook	Deer Lake	Albright &	Abitibi Price -	Abitibi Price -	North Atlantic	Royal Oak	Hope Brook
Year	Pulp & Paper	Power	Wilson	Stephenville	Grand Falls	Refining	Mines	Gold
1992	\$0.03688	\$0.03343	\$0.04247	\$0.03822	\$0.04101	\$0.04323	\$0.04428	\$0.08993
1995	\$0.03834	\$0.03414	\$0.22970	\$0.03627	\$0.03421	\$0.03878	\$0.03999	N/A
1998	\$0.03879	\$0.03603	N/A	\$0.03844	\$0.04467	\$0.04259	N/A	N/A
1999	\$0.04237	\$0.04344	N/A	\$0.03874	\$0.04382	\$0.04134	N/A	N/A
2000	\$0.03506	\$0.04022	N/A	\$0.03373	\$0.03708	\$0.03630	N/A	N/A
Forecast - 2001	\$0.03352	\$0.03281	N/A	\$0.03334	\$0.03545	\$0.03480	N/A	N/A
Forecast - 2002	\$0.03956	\$0.03868	N/A	\$0.03919	\$0.04206	\$0.04013	N/A	N/A

Q. Provide the average cost in U.S. dollars of No. 6 fuel in each of the years
 1992 - 2001, inclusive.

- 3
- 4

5 A. Please refer to the following table:

6

Year	\$(US)/bbl	Exchange Rate	\$(CDN)/bbl
1992	11.6930	1.2223	14.292
1993	11.5259	1.2819	14.775
1994	12.1092	1.3642	16.519
1995	15.0090	1.3846	20.781
1996	17.0118	1.3589	23.117
1997	15.7226	1.3918	21.883
1998	11.5328	1.4392	16.598
1999	14.8298	1.4764	21.895
2000	23.3785	1.4987	35.037
2001 to June	20.0859	1.5368	30.868

1	Q.	Provide the average exchange rate used to convert No. 6 fuel costs to
2		Canadian dollars in each of the years 1992-2001, inclusive.
3		
4		
5	A.	Please refer the response to IC-22.

1	Q.	Provide a Table showing the total volume of No. 6 fuel purchased in each of
2		the years 1992 - 2001 inclusive, and projected for the years 2002 to 2005
3		inclusive, the total amount (or projected to be used) in each of those years,
4		the total cost in Canadian dollars of the fuel purchased (or projected to be
5		purchased) in each of those years, the total number of kilowatt hours
6		generated (or projected to be generated) by each unit at the plant utilizing
7		No. 6 fuel in each of those years, the amount of No. 6 fuel used (or projected
8		to be used) in each of those years by each unit, and the average fuel cost
9		per kWh based on No. 6 fuel actually consumed (or projected to be
10		consumed) in that year.

- 11
- 12

13 Α. The attached table provides the requested data except for the fuel use by 14 unit and forecast production by unit. Hydro monitors fuel consumption by 15 individual unit for efficiency monitoring purposes but does not maintain a 16 record of fuel consumed by individual unit on a monthly or annual basis. Fuel 17 consumption on a monthly and annual basis is measured by storage volume 18 changes from the common plant fuel storage. Also we do not forecast 19 individual unit production as it would not provide any additional value to the 20 fuel budget forecast.

Newfoundland & Labrador Hydro

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No. 6 Fuel Data

Holyrood generating Station

	Fuel Pu	ırchase	Fuel Gross Generation			Net Energy	Average	
Year	Volume	Cost	Consumed	Unit 1	Unit 2	Unit 3	Production	Cost
Actuals	{bbl}	{\$/CDN}	{bbl}	{kWh}	{kWh}	{kWh}	{kWh}	{\$/kWh}
1992	3,013,950	\$43,075,850	2,856,439	710,090,000	540,310,000	562,050,000	1,706,212,840	\$0.022860
1993	2,505,664	\$37,029,632	2,570,185	741,330,000	459,640,000	460,160,000	1,558,883,340	\$0.025365
1994	1,320,468	\$21,813,798	1,339,448	281,410,000	321,590,000	236,760,000	776,894,400	\$0.025959
1995	2,630,543	\$54,666,235	2,463,492	725,580,000	506,440,000	394,960,000	1,533,078,080	\$0.032410
1996	2,295,993	\$53,076,723	2,297,257	547,020,000	569,600,000	376,440,000	1,403,596,120	\$0.036301
1997	2,375,531	\$51,983,671	2,431,424	552,300,000	631,920,000	441,160,000	1,531,300,920	\$0.035799
1998	1,903,590	\$31,596,450	2,041,312	571,030,000	475,030,000	297,420,000	1,263,264,060	\$0.029630
1999	1,877,440	\$41,107,155	1,593,506	395,800,000	255,720,000	341,770,000	919,801,520	\$0.031495
2000	1,355,875	\$47,505,661	1,593,125	447,840,000	421,400,000	171,210,000	970,283,280	\$0.050761
Forecast								
2001	3,250,000	\$100,945,000	3,231,705				1,971,340,000	\$0.052656
2002	3,500,000	\$99,330,000	3,537,509				2,157,880,000	\$0.046613
2003	3,250,000	\$84,565,000	3,317,016				2,023,380,000	\$0.043179
2004	3,250,000	\$75,172,500	3,061,574				1,867,560,000	\$0.038507
2005	3,000,000	\$69,780,000	3,124,525				1,905,960,000	\$0.038097

1	Q.	What is the RSP cap for Industrial Customers? Does Hydro propose to
2		change that cap?
3		
4		
5	Α.	Please see response to NP-154.

1	Q.	With respect to Specifically Assigned Charges for Industrial Customers
2		provide the total Specifically Assigned Charges billed to each of the Industrial
3		Customers for each of 1998, 1999 and 2000 together with a breakdown of
4		the component parts of such charges for each of those years.
5		
6		
_	-	

7 A. Please see attached.

NEWFOUNDLAND AND LABRADOR HYDRO)
Specifically Assigned Charges (\$)	

	Corner Brook	Abitibi Co	nsolidated	North Atlantic		
	Pulp & Paper	S'ville	Grand Falls	Refining	Total	
1998	11,833	127,792	5,075	323,444	468,144	
1999	11,833	127,792	5,075	323,444	468,144	
2000	10,562	114,067	4,530	288,706	417,865	
Components:						
O&M	2,945	30,192	2,256	79,384	114,777	
Depreciation	734	8,919	156	32,891	42,700	
Interest	5,761	62,729	1,763	147,469	217,722	
Margin	1,009	10,994	309	25,846	38,158	
Expense Credits	(9)	(85)	(6)	(219)	(319)	
Rural Deficit	1,393	15,043	597	38,073	55,106	
1998/99 Totals	11,833	127,792	5,075	323,444	468,144	
Deficit Reduction	(1,271)	(13,725)	(545)	(34,738)	(50,279)	
2000 Totals	10,562	114,067	4,530	288,706	417,865	

1	Q.	Whee	ling:
2		a)	What is the current wheeling charge for Industrial Customers? How
3			was it determined? When was it last changed, and why was it the
4			changed?
5		b)	Explain in detail, setting out all calculations and indicating the source
6			of all information as required in Schedule 1.5 of the Cost of Service
7			Study (particularly the source of the line 2 MWh estimate) how the
8			proposed wheeling rate was determined. Explain why the wheeling
9			rate has increased by 7.1% (see P.R. Hamilton, Table 2 at page 9).
10		C)	Explain how forecast revenue from wheeling (\$6,950, as referenced i
11			(b) above) is derived and applied in the calculation of revenue to Cos
12			Coverage ratios in Schedule 1.2. Confirm that wheeling revenue i
13			included as an "expense credit" for Transmission Demand costs i
14			Schedule 2.1A.
15			
16	Α.	a)	The current wheeling charge for Industrial Customers is \$0.00649 per
17			kilowatt hour. It was determined in the same manner as the proposed
18			rate (refer to response to part b, below), using 1994 budget data. It
19			was last changed in 1994, based on that budget, as were other
20			industrial rates.
21			
22		b)	The proposed wheeling rate was determined as follows:
23			Island Interconnected Transmission
24			Revenue Requirement \$43,918,606
25			(Source: Exhibit JAB-1, page 28, Column 5)
26			
27			Divided by:
28			

			2001 General	IC-34(Rev) Rate Application
	Transmissio	on Energy Output (M)	Wh)	Page 2 of 2 6,315,428
			,	0,010,120
		and Bulk Deliveries	6.346.400	
	Less:	-		
	Plus:	Rounding	28	
		-	6,315,428	
	Divided by		1,000	
	Equals		\$.00695 (\$/kWh)	
	The increas	se in the wheeling rate	e is due to the increa	ased costs from
	1994 to 200	02. As the transmissi	on energy has also i	increased, the
	resultant in	crease to the rate wa	s somewhat mitigate	ed.
c)	The forecas	st revenue from whee	ling is derived as fol	lows:
	Wheeling e	nergy forecast (kWh))	1,000,000
	Multiplied b	y Rate per kWh		<u>\$0.00695</u>
				\$ 6,950
	The wheeli	ng revenue is include	d as an expense cre	edit, reducing the
	total transm	nission demand costs	assigned to the Isla	nd Interconnected
	System (So	hedule 2.1 A., Line 1	4, Column 5). This	results in a lower
	Cost of Ser	vice, which is the der	nominator in the Rev	enue to Cost
	Coverage c	alculation.		
	с)	Source: Total Sales (Source H.0 Less: Plus: Divided by Equals The increas 1994 to 200 resultant in c) The forecas Wheeling e Multiplied b The wheelin total transm System (So	Source: Total Sales and Bulk Deliveries (Source H.G. Budgell, Schedule Less: Compensation Plus: Rounding Divided by Equals The increase in the wheeling rate 1994 to 2002. As the transmissi resultant increase to the rate wa c) The forecast revenue from wheele Wheeling energy forecast (kWh) Multiplied by Rate per kWh The wheeling revenue is include total transmission demand costs System (Schedule 2.1 A., Line 1	Transmission Energy Output (MWh) Source: Total Sales and Bulk Deliveries 6,346,400 (Source H.G. Budgell, Schedule 5) Less: Compensation (31,000) Plus: Rounding 28 6,315,428

1	Q.	Seco	ndary Energy:
2		a)	What is the existing "firming up charge" for secondary energy supplied
3			to NP by Corner Brook Pulp and Paper Limited? How was it
4			determined? How has it been applied in each year since it was
5			instituted?
6		b)	Explain in detail, setting out all calculations and indicating the source
7			of all information as required in Schedule 1.4 of the Cost of Service
8			Study, how the proposed firming up charge was determined. In
9			particulate, explain how each of the estimates related to the gas
10			turbine were derived from the Cost of Service information.
11		c)	Identify and explain each factor accounting for the reduction in this
12			rate as proposed by Hydro.
13			
14	Α.	a)	The existing firming up charge for secondary energy supplied to NP by
15			Corner Brook Pulp and Paper Limited is \$0.01034 per kWh. It was
16			determined in the same manner as the proposed rate (Exhibit JAB-1,
17			page 26), using 1992 test year data, as approved by the Board in the
18			1992 rate Hearing. The rate has been applied to secondary energy
19			purchased from Corner Brook Pulp and Paper and delivered to
20			Newfoundland Power.
21			
22		b)	The detailed calculation of the rate is attached.
23			
24		c)	While total costs increased, the unit cost for gas turbines has
25			decreased significantly, mostly due to the lower depreciation recorded
26			as the gas turbines have aged. As well, the consequent lower net
27			book value of the gas turbines has attracted less return. Unit costs for
28			Transmission and Terminal Stations have increased only slightly. The

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

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2 O&M Overhead 7,045,021 6,646,389 Exhibit JAB-1, Page 33, Line 22, Column 1 3 O&M Divided by Subtotal Production, Transmission and 14,689,207 Exhibit JAB-1, Page 33, Line 12, Column 1 6 Multiplied by 11.401.822 398,632 398,632 9 Depreciation 8,986,808 8,761.594 Exhibit JAB-1, Page 35, Line 40, Column 1 10 Depreciation 8,986,808 133,054 Exhibit JAB-1, Page 35, Line 40, Column 1 12 1 1 1 1 1 13 Plus 1 1 1 1 14 Demand Depreciation 8,986,808 8,761,594 Exhibit JAB-1, Page 35, Line 40, Column 1 14 Demand Depreciation 2,470,658 Exhibit JAB-1, Page 35, Line 9, Column 3 15 Divided by Subtotal Production, Transmission and Dividued Depreciation 2,470,658 Exhibit JAB-1, Page 35, Lines 34-38, Colu 16 Depreciation) 3,566,951 225,214 225,214 17 Return 19,642,937 0,73% Exhibit JAB-1, Page 36, Lines 11, Column 1 18 Depreciation 26,			2		Ū	7	
2 O&M Overhead 7,045,021 9,011,470 Col 4: Exhibit JAB-1, Page 33, Line 22, Column 1 3 O&M Divided by Subtotal Production, Transmission and 513,566 Row 1 4 Divided by Subtotal Production Demand 14,689,207 Exhibit JAB-1, Page 33, Line 22, Column 1 6 Multiplied by 11401,822 398,632 398,632 9 Depreciation 8,986,808 8,761,594 Exhibit JAB-1, Page 35, Line 40, Column 1 10 Depreciation 8,986,808 133,054 Exhibit JAB-1, Page 35, Line 40, Column 1 11 Divided by 1 1 1 1 12 1 1 1 1 1 13 Plus 1 1 1 1 1 14 Demand Depreciation 2,470,658 Exhibit JAB-1, Page 35, Lines 34-38, Colu 1 14 Depreciation) 3,566,951 225,214 225,214 1 15 Divided by Subtotal Production, Transmission and 1 1,660,055 225,214 225,214 16 Depreciation) 19,642,937 <t< td=""><td></td><td>Description</td><td>Total</td><td></td><td>Gas Turbine</td><td></td><td>Source</td></t<>		Description	Total		Gas Turbine		Source
2 O&M Overhead 7,045,021 6,646,389 Exhibit JAB-1, Page 33, Line 22, Column 3 3 O&M Subtotal Production, Transmission and 5 513,566 Row 1 4 Divided by Subtotal Production Demand 14,689,207 Exhibit JAB-1, Page 33, Line 12, Column 3 6 Multiplied by 1 398,632 398,632 9 Depreciation 8,986,808 8,761,594 Exhibit JAB-1, Page 35, Line 40, Column 3 10 Depreciation 8,986,808 133,054 8,761,594 Exhibit JAB-1, Page 35, Line 40, Column 3 11 Multiplied by 1 1 Exhibit JAB-1, Page 35, Line 9, Column 3 1 12 1 1 1 1 Exhibit JAB-1, Page 35, Line 9, Column 3 1 13 Plus 1 1 1 1 1 1 14 Demand Depreciation 2,470,658 Exhibit JAB-1, Page 35, Lines 34-38, Colu 1 15 Divided by 1 1 1 1 1 15 Divided by 1 1 1 1 1 16 Depreciation </td <td>1</td> <td>Operating & Maintenance</td> <td>9,525,036</td> <td></td> <td>513,566</td> <td>0 011 470</td> <td>Col 3: Exhibit JAB-1, Page 33, Line 4, Column 3</td>	1	Operating & Maintenance	9,525,036		513,566	0 011 470	Col 3: Exhibit JAB-1, Page 33, Line 4, Column 3
Subtotal Production, Transmission and Distribution Production Demand 14,689,207 Exhibit JAB-1, Page 33, Line 12, Column 14 Multiplied by 111,401,822 398,632 398,632 9 Depreciation 8,986,808 10 Depreciation 8,986,808 11 Multiplied by 1 12 1 1 13 Plus 1 14 Depreciation 2,470,658 15 Divided by 2,470,658 16 Depreciation 2,470,658 17 Return 19,642,937 18 Percent of Total Production Demand 26,760,190 19 Multiplied by: 0.73% 10 Depreciation 2,766,055 12 1 225,214 13 Percent of Total Production Demand 26,760,190 14 Depreciation 2,773% Exhibit JAB-1, Page 36, Lines 12, Column 12 Return on Equity - Production Demand 26,760,190 Exhibit JAB-1, Page 36, Lines 12, Column 12 Return on Debt - Transmission Demand 18,231,188 Exhibit JAB-1, Page 36, Lines 12, Column	3	O&M	7,045,021	513,566			Exhibit JAB-1, Page 33, Line 22 ,Column 5
7 Production Demand Overhead 11,401,822 398,632 398,632 9 Depreciation 8,986,808 8,761,594 Exhibit JAB-1, Page 35, Line 40, Column 3 10 Depreciation 133,054 Exhibit JAB-1, Page 35, Line 9, Column 3 11 Multiplied by 1 Exhibit JAB-1, Page 35, Line 9, Column 3 12 1 1 1 13 Plus (Subtotal General Plant, Telecontrol, Feasibility Study & Software Production Demand Depreciation 2,470,658 Exhibit JAB-1, Page 35, Lines 34-38, Column 3 14 Demand Depreciation 2,470,658 Exhibit JAB-1, Page 35, Lines 34-38, Column 3 15 Divided by 3,566,951 225,214 225,214 16 Depreciation Demand NBV 0.73% Exhibit JAB-1, Page 26 19 Multiplied by: 0.73% Exhibit JAB-1, Page 36, Lines 11, Column 2 20 (Return on Debt - Production Demand NBV 0.73% Exhibit JAB-1, Page 36, Lines 12, Column 2 21 Return on Equity - Production Demand 1,766,055 208,571 208,571 22 Return on Equity - Production Demand 18,231,188 Exhibit JAB-1, Page 36, Lines 12, Column 2 24 <td>5</td> <td>Subtotal Production, Transmission and</td> <td></td> <td>14,689,207</td> <td></td> <td></td> <td>Exhibit JAB-1, Page 33, Line 12 ,Column 3</td>	5	Subtotal Production, Transmission and		14,689,207			Exhibit JAB-1, Page 33, Line 12 ,Column 3
10 Depreciation 133,054 Exhibit JAB-1, Page 35, Line 9, Column 3 11 Multiplied by 1 13 Plus 1 (Subtotal General Plant, Telecontrol, Feasibility Study & Software Production Demand Depreciation 2,470,658 Exhibit JAB-1, Page 35, Lines 34-38, Colu 14 Demand Depreciation 2,470,658 Exhibit JAB-1, Page 35, Lines 34-38, Colu 15 Divided by Subtotal Production, Transmission and Distribution Production Demand 3,566,951 	7				398,632		
11 Multiplied by 1 12 1 13 Plus (Subtotal General Plant, Telecontrol, Feasibility Study & Software Production Demand Depreciation 2,470,658 14 Demand Depreciation 2,470,658 15 Divided by Subtotal Production, Transmission and Distribution Production Demand 2,566,951 16 Depreciation) 3,566,951 17 Return 19,642,937 18 Percent of Total Prod Demand NBV Multiplied by: 0.73% 20 (Return on Debt - Production Demand 26,760,190 12 Return on Equity - Production Demand 1,766,055 21 Return on Equity - Production Demand 18,231,188 22 Exhibit JAB-1, Page 36, Lines 11, Column 23 Return on Equity - Transmission Demand 18,231,188 24 Return on Equity - Transmission Demand 18,231,188 25 Return on Equity - Transmission Demand 19,434,367 26 19,434,367 19,434,367		•	8,986,808	133.054		8,761,594	3
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16 Depreciation) 3,566,951 225,214 225,214 17 Return 19,642,937 0.73% Exhibit JAB-1, Page 26 18 Percent of Total Prod Demand NBV 0.73% Exhibit JAB-1, Page 26 19 Multiplied by: 0.73% Exhibit JAB-1, Page 36, Lines 11, Column 20 (Return on Debt - Production Demand 26,760,190 Exhibit JAB-1, Page 36, Lines 12, Column 21 Return on Equity - Production Demand) 1,766,055 208,571 Exhibit JAB-1, Page 36, Lines 12, Column 23 Return on Debt - Transmission Demand 18,231,188 Exhibit JAB-1, Page 36, Lines 11, Column 24 Return on Equity - Transmission Demand 1,203,178 19,434,367 26 19,434,367 19,434,367	14	(Subtotal General Plant, Telecontrol, Feasibility Study & Software Production Demand Depreciation Divided by Subtotal Production, Transmission and		2,470,658			Exhibit JAB-1, Page 35, Lines 34-38 ,Column 3
18Percent of Total Prod Demand NBV0.73%Exhibit JAB-1, Page 2619Multiplied by:20(Return on Debt - Production Demand26,760,190Exhibit JAB-1, Page 36, Lines 11, Column2122Return on Equity - Production Demand)1,766,055208,571208,57123208,571208,571208,571Exhibit JAB-1, Page 36, Lines 12, Column24Return on Debt - Transmission Demand18,231,188Exhibit JAB-1, Page 36, Lines 11, Column25Return on Equity - Transmission Demand1,203,17819,434,3672619,434,36719,434,36719,434,367	16				225,214		
20 (Return on Debt - Production Demand26,760,190Exhibit JAB-1, Page 36, Lines 11, Column21 22 23Return on Equity - Production Demand)1,766,055 208,571Exhibit JAB-1, Page 36, Lines 12, Column23Return on Debt - Transmission Demand 25 2618,231,188 1,203,178 19,434,367Exhibit JAB-1, Page 36, Lines 11, Column Exhibit JAB-1, Page 36, Lines 11, Column Exhibit JAB-1, Page 36, Lines 12, Column Exhibit JAB-1, Page 36, Lines 12, Column	18	Percent of Total Prod Demand NBV	19,642,937	0.73%			Exhibit JAB-1, Page 26
22 23Return on Equity - Production Demand)1,766,055 208,571Exhibit JAB-1, Page 36, Lines 12, Column 208,57124 24 25 26Return on Debt - Transmission Demand Return on Equity - Transmission Demand 2618,231,188 1,203,178 19,434,367Exhibit JAB-1, Page 36, Lines 11, Column Exhibit JAB-1, Page 36, Lines 12, Column Exhibit JAB-1, Page 36, Li	20	1 2		26,760,190			Exhibit JAB-1, Page 36, Lines 11, Column 3
25 Return on Equity - Transmission Demand 1,203,178 Exhibit JAB-1, Page 36, Lines 12, Column 26 19,434,367 19,434,367	22	Return on Equity - Production Demand)			208,571		Exhibit JAB-1, Page 36, Lines 12, Column 3
	25			1,203,178	-	19,434,367	Exhibit JAB-1, Page 36, Lines 11, Column 5 Exhibit JAB-1, Page 36, Lines 12, Column 5
2/ I otal <u>45,199,802 1,345,982 43,853,820</u>	27	Total	45,199,802		1,345,982	43,853,820	-

1	Q.	Explain how Hydro delivers power to Newfoundland Power at Pasadena and
2		Marble Mountain and what transmission facilities are used for that purpose.
3		
4	Α.	Hydro does not have equipment connected to Newfoundland Power's
5		Pasadena and Marble Mountain stations except for metering equipment.
6		Corner Brook Pulp and Paper's 66 kV transmission line, L1, connects to both
7		of these stations and they provide the power and energy to Newfoundland
8		Power. Hydro delivers power and energy to Corner Brook Pulp and Paper at
9		either or both of Hydro's Massey Drive Terminal Station and Corner Brook
10		Pulp and Paper's Deer Lake Generating Station. Hydro provides a credit to
11		Corner Brook Pulp and Paper through the metering arrangement for all
12		power and energy provided to Pasadena and Marble Mountain.

Q. Explain the role, if any, that the generating facilities owned by Abitibi
 Consolidated and Corner Brook Pulp and Paper play in Hydro's planning for
 provision of power on the island grid in cases where Hydro's generation is
 out of service and how such generating facilities affect the security of the
 island grid generally.

6

7 Α. In its planning for the provision of power on the island grid, Hydro considers 8 its own generation and that of its customers as resources available to meet 9 the load of the total island interconnected system. For long term planning, in 10 any given period there is the probability that any unit, or combination of units 11 (either Hydro's and/or its customers), may be unavailable due to planned or 12 unplanned outages. It is this probabilistic analysis over all hours of the year 13 that forms the basis for the reliability assessment of the total island 14 interconnected system. With respect to the hydroelectric units owned by 15 Abitibi Consolidated and Corner Brook Pulp and Paper, while there are times 16 when Hydro may be able to utilize additional available capacity, these units 17 are not under the direct control of Hydro and are operated for the benefit of 18 their respective operations rather than the interconnected system. As such 19 their contribution to the overall reliability of the system is not as great as a 20 similar, fully dispatchable resource such as Bay D'Espoir.

1	Q.	What percentage of debt to capital structure for Hydro would, in Ms.
2		McShane's view, all other things being equal, negatively impact on the
3		Province's credit rating?
4		
5		
6	A.	It is impossible to conclude with any degree of precision at what level Hydro's
7		debt ratio would negatively impact on the Province's credit rating. Based on
8		the experience of other Crown Corporations, debt ratios of up to 90% in the
9		short-term have been maintained without negative impact on the Province's
10		credit rating. The debt rating agencies would tend to focus on the utility's
11		ability to fully recover its debt service costs without running the risk of having
12		to turn to the Provincial government for assistance. Stated alternatively, as
13		long as Hydro's debt is guaranteed by the Province, the debt rating agencies'
14		concerns are with assurance that Hydro is self-sufficient, i.e. Hydro will cover
15		its total out-of-pocket costs, including interest expense, from its own
16		revenues, without risk of a short-fall.

1	Q.	Assuming that the cost of debt to Hydro would be 100 basis points more
2		without the government guarantee, how much in dollars would this 100 basis
3		points represent as a cost to Hydro in the test year?
4		
5	Α.	As the 1% guarantee is applied to virtually all of Hydro's debt, the answer
6		would effectively be equal to the test year guarantee fee, which is currently
7		reported as \$11.9 million. (Please see NP-77 for revised calculation.)

1	Q.	Identify each of the companies whose shares form part of the TSE
2		Gas/Electric Utilities group which primarily operate isolated systems and
3		have statutory monopolies in their operating territories.
4		
5		
6	Α.	To Ms. McShane's knowledge, none of the TSE Gas/Electric utilities primarily
7		operates an isolated system and has a statutory monopoly.

1	Q.	Identify each of the companies included on either Schedule XIII or Schedule
2		XIV of the evidence of K. C. McShane which primarily operate isolated
3		systems and have statutory monopolies in their operating territories.
4		
5		
6	Α.	To Ms. McShane's knowledge, none of the companies identified on the
7		referenced schedules primarily operates an isolated system and has a
8		statutory monopoly.

- Q. Provide the monthly reports on the Rate Stabilization Plan from January,
 1992 to date.
 3
- 4 A. A copy of each monthly report on the Rate Stabilization Plan is enclosed.

1	Q.	(a)	Describe the function of Holyrood unit #3 as a synchronous condenser
2			including what effect, if any, such use has on fuel consumption.
3			
4 5		(b)	Explain the synchronous condenser use impacts reported for 1992 and 2000 in Schedule V of R.J. Henderson's evidence, and provide
6			similar numbers and explanations for each additional year since 1992
7			when such impacts have occurred. Explain why no impacts from
8			condenser use are forecast for the 2002 test year, and explain under
9			what conditions the condenser use could provide benefits in this test
10			year.
11			
12		(C)	What benefits, if any, would accrue from equipping another unit at
13			Holyrood to act as such a condenser?
14			
15			
16	Α.	(a)	The synchronous condenser operation of Holyrood unit #3 is primarily
17			designed to support transmission system voltages east of the
18			Sunnyside terminal station without requiring that a prime mover be
19			engaged on the unit. By operating unit #3 as a synchronous
20			condenser, it is possible to reduce or eliminate generation from the
21			Holyrood plant during certain periods of the year. This offers two
22			benefits. First, by improving the flexibility of the thermal dispatch on
23			the Island Interconnected system, it is possible to avail of
24			opportunities to better use stored water in the event of high storage
25			conditions. Second, by improving the flexibility of the thermal
26			dispatch, it is possible to avail of opportunities to shut down one or
27			more units earlier in the year, and similarly start units later in the year.
28			This has the effect of increasing average unit loading, and hence

1		improving the thermal efficiency of the plant versus the case if no
2		synchronous condenser were available.
3		
4		The Holyrood unit #3 synchronous condenser does not directly use
5		fuel to operate. Therefore, it primarily impacts fuel consumed by
6		allowing more efficient use of the fuel as described above.
7		
8	(b)	The synchronous condenser use noted in Schedule V of R.J.
9		Henderson's evidence reflects the consumption by all synchronous
10		condensers on Hydro's system with the exception of Holyrood unit #3.
11		Synchronous condenser energy consumption at Holyrood is not
12		metered, and as a result, consumption by Holyrood unit #3
13		synchronous condenser is reflected in system losses. The table
14		below summarizes synchronous condenser usage for the period 1993-
15		1999 inclusive and also does not include Holyrood unit #3 usage.
16		

		1993	1994	1995	1996	1997	1998	1999	
	Synchronous Condenser Use (GWh)	4.66	6.40	1.00	1.94	2.10	7.36	6.31	
17	· · · ·								
18	The synchronous condenser use reported in Schedule V of R. J.								
19	Henderson's evidence and in the above table are for both Cat Arm								
20	generators, unit #7 at Bay d'Espoir and the gas turbines at Hardwoods								ds
21	and Stephenville. They are each operated periodically for system								
22	voltage support when the generator is not required to supply power								
23	and energy.								
24									
25	Synchronous condenser usage is not forecast for the test year, as								
26	synchronous condenser operation is highly dependent upon the								

1		exigencies of load patterns, precipitation patterns, water storage
2		conditions, and transmission requirements and falls well within the
3		forecast variances in system losses which are also dependent on
4		these factors.
5		
6	(C)	Equipping another unit at Holyrood with synchronous condenser
7		capability will have limited benefit at this time. Hydro has recently
8		finished installing additional reactive capability on the Avalon
9		Peninsula in the form of capacitor banks at the Hardwoods and Oxen
10		Pond terminal stations. The reactive capability of the capacitor banks
11		in conjunction with the existing reactive capability of the Hardwoods
12		gas turbine and Holyrood unit #3 synchronous condensers is sufficient
13		to support voltages on the eastern portion of the system for the
14		foreseeable future.

1	Q.	Provide a schedule showing for each day in the years 1992, 1996 and 2000
2		how many units at Holyrood were operating.
3		
4		
~	٨	

5 A. See attached tables.

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Unit 3 in

Synchronous

	1992			1996				2000
Date	Number of Units	Unit 3 in Synchronous	Date	Number of Units	Unit 3 in Synchronous		Date	Number of Units
	of offics	Synchronous		oronits	Synchronous			oronits
1/1/92	3	0	1/1/96	3	0		1/1/00	3
1/2/92	3	õ	1/2/96	3	õ		1/2/00	3
1/3/92	3	0	1/3/96	3	0		1/3/00	3
1/4/92	3	0	1/4/96	3	0		1/4/00	3
1/5/92	3	0	1/5/96	3	0		1/5/00	3
1/6/92	3	0	1/6/96	3	0		1/6/00	3
1/7/92	3	0	1/7/96	3	0		1/7/00	3
1/8/92 1/9/92	2 2	0 0	1/8/96 1/9/96	3 3	0 0		1/8/00 1/9/00	3 3
1/10/92	2	0	1/10/96	3	0		1/10/00	2
1/11/92	2	õ	1/11/96	3	0		1/11/00	2
1/12/92	3	0	1/12/96	3	0		1/12/00	3
1/13/92	3	0	1/13/96	3	0		1/13/00	3
1/14/92	3	0	1/14/96	3	0		1/14/00	3
1/15/92	3	0	1/15/96	3	0		1/15/00	3
1/16/92	3	0	1/16/96	3	0		1/16/00	3
1/17/92	3	0	1/17/96	3	0		1/17/00	3
1/18/92	3	0	1/18/96	2	0		1/18/00	3
1/19/92 1/20/92	3 3	0	1/19/96 1/20/96	2 2	0 0		1/19/00 1/20/00	3 3
1/20/92	3	0	1/20/96	2	0		1/20/00	3
1/22/92	3	õ	1/22/96	3	õ		1/22/00	3
1/23/92	3	0	1/23/96	3	0		1/23/00	3
1/24/92	3	0	1/24/96	3	0		1/24/00	3
1/25/92	3	0	1/25/96	3	0		1/25/00	2
1/26/92	3	0	1/26/96	3	0		1/26/00	2
1/27/92	3	0	1/27/96	3	0		1/27/00	2
1/28/92	3	0	1/28/96	3	0		1/28/00	3
1/29/92 1/30/92	3 3	0 0	1/29/96 1/30/96	3 3	0 0		1/29/00 1/30/00	3 3
1/31/92	3	0	1/31/96	3	0		1/31/00	3
2/1/92	3	õ	2/1/96	3	0		2/1/00	3
2/2/92	3	0	2/2/96	3	0		2/2/00	3
2/3/92	3	0	2/3/96	3	0		2/3/00	3
2/4/92	3	0	2/4/96	3	0		2/4/00	3
2/5/92	3	0	2/5/96	3	0		2/5/00	3
2/6/92	3	0	2/6/96	3	0		2/6/00	3
2/7/92	3	0	2/7/96	3	0		2/7/00	3
2/8/92	3	0 0	2/8/96	3 2	0 0		2/8/00	3
2/9/92 2/10/92	3 3	0	2/9/96 2/10/96	2	0		2/9/00 2/10/00	3 3
2/11/92	3	0	2/10/90	3	0		2/10/00	3
2/12/92	3	õ	2/12/96	2	õ		2/12/00	3
2/13/92	3	0	2/13/96	2	0		2/13/00	3
2/14/92	2	0	2/14/96	2	0		2/14/00	3
2/15/92	3	0	2/15/96	2	0	:	2/15/00	3
2/16/92	3	0	2/16/96	2	0		2/16/00	3
2/17/92	3	0	2/17/96	3	0		2/17/00	3
2/18/92	3 2	0 0	2/18/96	3	0 0		2/18/00 2/19/00	3
2/19/92 2/20/92	2	0	2/19/96 2/20/96	2 2	0		2/19/00 2/20/00	3 3
2/21/92	3	õ	2/21/96	2	0		2/21/00	3
2/22/92	3	õ	2/22/96	2	õ		2/22/00	3
2/23/92	3	0	2/23/96	2	0		2/23/00	3
2/24/92	3	0	2/24/96	2	0	:	2/24/00	3
2/25/92	3	0	2/25/96	2	0		2/25/00	3
2/26/92	3	0	2/26/96	2	0		2/26/00	3
2/27/92	3	0	2/27/96	2	0		2/27/00	3
2/28/92	3	0	2/28/96	2	0		2/28/00	2
2/29/92 3/1/92	3 3	0 0	2/29/96 3/1/96	2 2	0 0		2/29/00 3/1/00	2 2
3/1/92 3/2/92	3	0	3/1/96 3/2/96	2	0		3/1/00 3/2/00	2
3/3/92	3	0	3/3/96	2	0		3/3/00	2
3/4/92	3	õ	3/4/96	2	õ		3/4/00	2
3/5/92	3	õ	3/5/96	2	õ		3/5/00	2
3/6/92	3	0	3/6/96	2	0		3/6/00	2
3/7/92	3	0	3/7/96	2	0		3/7/00	2
3/8/92	3	0	3/8/96	2	0		3/8/00	2

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	1992			1996		2000			
Data	Number	Unit 3 in	Dete	Number	Unit 3 in	De	Number	Unit 3 i	
Date	of Units	Synchronous	Date	of Units	Synchronous	Da	of Units	Synchron	
3/9/92	3	0	3/9/96	2	0	3/9/	/00 2	0	
3/10/92	3	0	3/10/96	2	0	3/10		0	
3/11/92	3	0	3/11/96	2	0	3/11		0	
3/12/92	3	õ	3/12/96	3	0	3/12		0	
3/13/92	3	0	3/13/96	2	0	3/13		0	
3/14/92	3	0	3/14/96	2	0	3/14		0	
3/15/92	3	0	3/15/96	2	0	3/15		0	
3/16/92	3	0	3/16/96	2	0	3/16		0	
3/17/92	3	0		2	0			0	
			3/17/96	2	0	3/17			
3/18/92	3 3	0 0	3/18/96	2	0	3/18		0 0	
3/19/92			3/19/96			3/19			
3/20/92	3	0	3/20/96	2	0	3/20		0	
3/21/92	3	0	3/21/96	2	0	3/21		0	
3/22/92	3	0	3/22/96	2	0	3/22		0	
3/23/92	3	0	3/23/96	2	0	3/23		0	
3/24/92	3	0	3/24/96	2	0	3/24		0	
3/25/92	3	0	3/25/96	2	0	3/25		0	
3/26/92	3	0	3/26/96	2	0	3/26		0	
3/27/92	3	0	3/27/96	2	0	3/27		0	
3/28/92	3	0	3/28/96	2	0	3/28		0	
3/29/92	3	0	3/29/96	2	0	3/29	9/00 2	0	
3/30/92	3	0	3/30/96	2	0	3/30	0/00 1	0	
3/31/92	3	0	3/31/96	2	0	3/31	/00 1	0	
4/1/92	3	0	4/1/96	2	0	4/1	/00 1	0	
4/2/92	2	0	4/2/96	1	0	4/2	/00 2	0	
4/3/92	2	0	4/3/96	2	0	4/3	/00 2	0	
4/4/92	2	0	4/4/96	2	0	4/4	/00 2	0	
4/5/92	2	0	4/5/96	2	0	4/5	/00 1	0	
4/6/92	2	0	4/6/96	2	0	4/6	/00 1	0	
4/7/92	2	0	4/7/96	2	0	4/7	/00 1	0	
4/8/92	0	0	4/8/96	2	0	4/8		0	
4/9/92	1	0	4/9/96	2	0	4/9		0	
4/10/92	2	0	4/10/96	2	0	4/10		0	
4/11/92	2	õ	4/11/96	2	0	4/11		0	
4/12/92	1	0	4/12/96	2	0	4/12		0	
4/13/92	2	õ	4/13/96	2	0	4/13		0	
4/14/92	2	0	4/14/96	2	0	4/14		0	
4/15/92	2	0	4/15/96	2	0	4/15		0	
4/16/92	2	0	4/16/96	2	0	4/16		0	
4/17/92	2	0	4/17/96	2	0	4/17		0	
	2	0		2	0			0	
4/18/92 4/19/92	2	0	4/18/96 4/19/96	2	0	4/18		0	
	2			2	0	4/19			
4/20/92		0	4/20/96			4/20		0	
4/21/92	3	0	4/21/96	2	0	4/21		0	
4/22/92	2	0	4/22/96	2	0	4/22		0	
4/23/92	2	0	4/23/96	2	0	4/23		0	
4/24/92	2	0	4/24/96	2	0	4/24		0	
4/25/92	2	0	4/25/96	2	0	4/25		0	
4/26/92	2	0	4/26/96	2	0	4/26		0	
4/27/92	2	0	4/27/96	2	0	4/27		0	
4/28/92	2	0	4/28/96	2	0	4/28		0	
4/29/92	2	0	4/29/96	2	0	4/29		0	
4/30/92	2	0	4/30/96	2	0	4/30		0	
5/1/92	3	0	5/1/96	2	0	5/1		0	
5/2/92	2	0	5/2/96	2	0	5/2	/00 2	0	
5/3/92	2	0	5/3/96	2	0	5/3	/00 2	0	
5/4/92	2	0	5/4/96	2	0	5/4	/00 2	0	
5/5/92	2	0	5/5/96	2	0	5/5		0	
5/6/92	2	0	5/6/96	2	0	5/6	/00 2	0	
5/7/92	2	0	5/7/96	2	0	5/7		0	
5/8/92	2	0	5/8/96	2	0	5/8		0	
5/9/92	2	0	5/9/96	2	0	5/9		0	
5/10/92	2	0	5/10/96	2	0	5/10		0	
5/11/92	2	0	5/11/96	2	0	5/11		0	
5/12/92	2	Õ	5/12/96	1	0	5/12		Ő	
5/13/92	2	0	5/13/96	1	0	5/13		0	
5/14/92	2	õ	5/14/96	1	0	5/14		ů 0	
5/15/92	2	õ	5/15/96	2	0	5/15		0 0	
0,10/02	2	5	5/15/90	2	Ū	5/10		0	

	2000	
Date	Number	Unit 3 in
	of Units	Synchronous
3/9/00	2	0
3/9/00	2	0
3/11/00	2	õ
3/12/00	2	0
3/13/00	2	0
3/14/00	2	0
3/15/00	2	0
3/16/00 3/17/00	2 2	0
3/18/00	2	0
3/19/00	2	0
3/20/00	2	0
3/21/00	2	0
3/22/00	2	0
3/23/00	2	0
3/24/00	2	0
3/25/00	2	0
3/26/00 3/27/00	2 2	0
3/28/00	2	0
3/29/00	2	Ő
3/30/00	1	0
3/31/00	1	0
4/1/00	1	0
4/2/00 4/3/00	2 2	0
4/3/00	2	0
4/5/00	1	0
4/6/00	1	0
4/7/00	1	0
4/8/00	1	0
4/9/00	1	0
4/10/00 4/11/00	1 1	0 0
4/11/00	1	0
4/13/00	1	ů 0
4/14/00	1	0
4/15/00	1	0
4/16/00	2	0
4/17/00	2	0
4/18/00 4/19/00	2 2	0 0
4/20/00	2	0
4/21/00	2	Ő
4/22/00	2	0
4/23/00	2	0
4/24/00	2	0
4/25/00 4/26/00	2 2	0
4/20/00	2	0
4/28/00	2	0
4/29/00	2	0
4/30/00	2	0
5/1/00	2	0
5/2/00	2	0
5/3/00 5/4/00	2 2	0 0
5/5/00	2	0
5/6/00	2	0
5/7/00	2	0
5/8/00	2	0
5/9/00	2	0
5/10/00	2	0
5/11/00 5/12/00	2 2	0 0
5/13/00	2	0
5/14/00	-	õ

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						2000					
	1992	U-14.0 I-1		1996							
Date	Number	Unit 3 in	Date	Number	Unit 3 in		Date	Number of Units	Unit 3 in		
	of Units	Synchronous		of Units	Synchronous			or units	Synchronous		
						ļļ					
5/16/92	1	0	5/16/96	2	0		5/16/00	1	0		
5/17/92	1	0	5/17/96	2	0		5/17/00	0	0		
5/18/92	1	0	5/18/96	2	0		5/18/00	0	0		
5/19/92	1	0	5/19/96	2	0		5/19/00	0	0		
5/20/92	1	0	5/20/96	2	0		5/20/00	1	0		
5/21/92	1	0	5/21/96	2	0		5/21/00	1	0		
5/22/92	1	0	5/22/96	2	0		5/22/00	1	0		
5/23/92	1	0	5/23/96	2	0		5/23/00	1	0		
5/24/92	1	0	5/24/96	2	0		5/24/00	1	0		
5/25/92	1	0	5/25/96	3	0		5/25/00	1	0		
5/26/92	1	0	5/26/96	2	0		5/26/00	0	0		
5/27/92	1	0	5/27/96	2	0		5/27/00	0	0		
5/28/92	1	0	5/28/96	2	0		5/28/00	0	0		
5/29/92	1	0	5/29/96	2	0		5/29/00	1	0		
5/30/92	1	0	5/30/96	1	1		5/30/00	1	0		
5/31/92	1	0	5/31/96	1	1		5/31/00	0	0		
6/1/92	1	0	6/1/96	1	1		6/1/00	0	0		
6/2/92	1	0	6/2/96	1	1		6/2/00	0	0		
6/3/92	1	0	6/3/96	1	1		6/3/00	0	0		
6/4/92	1	0	6/4/96	1	1		6/4/00	0 0	0		
6/5/92	1	õ	6/5/96	1	1		6/5/00	Ő	0		
6/6/92	1	õ	6/6/96	1	1		6/6/00	Õ	1		
6/7/92	1	0	6/7/96	1	1		6/7/00	0 0	1		
6/8/92	1	õ	6/8/96	1	1		6/8/00	Ő	1		
6/9/92	1	õ	6/9/96	1	1		6/9/00	0	1		
6/10/92	1	0	6/10/96	1	1		6/10/00	0	1		
6/11/92	1	0	6/11/96	1	1		6/11/00	0	1		
6/12/92	1	0	6/12/96	1	1		6/12/00	0	1		
		0		1	1				1		
6/13/92 6/14/92	1	0	6/13/96	1	1		6/13/00 6/14/00	0 0			
	1		6/14/96						1		
6/15/92	1	0	6/15/96	1	1		6/15/00	0	1		
6/16/92	1	0	6/16/96	1	1		6/16/00	0	1		
6/17/92	1	0	6/17/96	1	1		6/17/00	0	1		
6/18/92	1	0	6/18/96	1	1		6/18/00	0	1		
6/19/92	1	0	6/19/96	1	1		6/19/00	0	1		
6/20/92	1	0	6/20/96	1	1		6/20/00	0	1		
6/21/92	1	0	6/21/96	0	1		6/21/00	0	1		
6/22/92	1	0	6/22/96	0	1		6/22/00	0	1		
6/23/92	1	0	6/23/96	0	1		6/23/00	0	1		
6/24/92	1	0	6/24/96	0	1		6/24/00	0	1		
6/25/92	1	0	6/25/96	0	1		6/25/00	0	1		
6/26/92	1	0	6/26/96	0	1		6/26/00	0	1		
6/27/92	1	0	6/27/96	0	1		6/27/00	0	1		
6/28/92	1	0	6/28/96	0	1		6/28/00	0	1		
6/29/92	1	0	6/29/96	0	1		6/29/00	0	1		
6/30/92	1	0	6/30/96	0	1		6/30/00	0	1		
7/1/92	1	0	7/1/96	0	1		7/1/00	0	1		
7/2/92	1	0	7/2/96	0	1		7/2/00	0	1		
7/3/92	1	0	7/3/96	0	1		7/3/00	0	1		
7/4/92	1	0	7/4/96	0	1		7/4/00	0	1		
7/5/92	1	0	7/5/96	0	1		7/5/00	0	1		
7/6/92	1	0	7/6/96	0	1		7/6/00	0	1		
7/7/92	1	0	7/7/96	0	1		7/7/00	0	1		
7/8/92	1	0	7/8/96	0	1		7/8/00	0	1		
7/9/92	1	0	7/9/96	0	1		7/9/00	0	1		
7/10/92	1	0	7/10/96	0	1		7/10/00	0	1		
7/11/92	1	0	7/11/96	0	1		7/11/00	0	1		
7/12/92	1	0	7/12/96	0	1		7/12/00	0	1		
7/13/92	1	õ	7/13/96	Ő	1		7/13/00	Õ	1		
7/14/92	1	0	7/14/96	0	1		7/14/00	0 0	1		
7/15/92	1	õ	7/15/96	Ő	1		7/15/00	Ő	1		
7/16/92	1	õ	7/16/96	Ő	1		7/16/00	0	1		
7/17/92	1	0	7/17/96	0	1		7/17/00	0	1		
7/18/92	1	0	7/18/96	0	1		7/18/00	0	1		
7/19/92	1	0	7/19/96	0	1		7/19/00	0	1		
7/20/92	1	0	7/20/96	0	1		7/20/00	0	1		
7/21/92	1	0	7/21/96	0	1		7/21/00	0	1		
7/22/92	1	0	7/22/96	0	1		7/22/00	0	1		
1122132	I	5	1122/30	U	i.		1122/00	U			

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Date 7/23/92 7/24/92 7/25/92 7/25/92 7/26/92 7/26/92 7/28/92 7/30/92 7/31/92 8/1/92 8/3/92 8/3/92 8/5/92 8/6/92 8/	Number of Units 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Unit 3 in Synchronous 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Date 7/23/96 7/24/96 7/25/96 7/26/96 7/28/96 7/28/96 7/29/96 7/30/96 7/30/96 7/31/96	Number of Units 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Unit 3 in Synchronous 1 1 1 1 1 1
7/23/92 7/24/92 7/25/92 7/26/92 7/27/92 7/29/92 7/30/92 7/31/92 8/1/92 8/3/92 8/3/92 8/3/92 8/6/92 8/6/92 8/6/92 8/6/92	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		7/23/96 7/24/96 7/25/96 7/26/96 7/28/96 7/28/96 7/29/96 7/30/96 7/30/96	0 0 0 0 0 0 0 0	1 1 1 1 1
7/24/92 7/25/92 7/26/92 7/27/92 7/28/92 7/28/92 7/30/92 8/30/92 8/1/92 8/1/92 8/3/92 8/4/92 8/5/92 8/6/92 8/8/92 8/8/92	1 1 1 1 1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 0 0 0 0 0	7/24/96 7/25/96 7/26/96 7/27/96 7/28/96 7/29/96 7/29/96 7/30/96 7/31/96	0 0 0 0 0	1 1 1
7/24/92 7/25/92 7/25/92 7/26/92 7/28/92 7/28/92 7/30/92 8/30/92 8/1/92 8/1/92 8/4/92 8/5/92 8/6/92 8/7/92 8/8/92 8/9/92	1 1 1 1 1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 0 0 0 0 0	7/24/96 7/25/96 7/26/96 7/27/96 7/28/96 7/29/96 7/29/96 7/30/96 7/31/96	0 0 0 0 0	1 1 1
7/24/92 7/25/92 7/25/92 7/26/92 7/28/92 7/28/92 7/30/92 8/30/92 8/1/92 8/1/92 8/4/92 8/5/92 8/6/92 8/7/92 8/8/92 8/9/92	1 1 1 1 1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 0 0 0 0 0	7/24/96 7/25/96 7/26/96 7/27/96 7/28/96 7/29/96 7/29/96 7/30/96 7/31/96	0 0 0 0 0	1 1 1
7/25/92 7/26/92 7/27/92 7/28/92 7/29/92 7/30/92 7/31/92 8/1/92 8/2/92 8/3/92 8/4/92 8/5/92 8/6/92 8/8/92 8/8/92	1 1 1 1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 0 0 0	7/25/96 7/26/96 7/27/96 7/28/96 7/29/96 7/30/96 7/31/96	0 0 0 0	1 1
7/26/92 7/27/92 7/28/92 7/29/92 7/30/92 7/31/92 8/1/92 8/2/92 8/3/92 8/4/92 8/5/92 8/6/92 8/7/92 8/8/92 8/9/92	1 1 1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 0 0	7/26/96 7/27/96 7/28/96 7/29/96 7/30/96 7/31/96	0 0 0	1
7/27/92 7/28/92 7/29/92 7/30/92 7/31/92 8/1/92 8/2/92 8/3/92 8/3/92 8/4/92 8/6/92 8/6/92 8/8/92 8/8/92	1 1 1 1 1 1 1 1 1	0 0 0 0 0 0 0	7/27/96 7/28/96 7/29/96 7/30/96 7/31/96	0 0 0	
7/28/92 7/29/92 7/30/92 7/31/92 8/1/92 8/2/92 8/3/92 8/3/92 8/4/92 8/5/92 8/6/92 8/7/92 8/8/92 8/8/92	1 1 1 1 1 1 1 1	0 0 0 0 0 0 0	7/28/96 7/29/96 7/30/96 7/31/96	0 0	
7/29/92 7/30/92 7/31/92 8/1/92 8/2/92 8/3/92 8/4/92 8/5/92 8/6/92 8/6/92 8/7/92 8/8/92 8/9/92	1 1 1 1 1 1 1 1	0 0 0 0 0	7/29/96 7/30/96 7/31/96	0	1
7/30/92 7/31/92 8/1/92 8/2/92 8/3/92 8/4/92 8/5/92 8/6/92 8/7/92 8/8/92 8/8/92	1 1 1 1 1 1 1	0 0 0 0 0	7/30/96 7/31/96		1
7/31/92 8/2/92 8/3/92 8/4/92 8/5/92 8/6/92 8/6/92 8/7/92 8/8/92 8/9/92	1 1 1 1 1 1	0 0 0 0	7/31/96		1
8/1/92 8/2/92 8/3/92 8/4/92 8/5/92 8/6/92 8/7/92 8/8/92 8/9/92	1 1 1 1 1	0 0 0		0	
8/2/92 8/3/92 8/4/92 8/5/92 8/6/92 8/7/92 8/8/92 8/9/92	1 1 1 1	0 0		0	1
8/3/92 8/4/92 8/5/92 8/6/92 8/7/92 8/8/92 8/9/92	1 1 1 1	0	8/1/96	0	1
8/4/92 8/5/92 8/6/92 8/7/92 8/8/92 8/9/92	1 1 1		8/2/96	0	1
8/5/92 8/6/92 8/7/92 8/8/92 8/9/92	1 1	0	8/3/96	0	1
8/6/92 8/7/92 8/8/92 8/9/92	1		8/4/96	0	1
8/7/92 8/8/92 8/9/92		0	8/5/96	0	1
8/8/92 8/9/92		0	8/6/96	0	1
8/8/92 8/9/92	0	0	8/7/96	0	1
8/9/92	1	0	8/8/96	0	1
	1	0	8/9/96	0	1
	1	0	8/10/96	0	1
8/10/92					
8/11/92	1	0	8/11/96	0	0
8/12/92	1	0	8/12/96	0	1
8/13/92	1	0	8/13/96	0	1
8/14/92	1	0	8/14/96	0	1
8/15/92	1	0	8/15/96	0	1
8/16/92	1	0	8/16/96	0	1
8/17/92	1	0	8/17/96	0	1
8/18/92	1	0	8/18/96	0	1
8/19/92	1	0	8/19/96	0	1
8/20/92	1	0	8/20/96	0	1
					1
8/21/92	1	0	8/21/96	0	
8/22/92	1	0	8/22/96	0	1
8/23/92	1	0	8/23/96	0	1
8/24/92	1	0	8/24/96	0	1
8/25/92	1	0	8/25/96	0	1
8/26/92	1	0	8/26/96	0	1
8/27/92	1	0	8/27/96	0	1
8/28/92	1	0	8/28/96	0	1
8/29/92	1	0	8/29/96	0	1
8/30/92	1	õ	8/30/96	0	1
	1	0		0	1
8/31/92			8/31/96		
9/1/92	1	0	9/1/96	0	1
9/2/92	1	0	9/2/96	0	1
9/3/92	1	0	9/3/96	0	1
9/4/92	1	0	9/4/96	0	1
9/5/92	1	0	9/5/96	0	1
9/6/92	1	õ	9/6/96	0	1
9/7/92	1	0	9/7/96	0	1
9/8/92	1	0	9/8/96	0	1
9/9/92	1	0	9/9/96	0	1
9/10/92	1	0	9/10/96	0	1
9/11/92	1	0	9/11/96	0	1
9/12/92	1	0	9/12/96	0	1
9/13/92	1	0	9/13/96	0	1
9/14/92	1	õ	9/14/96	0	1
9/15/92	1	õ	9/15/96	1	0
	1	0		1	0
9/16/92			9/16/96		
9/17/92	1	0	9/17/96	1	0
9/18/92	1	0	9/18/96	1	0
9/19/92	1	0	9/19/96	1	0
9/20/92	0	0	9/20/96	1	0
9/21/92	0	0	9/21/96	1	0
9/22/92	0	0	9/22/96	2	0
9/23/92	0	õ	9/23/96	2	õ
		0		1	0
9/24/92	0		9/24/96		
9/25/92	0	0	9/25/96	1	0
9/26/92	0	0	9/26/96	1	0
9/27/92	0	0	9/27/96	1	0
9/28/92	0	0	9/28/96	1	0

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Unit 3 in Synchronous

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1

	1992			1996		
Date	Number	Unit 3 in	Date	Number	Unit 3 in	D
	of Units	Synchronous		of Units	Synchronous	
9/92	0	0	9/29/96	1	0	9/29/0
	0	0	9/30/96	1	0	9/30/0
)/92						
92	1	0	10/1/96	1	0	10/1/0
/92	1	0	10/2/96	1	0	10/2/0
92	1	0	10/3/96	1	0	10/3/0
/92	1	0	10/4/96	1	0	10/4/0
5/92	1	0	10/5/96	1	0	10/5/0
6/92	1	0	10/6/96	1	0	10/6/0
7/92	1	0	10/7/96	1	0	10/7/0
3/92	1	0	10/8/96	1	0	10/8/0
9/92	2	0	10/9/96	1	0	10/9/0
0/92	1	0	10/10/96	1	0	10/10/0
1/92	1	0 0		2	0	
			10/11/96			10/11/0
/92	2	0	10/12/96	2	0	10/12/0
/92	2	0	10/13/96	1	0	10/13/0
1/92	2	0	10/14/96	1	0	10/14/0
5/92	2	0	10/15/96	1	0	10/15/0
6/92	2	0 0	10/16/96	1	0	10/16/0
7/92	1	0	10/17/96	1	0	10/17/0
8/92	1	0	10/18/96	2	0	10/18/0
19/92	2	0	10/19/96	2	0	10/19/0
20/92	2	0	10/20/96	2	0	10/20/0
21/92	2	0 0	10/21/96	2	0	10/21/0
22/92	2	0	10/22/96	2	0	10/22/0
23/92	2	0	10/23/96	2	0	10/23/0
4/92	2	0	10/24/96	2	0	10/24/0
5/92	2	0	10/25/96	1	0	10/25/0
6/92	2	0	10/26/96	1	0	10/26/0
27/92	2	0	10/27/96	2	0	10/27/0
28/92	2	õ		2	0	10/28/0
			10/28/96			
9/92	2	0	10/29/96	2	0	10/29/0
0/92	2	0	10/30/96	2	0	10/30/0
/92	2	0	10/31/96	2	0	10/31/0
1/92	1	0	11/1/96	2	0	11/1/0
/2/92	2	0 0	11/2/96	2	0	11/2/0
3/92	2	0	11/3/96	2	0	11/3/0
4/92	2	0	11/4/96	2	0	11/4/0
5/92	2	0	11/5/96	2	0	11/5/0
6/92	1	0	11/6/96	1	0	11/6/0
7/92	1	0	11/7/96	2	0	11/7/0
8/92	1	0	11/8/96	2	0	11/8/0
	1	0		2	0	
/9/92			11/9/96			11/9/0
0/92	2	0	11/10/96	2	0	11/10/0
11/92	1	0	11/11/96	2	0	11/11/0
2/92	1	0	11/12/96	2	0	11/12/0
3/92	2	0	11/13/96	2	0	11/13/0
4/92	1	0	11/14/96	3	0	11/14/0
	2	0		3	0	
5/92			11/15/96			11/15/0
6/92	2	0	11/16/96	3	0	11/16/0
7/92	2	0	11/17/96	2	0	11/17/0
18/92	2	0	11/18/96	2	0	11/18/0
19/92	2	Õ	11/19/96	1	0 0	11/19/0
20/92	2	0	11/20/96	1	0	11/20/0
21/92	2	0	11/21/96	2	0	11/21/0
2/92	2	0	11/22/96	2	0	11/22/0
3/92	2	0	11/23/96	2	0	11/23/0
1/92	2	0	11/24/96	2	0	11/24/0
5/92	2	0	11/25/96	2	0	11/25/0
6/92	2	0	11/26/96	2	0	11/26/0
27/92	2	0	11/27/96	2	0	11/27/0
28/92	2	0	11/28/96	2	0	11/28/0
29/92	2	0	11/29/96	3	0	11/29/0
30/92	2	õ	11/30/96	2	0	11/30/0
/1/92	2	0	12/1/96	2	0	12/1/0
/2/92	2	0	12/2/96	2	0	12/2/0
/92	3	0	12/3/96	2	0	12/3/0
2	3	0	12/4/96	2	0	12/4/0
		5	. 2/ -1/00	3	0	12/4/0

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	1992		
Date	Number	Unit 3 in	Date
Date	of Units	Synchronous	Date
12/6/92	3	0	12/6/9
12/7/92	3	0	12/7/9
12/8/92	2	0	12/8/9
12/9/92	2	0	12/9/9
12/10/92	2	0	12/10/
12/11/92	2	0	12/11/
12/12/92	2	0	12/12/
12/13/92	2	0	12/13/
12/14/92	3	0	12/14/
12/15/92	3	0	12/15/
12/16/92	3	0	12/16/
12/17/92	3	0	12/17/
12/18/92	3	0	12/18/
12/19/92	3	0	12/19/
12/20/92	3	0	12/20/
12/21/92	3	0	12/21/
12/22/92	3	0	12/22/
12/23/92	2	0	12/23/
12/24/92	2	0	12/24/
12/25/92	2	0	12/25/
12/26/92	2	0	12/26/
12/27/92	2	0	12/27/
12/28/92	3	0	12/28/
12/29/92	3	0	12/29/
12/30/92	3	0	12/30/

1996										
Date	Number	Unit 3 in								
Date	of Units	Synchronous								
12/6/96	3	0								
12/7/96	2	0								
12/8/96	2	0								
12/9/96	2	0								
12/10/96	2	0								
12/11/96	2	0								
12/12/96	2	0								
12/13/96	2	0								
12/14/96	2	0								
12/15/96	2	0								
12/16/96	2	0								
12/17/96	2	0								
12/18/96	2	0								
12/19/96	2	0								
12/20/96	2	0								
12/21/96	2	0								
12/22/96	2	0								
12/23/96	2	0								
12/24/96	2	0								
12/25/96	2	0								
12/26/96	2	0								
12/27/96	2	0								
12/28/96	2	0								
12/29/96	2	0								
12/30/96	2	0								
10/01/06	2	0								

	1992			1996				2000	11-14-0.1	
Date	Number of Units	Unit 3 in Synchronous	Date	Number of Units	Unit 3 in Synchronous	1	Date	Number of Units	Unit 3 in Synchrono	
12/6/92	3	0	12/6/96	3	0	1:	2/6/00	2	0	
12/7/92	3	0	12/7/96	2	0	1:	2/7/00	2	0	
12/8/92	2	0	12/8/96	2	0	1:	2/8/00	2	0	
12/9/92	2	0	12/9/96	2	0	1:	2/9/00	3	0	
12/10/92	2	0	12/10/96	2	0	12	/10/00	3	0	
12/11/92	2	0	12/11/96	2	0	12	/11/00	3	0	
12/12/92	2	0	12/12/96	2	0	12	/12/00	3	0	
12/13/92	2	0	12/13/96	2	0	12	/13/00	3	0	
12/14/92	3	0	12/14/96	2	0	12	/14/00	3	0	
12/15/92	3	0	12/15/96	2	0	12	/15/00	3	0	
12/16/92	3	0	12/16/96	2	0	12	/16/00	3	0	
12/17/92	3	0	12/17/96	2	0	12	/17/00	3	0	
12/18/92	3	0	12/18/96	2	0	12	/18/00	3	0	
12/19/92	3	0	12/19/96	2	0	12	/19/00	3	0	
12/20/92	3	0	12/20/96	2	0	12	/20/00	3	0	
12/21/92	3	0	12/21/96	2	0	12	/21/00	3	0	
12/22/92	3	0	12/22/96	2	0	12	/22/00	3	0	
12/23/92	2	0	12/23/96	2	0	12	/23/00	2	0	
12/24/92	2	0	12/24/96	2	0	12	/24/00	2	0	
12/25/92	2	0	12/25/96	2	0	12	/25/00	2	0	
12/26/92	2	0	12/26/96	2	0	12	/26/00	2	0	
12/27/92	2	0	12/27/96	2	0	12	/27/00	3	0	
12/28/92	3	0	12/28/96	2	0	12	/28/00	3	0	
12/29/92	3	0	12/29/96	2	0	12	/29/00	3	0	
12/30/92	3	0	12/30/96	2	0		/30/00	3	0	
12/31/92	3	õ	12/31/96	2	õ		/31/00	3	Ő	

1	Q.	Provide a Schedule in the form of Schedule V to the evidence of R. J.
2		Henderson showing each of the years from 1992 to 2002. Break out
3		Holyrood N. 6 (<i>sic</i> .) fuel generation from other thermal.
4		
5		
6	A.	Please refer to attached table.

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Newfoundland And Labrador Hydro Island Interconnected System Energy Supply (GWh)

	Filed PUB 1991	1992 Actual	Variance From 1992 Forecast	1993 Actual	Variance From 1992 Actual	1994 Actual	Variance From 1993 Actual	1995 Actual	Variance From 1994 Actual	1996 Actual	Variance From 1995 Actual
Hydroelectric	4,211.91	4,221.58	9.67	4,439.03	217.45	5,043.58	604.55	4,392.54	(651.05)	4,573.58	181.04
Holyrood Other Thermal Total Thermal	1,841.43 2.76 1,844.19	1,706.21 (1.42) 1,704.79	(135.22) (4.18) (139.40)	1,558.88 0.30 1,559.19	(147.33) 1.73 (145.60)	776.89 1.30 778.19	(781.99) 0.99 (781.00)	1,533.08 0.79 1,533.87	756.18 (0.50) 755.68	1,403.60 2.90 1,406.49	(129.48) 2.10 (127.38)
Energy Purchased	0.00	4.71	4.71	6.42	1.71	2.80	(3.61)	1.84	(0.96)	10.41	8.57
Less Synchronous Condenser Use	0.00	2.24	2.24	4.66	2.42	6.40	1.74	1.00	(5.40)	1.94	0.95
Total Energy Supply	6,056.10	5,928.84	(127.26)	5,999.98	71.14	5,818.18	(181.80)	5,927.25	109.08	5,988.54	61.28

	1997 Actual	Variance From 1996 Actual	1998 Actual	Variance From 1997 Actual	1999 Actual	Variance From 1998 Actual	2000 Actual	Variance From 1999 Actual	2001 Forecast	Variance From 2000 Actual	2002 Forecast	Variance From 2001 Forecast
Hydroelectric	4,629.50	55.92	4,262.53	(366.97)	4,802.55	540.03	5,016.71	214.16	4,271.67	(745.04)	4,271.67	0.00
Holyrood Other Thermal Total Thermal	1,531.30 (0.45) 1,530.85	127.70 (3.34) 124.36	1,263.26 (0.68) 1,262.59	(268.04) (0.23) (268.27)	919.80 (0.65) 919.15	(343.46) 0.03 (343.43)	970.28 (1.98) 968.30	50.48 (1.33) 49.15	1,971.34 3.59 1,974.93	1,001.06 5.57 1,006.63	2,157.88 4.55 2,162.43	186.54 0.96 187.50
Energy Purchased	6.14	(4.27)	199.98	193.84	161.52	(38.46)	161.18	(0.34)	145.90	(15.28)	145.90	0.00
Less Synchronous Condenser Use	2.10	0.16	7.36	5.25	6.31	(1.04)	4.75	(1.57)	0.00	(4.75)	0.00	0.00
Total Energy Supply	6,164.39	175.86	5,717.73	(446.66)	5,876.91	159.18	6,141.45	264.53	6,392.50	251.05	6,580.00	187.50