

**Requests for Information**  
**Newfoundland & Labrador Hydro (“Hydro”) 2002 General Rate Review**

**Revenue Requirement**

- NP-1 (a) Reconcile the \$322,300,000 2002 forecast revenue requirement (JCR, Schedule I) with:
- (i) the \$318,846,984 total revenue requirement, Column 2 (JAB-1, page 1);
  - (ii) the \$319,925,000 total revenue for 2002 (JCR, Schedule IV); and
  - (iii) the \$317,464,000 total revenue for 2002 (JCR, Schedule VI).
- (b) Confirm the 2002 revenue requirement sought by Hydro in this proceeding.
- NP-2 Provide details, showing the calculations of interest coverage for the years 1992 to 2000 and forecast for 2001 and 2002. Follow the format used in JCR, Schedule IX in calculating interest expense. Provide separate calculations for interest coverage on regulated and non-regulated assets.
- NP-3 Provide details of the revenue requirement using the format shown in JCR, Schedule I for each year from 1992 to 2002.

## **Operating & Maintenance Expenses**

- NP-4 Provide details for each of the following expense forecasts for 2002 (JCR, Schedule I):
- (a) salaries and fringe benefits;
  - (b) system equipment maintenance;
  - (c) insurance;
  - (d) transportation;
  - (e) office supplies;
  - (f) building rentals and maintenance;
  - (g) professional services;
  - (h) travel;
  - (i) equipment rentals;
  - (j) miscellaneous; and
  - (k) loss on disposal of fixed assets.
- NP-5 Provide the following:
- (a) complete current organization chart for Hydro;
  - (b) 1992 organization chart in the same format as (a);
  - (c) copies of all organizational studies completed from 1992 to 2001; and
  - (d) a copy of Hydro's current code of accounts as filed with the Board pursuant to section 58 of the *Public Utilities Act*.
- NP-6
- (a) Provide details of staffing levels by department and location for the years 1992 to 2000 and projections for 2001 and 2002 (WEW, page 18, line 7).
  - (b) Provide staffing levels classified by temporary and permanent employees for the years 1992 to 2000 and forecast for 2001 and 2002.

- NP-7 Provide details of the 159 permanent positions eliminated by department and by location (WEW, page 18, line 7).
- NP-8 Provide details of salaries and wages expense for each year from 1992 to 2000 and forecast for 2001 and 2002 (JCR, Schedule I) as follows:
- (a) by type of labour (ie., regular permanent, regular temporary, overtime and contractor); and
  - (b) by capital or operating functions.
- NP-9 Provide details of and any reports on pension plan expense for Hydro for the years 1992 to 2000 and forecast for 2001 and 2002.
- NP-10 Provide the assumptions and calculations used in the capital and operating forecasts (JCR, Schedule I) as follows:
- (a) Labour Escalation Rate;
  - (b) Materials and Other Escalation Rate(s); and
  - (c) Interest Rates.
- NP-11
- (a) Provide details of inter-corporate transactions for each year for the period 1992 to 2000 and forecast for 2001 and 2002 (JCR, Schedule I, lines 34 and 35).
  - (b) Provide details on how Hydro allocates costs to its subsidiaries, including costs of executives and other employees (JCR, Schedule I, lines 34 and 35).
- NP-12 How does Hydro allocate costs between regulated and non-regulated operations (JCR, Schedule I)?

- NP-13 Provide details of the following expenses for each year of the period 1992 to 2000 and forecast for 2001 and 2002 (JCR, Schedule I):
- (a) charitable donations;
  - (b) advertising;
  - (c) community relations; and
  - (d) political contributions.
- NP-14 Provide a list of all consultants used by Hydro with a description of the associated projects and total project consultant costs for all consultancy engagements in excess of \$10,000 for the period 1992 to 2001.
- NP-15
- (a) Provide details of the wage increases including all lump sum payments, bonuses, performance pay or other remuneration granted to union and managerial employees for the period 1992 to 2001 and forecast for 2002 (JCR, Schedule I).
  - (b) Provide annual increases in wage and salary expense resulting from job reclassifications for each year for the period 1992 to 2001.
- NP-16
- (a) What methodology does Hydro use to allocate expenditures from non-construction departments to Hydro Capitalized Expense (JCR, Schedule I, line 33).
  - (b) Has the methodology described in (a) above changed from 1992 to present?
  - (c) Provide details of the Hydro Capitalized Expense for the years 1992 to 2000 and forecast 2001 and 2002 showing direct and indirect charges.
  - (d) Provide the yearly Hydro Capitalized Expense amount as a percentage of capital expenditure for 1992 to 2000 and forecast for 2001 and 2002.
- NP-17
- (a) Provide the details of the \$100,585,000 cost of No. 6 fuel for 2002 (JCR, Schedule I).
  - (b) Reconcile the amount in (a) above with the \$99,330,000 No. 6 fuel cost for 2002 (JCR, Schedule VI).

- NP-18 Reconcile the \$4,458,000 forecast miscellaneous expenses for 2002 (JCR, Schedule I, line 27) with the \$4,133,000 miscellaneous expenses for 2002 (JCR, Schedule V).
- NP-19 Explain the \$29,017,000 forecast O&M in 2002 (JCR, Schedule VI) in the context of the total forecast O&M expenses of \$97,394,000 with specific reference to line items in JCR, Schedule I.
- NP-20
- (a) Provide details of productivity and efficiency improvements implemented from 1992 to present in Transmission and Rural Operations (DWR, pages 6-9).
  - (b) Quantify the annual savings to date and forecast for 2001 and 2002 of these productivity and efficiency improvements.
- NP-21 Provide details of uncollectible bills (in \$ and % of annual revenue) for the period 1992 to 2000 and forecast for 2001 and 2002 (JCR, Schedule I) for each of the following:
- (a) Island Rural Isolated;
  - (b) Island Rural Interconnected;
  - (c) Labrador Rural Isolated; and
  - (d) Labrador Rural Interconnected.
- NP-22 Provide the reports on the annual reviews of Hydro conducted by the Board's financial consultants for each year for the period 1992 to 2000.
- NP-23
- (a) Provide the number of company vehicles by vehicle class and location for each year from 1992 to 2000 and forecast for 2001 and 2002 (DWR, page 16, lines 5-9).
  - (b) Provide Hydro's replacement policy for each vehicle class.
  - (c) Provide the most recent analysis evaluating leasing versus purchasing of vehicles.
  - (d) Has Hydro analyzed contracting out parts or all of its vehicle management? If so, provide a copy of the relevant analysis.
- NP-24 Provide copies of Hydro's corporate operating budget document for each of the years 1992 to 2001.

## Operating Performance

- NP-25 Provide the generation reliability indicators Derating Adjusted Forced Outage Rate (DAFOR) and Utilization Forced Outage Probability Percentage (UFOPP) for each generating plant and the Canadian Electricity Association (CEA) composite indices for the period 1992 to 2000.
- NP-26
- (a) Compare the Bulk Electricity System (BES) reliability indices (SAIFI, SAIDI and SARI) for the Island Interconnected System in total and by delivery point to the CEA composite indices on an annual basis for the period 1992 to 2000.
  - (b) Provide the reliability indices indicated in (a) above for the area previously designated as the St. Anthony / Roddickton system with comparison to BES and CEA composite indices for the period 1992 to 2000.
  - (c) Provide reliability indices indicated in (a) above for each of Hydro's Industrial customers with comparison to BES and CEA composite indices for the period 1992 to 2000.
- NP-27
- (a) Provide copies of any internal or external reports dated or created from 1999 through 2001 on the Hydro customer service system (WEW, page 19, lines 17-20).
  - (b) Provide reports on the information gathered on all customer surveys conducted from 1997 to 2001 (WEW, page 19, line 30).
- NP-28
- (a) Provide copies of reports completed by Hydro recommending the implementation of Reliability Centered Maintenance (RCM) pilot projects.
  - (b) Provide information regarding the results and current status of these pilot projects.
- NP-29 Provide the average absenteeism days per employee for each year from 1992 to 2000 and forecast for 2001 and 2002 (JCR, Schedule I).
- NP-30 Provide the Quality of Service and Reliability Study of Hydro performed by Quetta Inc. and Associates dated March 17, 1999.
- NP-31 Provide copies of all benchmarking studies performed since 1992 relating to electrical system or generating station performance.

- NP-32
- (a) Provide the annual expenditures on environmental initiatives for the years 1997 to 2000 and forecast for 2001 and 2002 (JCR, Schedule I).
  - (b) Provide details on the quantities, concentration levels and location of any PCB's remaining in service or in storage.
  - (c) Provide a summary of all oil spills, identifying PCB contaminated spills separately, for the period 1992 to 2001.
  - (d) Provide any reports on environmental performance for the period 1992 to 2001.
- NP-33 Provide an explanation of the environmental fee and provide details of the cost for 2000, 2001 and 2002 (JCR, Schedule I).

### Deficit Reduction

- NP-34 Provide the rural deficit (JAB-1, page 3 of 94) from 1992 to 2000 and forecast for 2001 and 2002 using the Cost of Service methodology approved in the Board's report in February 1993. Include a breakdown of the deficit generated by each of the following:
- (a) Rural Interconnected System;
  - (b) Rural Isolated Island System;
  - (c) Rural Isolated Labrador System; and
  - (d) L'Anse Au Loup System.
- NP-35 In its report to the Minister on July 29, 1996, the Board recommended that preferential rates be phased out and that the phase-out period should be five years.
- (a) Provide Hydro's schedule for the phase-out of preferential rates.
  - (b) Provide Hydro's schedule for the implementation of full cost recovery rates to rural government customers.
- NP-36 For the L'Anse Au Loup system:
- (a) Complete the following table showing the actual costs, revenues and recovery ratios by year from 1996 to 2000 and forecast for 2001 and 2002.

**Newfoundland & Labrador Hydro**  
**L'Anse Au Loup**  
**Comparisons of Revenue & Allocated Revenue Requirements**  
**(\$ 000)**

<u>Year</u>	<u>Revenues</u>	<u>Cost of Service before</u>		<u>Revenue Requirement</u>		<u>Revenue</u>
		<u>Deficit &amp; Revenue</u>	<u>Revenue</u>	<u>After Deficit &amp; Revenue</u>	<u>to Cost</u>	
		<u>Credit Allocation</u>	<u>Credits</u>	<u>Deficit</u>	<u>Credit Allocation</u>	<u>Coverage</u>
(1)	(2)	(3)	(4)	(5)	(6)	( 2 / 3 )
1996						
1997						
1998						
1999						
2000						
2001						
2002						



- (b) Complete the following table showing the projections presented at the 1996 Hearing in L'Anse au Loup.

**Newfoundland & Labrador Hydro  
L'Anse Au Loup  
Comparisons of Revenue & Allocated Revenue Requirements  
(\$ 000)**

<u>Year</u>	<u>Revenues</u>	Cost of Service before Deficit & Revenue <u>Credit Allocation</u>	Revenue		Revenue Requirement After Deficit & Revenue <u>Credit Allocation</u>	Revenue to Cost <u>Coverage</u>
(1)	(2)	(3)	<u>Credits</u>	<u>Deficit</u>	(6)	( 2 / 3 )
1996						
1997						
1998						
1999						
2000						
2001						
2002						

### **Production /Purchased Power Expense**

- NP-37 (a) Provide the monthly purchases from each Non-utility Generator (NUG) for the years 1998 to 2001 (RJH, page 5, lines 28-31).
- (b) Were the NUGs producing during each annual system peak from 1998 to 2000?
- NP-38 Provide the Rate Stabilization Plan Summaries for May and June 2001 (DWO, page 2, lines 8-9).
- NP-39 Provide the total levelized cost to the system in \$/kW-Yr and cents/kWh for the Granite Canal project (HGB, page 10, lines 20-23).
- NP-40 Provide the terms of the power purchase agreement with CF(L) Co (HGB, page 14, lines 28-30).
- NP-41 Provide the cost per barrel of No. 6 fuel purchases for the period January 1, 2001 to June 30, 2001 (DWO, page 2, lines 6-8).
- NP-42 Provide the calculation used to derive the 5.9% RSP adjustment forecast for 2002 (DWO, page 2, line 31).
- NP-43 Provide the calculation used to derive the \$25,490,000 RSP transfer for 2002 (JCR, Schedule I, line 12).
- NP-44 (a) Provide the in-service date for each Hydroelectric plant (RJH, Schedule I).
- (b) Provide the annual actual energy production for each Hydroelectric plant for each year after the in-service date (RJH, Schedule I).
- (c) Provide the derivation of the 2002 forecast of 4,271.67 GWh hydroelectric generation (RJH, Schedule V).
- NP-45 Provide hydroelectric production, thermal production, and energy purchases by year from 1992 to 2000 and forecast for 2001 and 2002 in the format set forth in RJH, Schedule V.

NP-46 Provide the calculation of GWh of system energy storage (RJH, Schedule III) at year-end for 2000. Provide the variance from the Minimum Energy Storage Target for year-end 2000 in GWh and percentage.

NP-47 Provide the basis for the calculation of cost of debt applied to the RSP balance from 1992 to present (JCR, page 8, lines 12-14).

NP-48 From HGB, Schedule V, explain the reason for the increase in losses for 2002 (see below):

<i>Year</i>	<i>Increase in Sales over previous year</i>	<i>Increase in Losses over previous year</i>	<i>Increased Losses as a % of Change in Sales</i>
2001	244.6 GWh	6.4 GWh	2.62%
2002	171.1 GWh	16.5 GWh	9.64%

NP-49 Explain the 77 MW reduction in demand forecast for 2007 (HGB, Schedule VIII).

NP-50 Using the current forecast, expand JCR, Schedule XIV to provide estimates of the Rate Stabilization Plan balances for year-end 2003 and year-end 2004.

NP-51 Provide the annual production efficiency (in kWh per barrel) for the Holyrood generating facility for each year for the period 1992 to 2000.

NP-52 Provide details of the approach used in determining the Wabush T.S. expenses estimates from TWINCo. for 2001 (RJH, page 16, lines 10-12).

### **Employee Future Benefits**

- NP-53      McShane states on pages 13 and 14 of her evidence “Hydro elected to charge retained earnings for the entire amount of the transitional obligation, thus creating a liability for future employee benefits. By comparison, many Canadian utilities are amortizing the transitional obligation over the remaining employee service life, as permitted under the CICA guidelines, and seeking to recover the transitional obligation from rate payers over the amortization period.”
- (a)    Why has Hydro chosen this approach in accounting for future employee benefits?
  - (b)    Provide a projection of the impact on revenue requirement for each year from 2002 to 2006 if Hydro had elected to amortize the transitional obligation over the remaining employee service life.
  - (c)    Provide a projection of the impact on revenue requirement for each year from 2002 to 2006 if Hydro had elected to account for employee future benefits on a cash basis rather than an accrual basis of accounting.
- NP-54      Provide the actuarial study that formed the basis for the employee future benefits balance and the annual expense presented by Hydro.

## **Depreciation Study**

- NP-55 Provide the 1986 Depreciation Study and the 1998 Depreciation Study completed by Hydro's financial consultants (JCR, page 1, line 21).
- NP-56 Provide details of the \$2,731,000 decrease in depreciation expense from 2000 to 2001 (JCR, Schedule 1, Line 3).
- NP-57
- (a) What provision for salvage upon disposal of fixed assets has been made in Hydro's 2002 capital budget and estimate of depreciation for 2002 (JCR, page 10, lines 19-22)?
  - (b) Provide the net salvage costs forecast for 2002 under each of option 1 and option 2 (JCR, pages 10 and 11).
  - (c) Provide a comparison of Hydro's proposed accounting treatment of salvage costs with Hydro's previous accounting treatment of salvage costs (JCR, pages 10 and 11).
  - (d) Provide details of any amounts that have been set aside as part of depreciation expense or otherwise in the 2002 revenue requirement to establish or accumulate in the depreciation reserve account (JCR, page 11, lines 20-22).
- NP-58 Compare the depreciation expense for the years 1998 to 2002 using the current depreciation methodology and the proposed depreciation methodology.
- NP-59 Provide copies of the reports on the Conditions Surveys:
- (a) Completed in 1999 of Holyrood Thermal Units 1 and 2 and the Hardwoods and Stephenville Gas Turbines (JCR, page 12, line 9);
  - (b) Completed on the Transmission lines on the Avalon (JCR, page 12, line 28).
  - (c) Were the results of the Conditions Surveys reviewed by external or independent experts (JCR, page 12, lines 9 and 28)? If so, who? Provide any written reports by the external or independent experts.
  - (d) What service life will be utilized on transmission lines receiving major upgrades as part of the 2002 capital program (JCR, page 13, line 1)?
- NP-60 Provide copies of any reports provided by Hydro to the Board reporting annual rates of depreciation applied to classes of property of Hydro as required by Section 68 of the *Public Utilities Act*?

## Rate Base

NP-61 Complete the following table for each year from 1992 to 2000 and forecast for 2001 and 2002:

<b>Newfoundland Hydro</b>							
<b>Calculation of Plant Investment and Rate Base</b>							
<b>1992 – 2002</b>							
<b>(000s)</b>							
		Balance	Balance	Balance	Balance		
		Dec. 31	Dec. 31	Dec. 31	Dec. 31		
		<u>1992</u>	<u>1993</u>	...	<u>2001</u>	<u>2002</u>	
<b><u>Plant Investment</u></b>							
1	Power Generation:	\$ -	\$ -		\$ -	\$ -	
2	- Thermal	\$ -	\$ -		\$ -	\$ -	
3	- Hydro	\$ -	\$ -		\$ -	\$ -	
4	- Diesel	\$ -	\$ -		\$ -	\$ -	
5	- Gas Turbine	<u>\$ -</u>	<u>\$ -</u>		<u>\$ -</u>	<u>\$ -</u>	
6	Total	\$ -	\$ -		\$ -	\$ -	
7							
8	Substations	\$ -	\$ -		\$ -	\$ -	
9	Transmission	\$ -	\$ -		\$ -	\$ -	
10	Distribution	\$ -	\$ -		\$ -	\$ -	
11	General Properties	\$ -	\$ -		\$ -	\$ -	
12	Transportation	\$ -	\$ -		\$ -	\$ -	
13	Communications	\$ -	\$ -		\$ -	\$ -	
14	Computer Software	\$ -	\$ -		\$ -	\$ -	
15	Computer Hardware	\$ -	\$ -		\$ -	\$ -	
16	Customer Contributions	\$ -	\$ -		\$ -	\$ -	
17	Government Contributions	<u>\$ -</u>	<u>\$ -</u>		<u>\$ -</u>	<u>\$ -</u>	
18							
19	Total Depreciable Plant	\$ -	\$ -		\$ -	\$ -	
20							
21	Non-Depreciable Land/Plant	<u>\$ -</u>	<u>\$ -</u>		<u>\$ -</u>	<u>\$ -</u>	
22							
23	Total Plant	\$ -	\$ -		\$ -	\$ -	
24							
25	Construction Work In Progress	<u>\$ -</u>	<u>\$ -</u>		<u>\$ -</u>	<u>\$ -</u>	
26							
27	Total Plant Investment	<u><u>\$ -</u></u>	<u><u>\$ -</u></u>	-	<u><u>\$ -</u></u>	<u><u>\$ -</u></u>	

<b><u>Rate Base Calculation</u></b>				
-				
28	Plant Investment Less CWIP	Line 23	\$ -	\$ -
29			\$ -	\$ -
30	<u>Deduct:</u>			
31	Accumulated Depreciation		\$ -	\$ -
32	Contributions In Aid of Construction		\$ -	\$ -
33	Add/Deduct Other Items		<u>\$ -</u>	<u>\$ -</u>
34			\$ -	\$ -
35				
36	Net Plant Investment	Line 28 - Line 34	<u>\$ -</u>	<u>\$ -</u>
37				
38	Deferred Realized Foreign Exchange Loss		\$ -	\$ -
39	Cash Working Capital Allowance		\$ -	\$ -
40	Inventories		<u>\$ -</u>	<u>\$ -</u>
41				
42	Rate Base At Year End	Line 36+38+39+40	<u><u>\$ -</u></u>	<u><u>\$ -</u></u>

- NP-62 Provide the detailed calculation of the \$16,018,000 in fuel inventory for 2002 (JCR, Schedule II, Page 1 of 3).
- NP-63 Reconcile the deferred realized foreign exchange loss of \$85,200,000 in rate base for 2002 (JCR, Schedule II, Page 1 of 3) with the unamortized foreign exchange loss of \$84,121,000 for 2002 on the projected balance sheet (JCR, Schedule XI).
- NP-64 Provide details of the \$21,095,000 of supplies inventory for 2002 (JCR, Schedule II, Page 1 of 3).
- NP-65 Provide details of the “Other” component in the Revenue Lag summary (JCR, Schedule IV).
- NP-66 Provide details of the “Customer Costs” component in the Operating Expenses Lag summary (JCR, Schedule V).

- NP-67 Provide supporting documentation for lag days for (JCR, Schedule V):
- (a) salaries and benefits;
  - (b) system equipment maintenance;
  - (c) power purchases;
  - (d) travel; and
  - (e) professional services.
- NP-68 Provide details on how the elimination of the Roddickton wood chip facility has been treated in the determination of depreciation expense and rate base (DWR, page 4, lines 21-22).
- NP-69 Provide details of the following charges as provided in the Projected Statement of Cash Flows (JCR, Schedule XIII):
- (a) amortization of deferred charges;
  - (b) changes in working capital balances;
  - (c) reductions (additions) to deferred charges; and
  - (d) other.
- NP-70 Provide a statement of income for 2001 and 2002 on the same basis as provided in JCR, Schedules XI to XIII.



## Capital Structure

- NP-71 Provide details, in tabular form, of the calculations of the debt/equity ratios for Hydro for the years 1992 to 2000 and forecast for 2001 and 2002 (JCR, Schedule VIII).
- NP-72
- (a) Provide the utility common equity ratio for 2002 assuming a 75% dividend payout (KCM, pages 23-24);
  - (b) Provide a comparison of the dividends paid from 1995 to 2000 and forecast for 2001 to 2002 with the dividends that would have been paid in each year if the 75% payout target was applied.
  - (c) Provide the estimated impact on revenue requirement for 2002 of financing the \$70 million dividend payout as shown in the projected statement of cash flows (JCR, Schedule XIII).
- NP-73 Provide a copy of Hydro's financial plan to achieve the 80/20 short-term target for debt/equity (WEW, page 14, line 20). If no such plan exists in writing, provide details of Hydro's current intentions.
- NP-74 Provide any documentation to support the assertion that movement toward a debt/equity ratio of 60/40 would result in a change in the requirement for Hydro to pay a debt guarantee fee to the Provincial Government (DGH, page 4, line 27-30).
- NP-75
- (a) Provide the excerpts from the legislation that support, in Hydro's view, the statement "the legislative amendments indicate that, as a matter of public policy, Hydro is intended to operate as a fully regulated utility, more similar to that of an investor-owned utility" (WEW, page 6, lines 20-22).
  - (b) In addition to the legislation, what does Hydro view as the similarities between the way Hydro is intended to operate and the manner in which an investor-owned utility operates?
- NP-76 What does Hydro view as the differences, if any, between the way Hydro is intended to operate and the manner in which an investor -owned utility operates (WEW, page 6, lines 20-22)?

## **Cost of Capital**

- NP-77 Provide details of the calculation of the Debt Guarantee fee for each year from 1992 to 2000 and forecast for 2001 and 2002 (JCR, Schedule IX).
- NP-78 Provide the details of:
- (a) redemptions of long-term debt from 1992 to 2000; and
  - (b) anticipated future redemptions from 2001 to 2006 (JCR, Schedule X).
- NP-79 Provide details of the projected impact on revenue requirement of the realized foreign exchange loss for each year from 2002 to 2006. Identify the annual amortization portion separately from the return on rate base (JCR, page 8, line 25).
- NP-80 Treat the debt guarantee fee as a component of return on equity rather than interest expense and recalculate return on equity as a percentage for each year from 1992 to 2000 and forecast for 2001 and 2002.
- NP-81 Provide detailed calculations of the interest rate projections for 2001 and 2002 (JCR, page 6, line 27).
- NP-82 Provide details of all sources that were consulted in determining the applicable spreads on forecast long-term debt (JCR, page 7, line 1).
- NP-83 Explain how the change from cost of debt to weighted average cost of capital impacts the forecast 2002 carrying charges for the RSP and CWIP. (JCR, page 8, line 8).
- NP-84 (a) Provide details of the CF(L)Co Share Purchased Debt (JCR, Schedule VIII) Include the derivation of the \$25,609,000 for 2002.
- (b) Provide the amortization and repayment schedule for (a).
- NP-85 Provide details of the calculation of the \$1,951,000 cost of debt for 2002 on the CF(L)Co Share Purchase Debt (JCR, Schedule IX).
- NP-86 Provide details of the \$94,151,000 Sinking Fund for 2002 (JCR, Schedule VIII).

- NP-87 Provide details of the calculation of the \$101,662,000 Interest Expense for 2002 (JCR, Schedule IX) identifying long-term debt by issue and applicable short-term debt.
- NP-88 Provide details of the calculation of the \$1,175,000 Amortization of Debt Discount and Issue Expense for 2002 (JCR, Schedule IX).
- NP-89 Provide details of the calculation of the \$6,301,000 Interest on Sinking Fund Assets for 2002 (JCR, Schedule IX).
- NP-90 Reconcile the \$108,735,000 cost of debt forecast for 2002 (JCR, Schedule IX) with the \$93,584,000 interest expense (JCR, Schedule I, line 40).
- NP-91 Provide summaries, both actual and prospective, of the terms of the sinking fund arrangements for each debt issue identified (JCR, Schedule X).
- NP-92 Provide an explanation of why the 2002 borrowings are proposed as different maturities (JCR, Schedule X).

## Capital Expenditure

- NP-93 Provide reports on the cost benefit analysis justifying the interconnection of the former diesel areas of Westport, Mud Lake and LaPoile (DWR, page 13, lines 14-19).
- NP-94 (a) Provide a report on the cost benefit analysis performed to justify the purchase of the J.D. Edwards suite of products (WEW, page 19, lines 17-20).
- (b) Compare actual to forecast costs regarding this purchase.
- NP-95 Provide details of the \$107,453,000 capital expenditures for 2002 (JCR, Schedule VI). Reconcile this amount with the \$119,469,000 net additions to capital assets (JCR, Schedule XIII).
- NP-96 (a) Provide details of all capital and operating leases entered into by Hydro for the period 1992 to 2000 and forecast for 2001 and 2002 for which Board approval is required pursuant to Section 41 of the *Public Utilities Act*.
- (b) How does Hydro determine whether to buy or lease capital assets?
- NP-97 Provide a comparison of budget and actual capital expenditures for the period 1992 to 2000 by class of assets.
- NP-98 With respect to the replacement of manufacturer non-supported equipment, answer the following questions or provide the information appropriate on each budget item identified below:

<i>Budget Item</i>	<i>Amount</i>	<i>Description</i>
B-8	\$863,000	Replace Exciter Unit 1 – Cat Arm (installed 1984)
B-11	\$606,000	Replacement of Governor Control - Upper Salmon (installed 1982)
B-13	\$153,000	Upgrade Controls on Spherical Valve #5 – Bay d’Espoir
B-65	\$2,379,000	Replace Power Line Carrier Equipment - Transmission System - West Coast
B-66	\$8,373,000	Replace VHF Mobile Radio System (installed 1989 - not supported by mfg. since 1991)
B-67	\$58,000	Replace Tele-protection - Stony Brook - Grand Falls Frequency Converter

B-68	\$556,000	Replace UHF Radio - Upper Salmon (20 years old)
B-70	\$311,000	Replace Remote Terminal Unit for Hydro – Phase 3
B-73	\$52,000	Replace Telephone Isolation Equipment - Sunnyside & Western Avalon
<b>Total</b>	<b>\$13,351,000</b>	

- (a) Provide failure statistics for the equipment over the past 5 years.
- (b) What spares were purchased initially for this equipment?
- (c) What spares were purchased as Hydro became aware that spares were no longer going to be supplied by the manufacturer?
- (d) Provide details on the spare parts currently in inventory.
- (e) What is Hydro’s practice with respect to spares on equipment once that equipment is no longer supported by the manufacturer?
- (f) As one system, or part of a system is retired, can the parts from that system be used as spares and otherwise to support extending the life of another system for another number of years? Provide details of situations where this approach has been utilized in the past.
- (g) What are the benefits and costs of training an employee or contracting others to maintain a supply of spares through replacement of components and rebuilding boards given the capital costs associated with the replacement of equipment for such purposes in 2001 and 2002?
- (h) Given the substantial costs of replacing such equipment for lack of spares, has Hydro changed its practices with respect to purchasing spares, both in the initial purchase and as manufacturers remove support for such equipment?

***Generation***

NP-99 For the budget item identified below, answer the following questions or provide the information as appropriate:

<b><i>Budget Item</i></b>	<b><i>Amount</i></b>	<b><i>Description</i></b>
B-10	\$1,555,000	Install 25 kV Distribution Line – Ebbegunbaeg

- (a) Provide the cost benefit study that supports this expenditure.
- (b) Will construction of the line result in the removal of all local diesel generation?
- (c) Provide a detailed cost estimate for the project, including a breakdown by line and termination equipment and further by material and labour identifying internal labour and contract labour separately.
- (d) Identify the portions of the construction that are forecast to be contracted out.

NP-100 For the budget item identified below, answer the following question:

<i>Budget Item</i>	<i>Amount</i>	<i>Description</i>
B-15	\$158,000	Install Intake Stoplogs - Paradise River

This plant has been in service for a number of years. What makes installation of stop logs necessary now?

NP-101 For the budget item identified below, provide the following information:

<i>Budget Item</i>	<i>Amount</i>	<i>Description</i>
B-9	\$697,000	Replace Halon 1301 Fire Protection Systems for Generation System

Provide a copy of Hydro's *Strategic Plan for Phase-Out and Replacement of Halons*.

NP-102 For the budget item identified below, provide the following information:

<i>Budget Item</i>	<i>Amount</i>	<i>Description</i>
B-20	\$225,000	Upgrade Oil Systems for Fire Protection on Unit No. 3 – Holyrood

Provide a copy of the insurer's recommendation requiring installation of the containment dykes and the upgrade of sprinkler piping.

NP-103 For the budget item identified below, provide the following information:

<i>Budget Item</i>	<i>Amount</i>	<i>Description</i>
B-18	\$177,000	Purchase Track Machine - Cat Arm

- (a) Provide the number of enclosed track machines that Hydro has on the island and the normal location of each vehicle.
- (b) Provide instances where lack of such a vehicle resulted in a lengthening of any outage(s) of the Cat Arm facility, and the cost of the extended outage(s).

NP-104 For the budget item identified below, provide the following information:

<i>Budget Item</i>	<i>Amount</i>	<i>Description</i>
B-19	\$801,000	Purchase and Install Continuous Emission Monitoring

- (a) Provide a copy of the health risk assessment that concluded quantification of emissions is required.
- (b) Explain why the other monitoring equipment currently in place is not sufficient to calculate emissions.
- (c) Detail the benefits that will accrue from enhancement of control of the combustion process.

NP-105 For the budget item identified below, answer the following questions or provide the information as appropriate:

<i>Budget Item</i>	<i>Amount</i>	<i>Description</i>
B-21	\$152,000	Purchase and Install Closed Circuit Surveillance System – Holyrood

- (a) Provide details on resources currently allocated to site security and the annual cost of these resources.

- (b) Provide details on the plan for future monitoring of the surveillance system?
- (c) Provide details on the budget estimate.
- (d) Identify any operating savings or costs related to the purchase of the surveillance system.

***Transmission***

NP-106 For the budget item identified below, provide the following information:

<b><i>Budget Item</i></b>	<b><i>Amount</i></b>	<b><i>Description</i></b>
B-26	\$496,000	Upgrade TL227 (69kV Berry Hill – Daniels Harbour)

- (a) For each outage from 1996 to 2000, provide the following:
  - (i) date of outage;
  - (ii) cause of outage;
  - (iii) duration of outage; and
  - (iv) number of customers affected.
- (b) Provide the SAIDI and SAIFI for each of past five years for substations served through this line.

***Rural Systems***

NP-107 For the budget item identified below, provide the following information:

<b><i>Budget Item</i></b>	<b><i>Amount</i></b>	<b><i>Description</i></b>
B-35	\$981,000	Provide Service Extensions – Central, Northern and Labrador

- (a) Provide the 5-year historical expenditures, customer counts and unit extension costs per customer addition (material and labour) by region.
- (b) Provide a forecast of the number of customers and methodology used to develop the budgeted amounts.



NP-108 For the budget item identified below, provide the following information:

<i>Budget Item</i>	<i>Amount</i>	<i>Description</i>
B-36	\$1,330,000	Upgrade Distribution Systems – Central, Northern and Labrador

- (a) Provide the details of the unit capital expenditure costs per customer by region for the period 1996 to 2000 and forecast for 2001 and 2002.
- (b) Provide details of the budgeted amount including material and labour costs.

NP-109 For the budget items identified below, provide the following information:

<i>Budget Item</i>	<i>Amount</i>	<i>Description</i>
B-38	\$669,000	Replace Insulators – English Harbour West
B-39	\$317,000	Replace Insulators – South Brook Distribution System

- (a) Provide details of the estimated costs of insulator replacements.
- (b) Provide an explanation of the difference in the unit costs of insulator replacements in item B-38 with B-39.

NP-110 For each project identified below, provide a cost benefit analysis comparing the proposed project with one additional overhaul.

<i>Budget Item</i>	<i>Amount</i>	<i>Description</i>
B-45	\$297,000	Replace 136 kW Diesel Unit No. 279 – Grey River
B-47	\$238,000	Replace 75 kW Diesel Unit No. 252 – Petites
B-52	\$299,000	Replace 136 kW Diesel Unit No. 266 – William’s Harbour
B-53	\$318,000	Replace 300 kW Diesel Unit No. 288 – Black Tickle
B-54	\$301,000	Replace 250 kW Diesel Unit No. 293 – Rigolet

NP-111 For the budget items identified below, provide the following information:

<b><i>Budget Item</i></b>	<b><i>Amount</i></b>	<b><i>Description</i></b>
B-46	\$282,000	Replace 136 kW Diesel Unit No. 284 – Harbour Deep
B-57	\$515,000	Upgrade Diesel Plant - Harbour Deep

- (a) Provide more detailed rationale for the upgrading of the diesel plant building.
- (b) Provide a detailed breakdown of the costs associated with the project.
- (c) Provide the following for the Harbour Deep system for the period 1996-2000:
  - (i) energy sold;
  - (ii) annual peak demand;
  - (iii) capital expenditures;
  - (iv) operating costs; and
  - (v) the number of domestic/commercial customers.
- (d) Indicate the viability of extending the life of the existing plant for an additional 2 to 5 years without this capital expenditure.

NP-112 For the budget item identified below, provide the following information:

<b><i>Budget Item</i></b>	<b><i>Amount</i></b>	<b><i>Description</i></b>
B-58	\$828,000	Upgrade Diesel Plant – St. Lewis

- (a) Provide more detailed rationale for the upgrading of the diesel plant building.
- (b) Provide a detailed breakdown of the costs associated with the project.
- (c) Provide the following for the St. Lewis system for the period 1996-2000:
  - (i) energy sold;
  - (ii) annual peak demand;
  - (iii) capital expenditures;
  - (iv) operating costs; and
  - (v) the number of domestic/commercial customers.

NP-113 For the budget items identified below, provide the following information:

<i>Budget Item</i>	<i>Amount</i>	<i>Description</i>
B-37	\$173,000	Replace Poles – South Brook and King’s Point System
B-38	\$669,000	Replace Insulators - English Harbour West
B-39	\$317,000	Replace Insulators – South Brook Distribution System
B-40	\$300,000	Replace Conductor / Poles - Burgeo
B-48	\$206,000	Upgrade Distribution Lines – St. Anthony Distribution System
B-49	\$556,000	Relocation of Line – Cook’s Harbour

Provide the following for each year from 1996 to 2000

- (i) SAIDI;
- (ii) SAIFI;
- (iii) total customer minutes of outage; and
- (iv) number of customers served by each distribution feeder.

### *General Property*

NP-114 For the budget item identified below, answer the following questions or provide the information as appropriate:

<i>Budget Item</i>	<i>Amount</i>	<i>Description</i>
B-61	\$517,000	Purchase Additional Corporate Applications

- (a) Provide the details on the corporate applications being purchased including the rationale for each purchase.
- (b) How do these applications relate to the J. D. Edwards software system that Hydro currently uses for some of its applications?
- (c) Provide Hydro’s policies and practices with respect to the capitalizing and expensing of expenditures related to software for both internal or external software development including labour, hardware, software, maintenance, consulting and implementation services, and other costs.

NP-115 For the budget item identified below, provide the following information:

<i>Budget Item</i>	<i>Amount</i>	<i>Description</i>
B-60	\$104,000	Acquire Document Management & Imaging System

- (a) Provide justification to support purchase of this system.
- (b) Provide estimates of capital expenditures for subsequent years for the additional phases of this system.

NP-116 For the budget item identified below, answer the following questions or provide the information as appropriate:

<i>Budget Item</i>	<i>Amount</i>	<i>Description</i>
B-64	\$2,109,000	Replacement of AS-400 Computers

- (a) Provide details to support the cost estimate.
- (b) Provide details on the impact of deferring the purchase of this item and continuing to utilize the existing equipment.
- (c) Is computer capacity being increased as a result of the replacement?
- (d) If capacity is being increased, indicate the capacity increments proposed and the reasons for the capacity increases by computer application.

NP-117 The system identified below was purchased in 1989 and manufacturer support terminated in 1991. Answer the following questions or provide the information as appropriate.

<i>Budget Item</i>	<i>Amount</i>	<i>Description</i>
B-66	\$8,373,000	Replace VHF Mobile Radio System

- (a) Provide a copy of the cost benefit analysis conducted, if any, when purchasing the existing system.
- (b) Provide details on the impact of deferring the purchase of this item one, two or five years.

- (c) Can components of the system be replaced to defer the need for the bulk of the capital expenditure to a future time? If not, why not? If so, provide details on the cost of replacing components.
- (d) Other communication service providers offer cell phones, paging and VHF/UHF/twisted pair/microwave/fibre services. Can the purchase of communications services from others help defer or lower the cost of providing these services? Has Hydro considered using such services?

NP-118 For the budget item identified below, provide the following information:

<i>Budget Item</i>	<i>Amount</i>	<i>Description</i>
B-69	\$8,942,000	Complete Microwave Radio System Interconnection

- (a) Aliant Telecom has a looped digital fibre system in existence along the same path. Compare the cost and benefit of using the Aliant system with the proposed microwave system.
- (b) Provide details on the projected annual cost of operating and maintaining this microwave system.
- (c) Provide details on the reliability (availability in % per year) that Hydro has experienced on its existing microwave systems on the island.

NP-119 For the budget item identified below, provide the following information:

<i>Budget Item</i>	<i>Amount</i>	<i>Description</i>
B-72	\$171,000	Install Interactive Voice Response System – Hydro Place

Provide a cost benefit analysis to support the purchase of this system.

### Cost of Service/Rates

NP-120 Provide an electronic copy of the cost of service study (Exhibit JAB-1 with formulas included and user documentation).

NP-121 Complete the following table for each of the following customers:

- (a) Newfoundland Power;
- (b) Rural-Island Interconnected ;
- (c) Rural-Labrador Interconnected (Excluding CFB Goose Bay);
- (d) Rural-Isolated;
- (e) Each of Hydro's industrial customers; and
- (f) CFB Goose Bay.

		Customer												
Year	Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total Sales
1996	Sales (MWh)													
	CP (kW)													
	NCP (kW)													
1997	Sales (MWh)													
	CP (kW)													
	NCP (kW)													
1998	Sales (MWh)													
	CP (kW)													
	NCP (kW)													
1999	Sales (MWh)													
	CP (kW)													
	NCP (kW)													
2000	Sales (MWh)													
	CP (kW)													
	NCP (kW)													
2001 Forecast	Sales (MWh)													
	CP (kW)													
	NCP (kW)													
2002 Forecast	Sales (MWh)													
	CP (kW)													
	NCP (kW)													

- NP-122 (a) Provide the capacity factors for each year for the time period 1992 to 2000 and forecasts for 2001 and 2002 on each of Hydro's hydraulic and thermal plants (including gas turbines and diesels) on the Island (in the format of Exhibit JAB-1, page 93 of 94, Schedule 4.3).
- (b) Provide the island interconnected system capacity factor for each of these years.
- NP-123 Provide the reports on the studies undertaken in 1996, 1998 and 2000 on the distribution system cost classification (JAB, page 2, lines 10-22).
- NP-124 Provide the report on the study completed on attributing system losses to rate classes on a time-differentiated basis (JAB, page 9, lines 8-20).
- NP-125 Reconcile the 1026.8 MW peak forecasted for 2002 (HGB, Schedule V) and the 2 CP production demand data (JAB-1, page 38).
- NP-126 Provide details of the generation credit for Newfoundland Power in the 2002 Cost of Service (JAB, Schedule II).
- NP-127 Provide details of specifically assigned amounts to Newfoundland Power and the Industrial customers (JAB-1, page 41).
- NP-128 Provide the calculation of the interconnected system load factor for the period 1992 to 2000 and forecast for 2001 and 2002 (in the same format as provided in JAB-1, Schedule 4.2, page 92).
- NP-129 (a) Explain the change in status of CFB Goose Bay from Industrial to non-industrial status (JAB-1, page 3).
- (b) Does CFB Goose Bay have any firm power requirements (JAB-1, page 25 of 94)?
- (c) In the cost of service study filed in the fall of 2000 with the application requesting rates be approved for industrial customers, the cost of serving CFB Goose Bay in 1999 was \$1,591,871 (including deficit). In the 2002 Cost of Service study the cost of serving CFB Goose Bay is forecast to be \$182,957 (including deficit) (Exhibit JAB-1, page 3 of 94). Explain in detail the cost reduction.

- NP-130 Hydro proposes to treat as common cost a 230 kV transmission line that was built to serve Albright and Wilson Americas because a 24 MVAR capacitor bank is providing voltage support to the 230 kV system (HGB, page 21, lines 5-10).
- (a) Is a 230 kV transmission line to the mine site required?
  - (b) What is the cost of relocating the capacitor bank to a transmission line that is currently required on the system?
  - (c) What is the net book value of the transmission line that was built to serve Albright and Wilson Americas?
  - (d) Provide copies of any studies related to alternative sites for the capacitor bank.
- NP-131 The 66 kV plant feeding 400L at the Bottom Brook Terminal Station has been proposed by Hydro to be treated as specifically assigned to Newfoundland Power rather than common. Provide details on changes in system use that justify the change in classification. (HGB, page 21, line 23).
- NP-132 In the report to the Minister on July 29, 1996, the Board recommended: “that Hydro provide, as part of future cost of service reports, the specific policies as well as an allocation schedule related to operation and maintenance overheads”.
- (a) Provide the specific policies and allocation schedule recommended by the Board.
  - (b) Provide the supporting documentation for the allocation schedule for the five geographic areas (JAB-1, page 1).
- NP-133
- (a) Provide detailed calculations of the interruptible rate credit provided to participating industrials (HGB, page 7, lines 21-25).
  - (b) What operating criterion is used to interrupt the customers on the interruptible rate?
  - (c) Provide the statistics on the number of interruptions per year requested and the interruptible credits provided for each year since the creation of the interruptible rate.



- NP-134 (a) Recalculate DWO, Schedule I with an estimate of the annual Hydro Rural deficit per year treated as a cost of serving Wabush using the cost of service methodology approved in the Board's report in February 1993.
- (b) Justify the proposed Wabush rebate in light of Section 17(5) of the *Hydro Corporations Act*.
- NP-135 Provide the study supporting the recommendation of using a 2 CP allocator for generation demand cost (JAB, page 8, lines 8-29).
- NP-136 Hydro proposed an AED (Average and Excess Demand) allocator for generation demand cost for Labrador Interconnected and Hydro Rural Isolated Systems at the 1992 Cost of Service Hearing. In Recommendation 21 of the February 1993 Referral for The Proposed Cost of Service Methodology, the Board accepted Hydro's proposal. Why is Hydro now proposing a single CP allocator for allocation of generation demand cost in the 2002 Forecast Cost of Service Study?
- NP-137 Reconcile the Newfoundland Power revenue to cost ratio guidelines in PRH, page 5, lines 12-18, with the guidelines of the Board set out on page 87 of P.U. 7 (1996-97).
- NP-138 Provide the details of the calculation of revenue on existing and proposed rates showing the billing determinants that apply to each rate component (PRH, page 9, Table 2).