

1 **IN THE MATTER OF** the Electrical
2 Power Control Act, 1994 and the Public Utilities Act

3
4
5 **AND IN THE MATTER OF** a General
6 Rate Application by Newfoundland and
7 Labrador Hydro for approvals of, under
8 Section 70 of the Act, changes in the
9 rates to be charged for the supply of
10 power and energy to Newfoundland
11 Power, Rural Customers and Industrial
12 Customers; and under Section 71 of
13 the Act, changes to the Rules and
14 Regulations applicable to the supply of
15 electricity to Rural Customers
16

17
18 **INFORMATION REQUESTS FROM ISLAND INDUSTRIAL**
19 **CUSTOMERS TO HYDRO**
20

21 **Cost of Service**
22

23 IC 1-NLH Provide the Forecast Cost of Service and the actual Cost of Service
24 for Hydro for each of 1995, 1996, 1997, 1998, 1999, 2000, 2001 and
25 2002.
26

27 IC 2-NLH Provide the forecast Cost of Service for 2003.
28

29 IC 3-NLH Does the 2004 Forecast Cost of Service use the cost of service
30 classifications, assignments and allocations approved by the Board in
31 2002? If not, what are the changes and the cost implications related to
32 each change for each class of customer?
33

34 IC 4-NLH Provide the 2004 Forecast Cost of Service assuming that the 1996
35 interconnection of the Great Northern Peninsula had not occurred.
36

1 IC 5-NLH Provide the information contained in Table 4 of Mr. Haynes
2 evidence for each thermal generating unit serving the Island
3 Interconnected System, including the gas turbines.
4

5 IC 6-NLH Provide the annual production (in GWh) for the 2004 Forecast Cost
6 of Service for each of the hydraulic generating stations on the Island
7 interconnected system. Use the following format:
8

9 BAY UPPER HINDS CAT PARADISE GRANITE PPAS OTHER TOTAL
10 D'ESPOIR SALMONLAKE ARM RIVER CANAL HYDRO
11

12 IC 7-NLH For each year since the in-service date, provide the annual
13 production for each of the hydraulic generating stations plus the total. Use
14 the following format:
15

16 BAY UPPER HINDS CAT PARADISE GRANITE PPAS OTHER TOTAL
17 D'ESPOIR SALMON LAKE ARM RIVER CANAL HYDRO
18
19

20 IC 8-NLH Provide the data and rationale used to determine the Island
21 Interconnected hydraulic production for the 2004 Forecast Cost of Service
22 year.
23

24 IC 9-NLH Provide actual costs for Newfoundland & Labrador Hydro for each
25 of the years 1995 to 2002 inclusive in the same format as in Schedule 2 of
26 J.C. Robert's evidence substituting in the "Increase (Decrease)" columns
27 the cumulative difference from the starting point
28

29 IC 10-NLH Provide actual costs for the Island Interconnected system for each
30 of the years 1997 to 2002 inclusive plus the 2003 and 2004 estimates.
31 Use the same format as in Schedule 2 of J.C. Robert's evidence

1 substituting in the “Increase (Decrease)” columns the cumulative
2 difference from the starting point.

3

4 IC 11-NLH If Hydro’s 2004 Forecast Cost of Service was based on the last
5 forty (40) years lowest historic inflow sequence experienced, would the
6 revenue requirement change? If so, how would it change?

7

8 IC 12-NLH If Hydro’s 2004 Forecast Cost of Service was based on the # years
9 recorded lowest historic inflow sequence experienced from the year Cat
10 Arm came into service, would the revenue requirement change? If so, how
11 would it change?

12

13 IC 13-NLH Indicate annual functionalized cost of service for each of the
14 generation sources in the previous question and for transmission, based
15 on COSS for the Island Interconnected System, showing separately for
16 each generation source and for transmission (where this is separate): fuel
17 expenses, O&M, depreciation, expense credits, disposal gain/loss, return
18 on debt and return on equity. Indicate classified generation and
19 transmission costs (Production Demand, Production and Transmission
20 Energy, Transmission Demand) separately for each fuel source and for
21 transmission.

22

23 IC 14-NLH After the Board has made its decision, is it Hydro’s intention to
24 circulate to all intervenors a revised Cost of Service reflecting the Board’s
25 orders?

26

27 IC 15-NLH Is it Hydro’s intention to issue to each Industrial Customer an
28 actual Cost of Service at the end of each calendar year? Has that been
29 done for 2001 and 2002?

30

1 IC 16-NLH Outline quantitatively the impact on the Cost of Service Study of the
2 introduction of new generation sources in 2003 as forecast in the five year
3 plan of Hydro produced in the 2001 General Rate Hearing.
4

5 IC 17-NLH Confirm the actual and forecast industrial rates for the years 2001
6 to 2007 with the RSP and similar adjustments included for each of the
7 utilities, including Hydro, referred to on Schedule I to the evidence of W.E.
8 Wells filed May 2003.
9

10 IC 18-NLH What is the forecast percentage increase in Industrial rates
11 (including RSP and similar adjustments) for the years 2004 to 2007
12 inclusive, for each of the utilities, including Hydro, referred to on Schedule
13 I to the evidence of W.E. Wells filed May 2003?
14

15 IC 19-NLH Provide Hydro's Five Year forecast rates for 2005, 2006, 2007,
16 2008 and 2009 with the expected rate adjustment attributable to the RSP
17 in each of those years shown separately.
18

19 IC 20-NLH Provide RSP forecast rate adjustments for 2005, 2006 and 2007 for
20 No. 6 fuel prices of \$15/bbl, \$20/bbl and \$25/bbl, assuming that the
21 proposed rates for 2004 are implemented in January, 2004.
22

23 **Existing & Historical rates**
24

25 IC 21-NLH Provide the following for each of the years 1995 - 2002, inclusive:
26

27 1. the demand rate charged Industrial Customers for firm power and
28 for each class of non-firm service;
29

30 2. the energy rate charged Industrial Customers for firm energy and
31 for each class of non-firm service and wheeling;

- 1 3. the Specifically Assigned Charges charged to each Industrial
- 2 Customer, and for all Industrial Customers;
- 3
- 4 4. the total dollar amount billed to the Industrial Customers in those
- 5 years exclusive of sales tax, broken out for firm service, each class of non-
- 6 firm service and wheeling;
- 7
- 8 5. the total number of MWh sold to the Industrial Customers for those
- 9 years, broken out for firm service and each class of non-firm service and
- 10 the total number of MWh for which the wheeling rate was charged;
- 11
- 12 6. the total billing demand of each Industrial Customer for those years
- 13 for firm service, indicating separately each of the following:
- 14 a. the contracted amount of power
- 15 b. the maximum demand for each year
- 16 c. billing demand (MW) charged before any provisions for
- 17 reduced billing demand
- 18 d. any provisions for reduced billing demand (MW) and the
- 19 reasons for same
- 20 e. actual billing demand (MW) charged.
- 21 7. the average cost per kilowatt hour billed to the Industrial
- 22 Customer for those years.
- 23

24 IC 22-NLH Provide the same information as requested in the previous question
25 for 2003 and 2004 based on your most recent forecasts.

26

27 IC 23-NLH With respect to Specifically Assigned Charges for Industrial
28 Customers provide the total Specifically Assigned Charges billed to each
29 of the Industrial Customers for each of 1998 to 2002, inclusive, together
30 with a breakdown of the component parts of such charges for each of
31 those years.

1 IC 24-NLH With respect to forecast 2003 and 2004 Specifically Assigned
2 Charges, provide a breakdown of the component parts of each of those
3 forecast Specifically Assigned Charges for each of the Industrial
4 Customers and identify any Specifically Assigned Charges proposed to be
5 included or excluded in 2003 and/or 2004 Specifically Assigned Charges
6 which have/have not been charged in previous years and the dollar
7 amount of and rationale for each proposed change.

8
9 IC 25-NLH Explain in detail the basis for each of the estimated Specifically
10 Assigned amounts set out in the 2004 forecast Cost of Service, as well as
11 the basis for each of the allocations to NP and each IC set out therein.

12
13 **Cost of Fuel**

14
15 IC 26-NLH Provide the average cost in U.S. dollars of No. 6 fuel in each of the
16 years 1995 - 2002, inclusive and, in 2003, to date and forecast for the
17 whole year.

18
19 IC 27-NLH Provide the average exchange rate used to convert No. 6 fuel costs
20 to Canadian dollars in each of the years 1995 - 2002, inclusive and, in
21 2003, to date and forecast for the whole year.

22
23 IC 28-NLH Provide the cost in U.S. and in Canadian dollars of No. 6 fuel in
24 2004 assuming each of the following scenarios:

25 a) Hydro's application is adjusted to charge \$25 per barrel No.
26 6 fuel price for inclusion in Hydro's 2004 base rates.

27 b) Hydro's application is adjusted to charge \$15 per barrel No.
28 6 fuel price for inclusion in Hydro's 2004 base rates.

29 c) Hydro's application is adjusted to charge \$30 per barrel No.
30 6 fuel price for inclusion in Hydro's 2004 base rates.

1 IC 29-NLH Provide a Table showing the total volume of No. 6 fuel purchased in
2 each of the years 1992 - 2002 inclusive, and projected for the years 2003
3 to 2006 inclusive, the total amount used (or projected to be used) in each
4 of those years, the total cost in Canadian dollars of the fuel purchased (or
5 projected to be purchased) in each of those years, the total number of
6 kilowatt hours generated (or projected to be generated) by each unit at the
7 plants utilizing No. 6 fuel in each of those years, the amount of No. 6 fuel
8 used (or projected to be used) in each of those years by each unit, and the
9 average fuel cost per kwh based on No. 6 fuel actually consumed (or
10 projected to be consumed) in that year and the fuel conversion rate for No.
11 6 fuel used in each of those years.

12
13 IC 30-NLH With respect to the previous question, provide a table that shows
14 total gross generation, net energy production, losses and percentage
15 losses for each year 1992 to 2002 and advise where gross generation is
16 measured, where net energy production is measured and explain where
17 the losses occur and the reason for the changes from year to year.

18
19 IC 31-NLH Quantify the fuel savings/overruns (in barrels and dollars) for each
20 year 1992 to 2002 inclusive and as forecast for 2003 and 2004.

21
22 IC 32-NLH Indicate projected costs in U.S. dollars of No. 6 fuel in each of the
23 years 2004 - 2011, inclusive, based (a) on the forecasts adopted in the,
24 and (b) based on the best and most current information available to Hydro
25 together with a copy of the relevant forecast sources used.

26
27 IC 33-NLH Indicate projected exchange rates used by Hydro to convert No. 6
28 fuel costs in Canadian dollars in each of the years 2004 - 2011, inclusive
29 together with a copy of the relevant forecast sources used.

1 IC 34-NLH With respect to the evidence filed in May 2003, are the annual
2 prices for No. 6 fuel oil the weighted average purchase prices taking into
3 account the variation in monthly prices and monthly purchases? If not,
4 provide the weighted average purchase price for each year from 2002 to
5 2005 inclusive.

6

7 IC 35-NLH What was the total thermal production in each of 1995 – 2002 and
8 2003 to date, the amount of energy purchased from NUGS/PPAS in each
9 of those years, the average cost of No. 6 fuel/kWh generated from thermal
10 generation in each of those years and the power purchase costs of energy
11 purchases from NUGS/PPAS in each of those years?

12

13

14 **Operating costs**

15

16 IC 36-NLH List the expenses that Hydro considers “controllable”.

17

18 IC 37-NLH For each of the years 1992 to 2002 inclusive, what was the actual
19 amount of these “controllable” expenses?

20

21 IC 38-NLH What were the actual costs for salaries and benefits for each year
22 1992 to 2002 inclusive?

23

24 IC 39-NLH For each division in Hydro provide the number of approved
25 positions, the number of positions filled, the forecast salary and benefit
26 costs and the actual salary and benefit costs for the years 1992-2002 and
27 as forecast for 2003 and 2004.

1 **Wheeling**

2

3 IC 40-NLH Provide the current wheeling charge for Island Industrial

4 Customers, how it was determined, when it was last changed, and why it

5 was then changed?

6

7 IC 41-NLH Explain in detail, setting out all calculations and indicating the

8 source of all information as required in Schedule 1.5 of the Cost of Service

9 Study (particularly the source of the line 2 MWh estimate), how the

10 proposed wheeling rate was determined and the reasons for any proposed

11 changes in 2004.

12

13 IC 42-NLH Explain how forecast revenue from wheeling is derived and applied

14 in the calculation of Revenue to Cost Coverage ratios and confirm that

15 wheeling revenue is included as an “expense credit” for Transmission

16 Demand costs

17

18 IC 43-NLH Which of Hydro’s customers is capable of wheeling energy?

19

20 IC 44-NLH Will the opportunity to wheel energy be provided to all customers

21 who are capable of or wish to wheel energy?

22

23 IC 45-NLH If not, which customers will be permitted to wheel energy, and on

24 what basis and in what circumstances does Hydro propose that wheeling

25 shall be permitted?

26

27 IC 46-NLH Supply the data used in calculating the loss as used in the wheeling

28 rate.

1 **Labrador**

2
3 IC 47-NLH What are the 2002 rates charged for demand and energy to
4 Labrador Industrial Customers and what will those rates be in 2004?

5
6 IC 48-NLH Provide copies of the existing and any proposed contracts between
7 Hydro and its Labrador Industrial Customers.

8
9 IC 49-NLH What is the percentage increase in the rates proposed by Hydro for
10 its Labrador Industrial Customers?

11
12 **Industrial contracts**

13
14 IC 50-NLH Outline, for each of the Industrial Customers, the differences, if any,
15 between the proposed Industrial Contracts and the existing Industrial
16 Contracts and provide the forecast financial implication in dollars for 2004
17 of each of those changes for each of the Industrial Customers.

18
19 IC 51-NLH Provide the forecast dollar impact for each Industrial Customer in
20 2004 of each of the proposed changes in rates, including the effect of non-
21 renewal of any Interruptible “B” contracts.

22
23
24 IC 52-NLH Describe Hydro’s underfrequency load shedding program and the
25 benefits provided to the grid by the participation in this program by
26 Industrial Customers.

27
28 IC 53-NLH For the Industrial Contracts outline how the maximum “amount of
29 power on order” is determined, whether this has changed from previous
30 years and, if so, how it has changed.

1 IC 54-NLH Outline on what basis has Hydro decided to discontinue
2 Interruptible “B” contracts and list the customers affected and the dollar
3 impact of the decision for both Hydro and those customers?
4

5 IC 55-NLH How many kWh of energy have each of Corner Brook Pulp and
6 Paper Limited (CBPPL) and Abitibi Consolidated Company of Canada.
7 (ACCC) supplied to Hydro in each of the years 1995 - 2002 inclusive?
8

9 IC 56-NLH How much did Hydro pay each of CBPPL and ACCC for energy
10 supplied in each of the years 1995 - 2002 inclusive for energy surplus to
11 their needs?
12

13 IC 57-NLH What is the basis upon which Hydro paid for surplus energy from
14 CBPPL and ACCC each of 1995 - 2002?
15

16 IC 58-NLH What is the dollar value of the surplus energy supplied by each of
17 CBPPL and ACCC in the years 1995 – 2002 for which they were not paid
18 any compensation?
19

20 IC 59-NLH With reference to the proposed Industrial – Non-Firm rate, provide
21 the detailed reasons and calculations used in determining the amount per
22 month per kilowatt and provide the details to support the administrative
23 and variable operating and maintenance charge.
24
25

26 **Cost of Service Methodology**

27

28 IC 60-NLH Provide the following for each of the years 1994 - 2000 inclusive,
29 assuming the implementation of the Cost of Service Methodology
30 approved in the Public Utility Board 1993 Report
31

- 1 1. the total dollar amount which would have been billed to the
- 2 Industrial Customers in those years, exclusive of sales tax, for firm
- 3 power and for each class of non-firm service and for wheeling
- 4 (indicate subtotals for each class of service and overall total);
- 5
- 6 2. the total dollar amount which was billed to Industrial Customers;
- 7
- 8 3. the difference between 1 and 2.
- 9

10 IC 61-NLH Provide a Table showing the same information as requested in 18
11 above assuming implementation in 1994 of the 1993 Report .
12

13 IC 62-NLH Explain why Hydro did not apply to the Public Utilities Board to
14 implement the Cost of Service Methodology approved by the Board in
15 1993, given the power policy of the Province set out in Section 3(a)(i) of
16 the Electrical Power Contract Act, 1994 providing that the rates charged
17 “should be reasonable and not unjustly discriminatory.”
18

19 IC 63-NLH List all/any proposed changes in assignment on the Island
20 Interconnected System and the cost impact that each change has on the
21 Island customer classes.
22

23 IC 64-NLH What transmission lines and terminal stations associated with the
24 Holyrood gas turbine have been classified as demand, consistent with
25 other gas turbines.
26

27 IC 65-NLH Identify the dates and nature of any interconnections to the Hydro
28 Rural system in the period 1992 - 2000 and the operating load impacts for
29 Hydro Rural of those connections for 1992 - 2000.
30

- 1 IC 66-NLH Explain how the changes in bulk metering for bulk deliveries to
2 Hydro's Rural Interconnected Customers affected the forecast and the
3 actuals for bulk deliveries to that class starting in 2002.
4
- 5 IC 67-NLH How are NUG demand costs allocated among rate classes?
6
- 7 IC 68-NLH How are Power Purchase Agreement costs allocated among rate
8 classes? If this has changed since 2001, explain the nature of the
9 changes.
10
- 11 IC 69-NLH Indicate the overall cost benefits to ratepayers (through reduced
12 revenue requirements in 2002 and subsequent years) provided by each of
13 the NUGs /PPAS implemented since 1992.
14
- 15 IC 70-NLH Indicate the forecast kWh for 2004, and actual numbers for each
16 year to date of operation, of the generation for each NUG/PPA during the
17 winter months (January to March and November and December) and the
18 other months (April to October).
19
- 20 IC 71-NLH Compare mill/kWh costs for each NUG/PPA to costs forecast for
21 existing thermal facilities and for other new generation options available to
22 Hydro.
23
- 24 IC 72-NLH Explain the basis for setting NUG charges higher in 5 winter
25 months relative to the other months, and indicate the extent to which these
26 differences reflect Hydro's variability in seasonal time-of-use costs.
27
- 28 IC 73-NLH Explain the basis for (a) the Industrial Firm revenue credit of
29 (\$4,331) in Schedule 1.2, page 2, line 4, column 4, and (b) the Industrial -
30 Non Firm Revenues of \$49,752 in Schedule 1.2, page 2, line 5, column 2.

1 In each instance, indicate all billing determinants and rates assumed for
2 these estimates.

3

4 IC 74-NLH Indicate any cost based rationale for the demand charge of \$1.50
5 per kW proposed for non-firm sales to IC.

6

7 IC 75-NLH Confirm that the 2004 COSS provides no analysis of any demand
8 related costs for non-firm sales, and that the costs assigned to this service
9 in the COSS are solely the firm energy cost of \$.02808 per kWh.
10 (Schedule 1.3, page 1)

11

12 IC 76-NLH Provide a table setting out the assumed COSS generation (MWh)
13 by source (hydraulic, No. 6 fuel, diesel fuel, gas turbine fuel, power
14 purchases from NUGs, power purchases from non-NUGs) and month for
15 the test year 2004 for the Island Interconnected System and indicate the
16 likely percent of load supplied by thermal during off-peak hours (low load
17 evenings and weekend hours) during each month.

18

19 IC 77-NLH Provide a table or the Island Interconnected System test year 2004
20 setting out for each rate class the following projections: billing demands at
21 customer meter; coincident peak loads at customer meter and at
22 generator (after provision for losses); 1CP kW at customer meter and at
23 generator (after provision for losses); sales at customer meter and
24 generation energy requirements after losses; number of customers for
25 COSS allocation purposes. Explain all assumptions used to derive these
26 projections.

27

28 IC 78-NLH Outline the impact of splitting hydraulic plant costs for the Island
29 Interconnected System between energy and demand based on the system
30 load factor. Indicate the change that this creates from the previous COSS
31 adopted by Hydro for the 1992 rate hearing

1 **Subsidy**

2
3 IC 79-NLH Provide a Table showing the total amount of the Industrial
4 Customers' contribution to the Rural subsidy in each of 1992, 1993, 1994,
5 1995, 1996, 1997, 1998 and 1999 including, as a separate item for each
6 year, the amount of subsidy re-allocated to Industrial Customers through
7 the Rate Stabilization Plan.

8
9 IC 80-NLH Provide a Table showing (a) the total amount contributed by the
10 Industrial Customers to the Rural subsidy in 1995, 1996, 1997, 1998 and
11 1999 and (b) the amount which would have been contributed by the
12 Industrial Customers in each of those years if the direction of the
13 Legislature in Section 3(a)(iv) of the Electrical Power Control Act, 1994
14 that the Industrial Customers' contribution to the Rural subsidy "shall be
15 gradually reduced during the period prior to December 31, 1999" had been
16 implemented to reduce their contribution by 20% in 1995, by 40% in 1996,
17 by 60% in 1997, by 80% in 1998 and by 100% in 1999.

18
19 IC 81-NLH Did Hydro apply to the Public Utilities Board in the period June 9,
20 1994 to November 19, 1999 to implement the power policy of the province
21 as expressed in Section 3(a)(iv) of the Electrical Power Control Act, 1994
22 that the Industrial Customers' contribution to the Rural subsidy "shall be
23 gradually reduced during the period prior to December 31, 1999." If not,
24 why not?

25
26 **GNP**

27
28 IC 82-NLH Provide the 2004 Forecast Cost of Service with the generation
29 assets, the associated terminal stations and the 138 kv & 66 kv
30 transmission lines on the Great Northern Peninsula specifically assigned
31 to the Island Rural Interconnected Customers.

1

2 IC 83-NLH What has been the total annual energy produced from the St.
3 Anthony diesel plant, the Roddickton mini-hydro and the mobile diesel
4 units in Roddickton for each year since connection to the interconnected
5 system.

6

7 IC 84-NLH With regard to the Great Northern Peninsula interconnection in
8 1996, which customer classes benefited from the interconnection?

9

10 IC 85-NLH With regard to the Great Northern Peninsula interconnection in
11 1996, how did each customer class benefit from the interconnection and
12 what, if any, is the dollar value of the benefit to each?

13

14 IC 86-NLH With regard to the Great Northern Peninsula interconnection in
15 1996, does the interconnection increase the revenue requirement to any
16 class of customers in the 2004 forecast Cost of Service? If so, which class
17 or classes and by how much?

18

19 IC 87-NLH For each year since 1996, provide the annual generation, annual
20 radial load and net delivered to the 230 kv grid from the Great Northern
21 Peninsula 1996 interconnection.

22

23 IC 88-NLH With respect to the diesel units at St. Anthony, Roddickton, and
24 Hawkes Bay, when did each become part of the Island Interconnected
25 system?

26

27 IC 89-NLH With respect to the diesel units at St. Anthony, Roddickton, and
28 Hawkes Bay, provide a chart showing the number of times each unit has
29 been used in each year since it became interconnected, the reason it was
30 used on each occasion and the class of customers in need of emergency
31 or peaking capacity on each occasion.

1 IC 90-NLH With respect to the diesel units at St. Anthony, Roddickton, and
2 Hawkes Bay, provide the number of kWh generated by each unit in each
3 year since it was interconnected, the amount of fuel consumed by that unit
4 in that year, the cost of the fuel consumed in that year, the capital costs
5 incurred in relation to that unit in that year and the operating and
6 maintenance costs associated with that unit in that year.

7
8 IC 91-NLH With respect to the diesel units at St. Anthony, Roddickton and
9 Hawkes Bay, what was the average annual revenue from energy
10 generated by each of those units in each of the years since they were
11 interconnected?

12
13 IC 92-NLH Provide the same information as requested in questions 88-91
14 above for the gas turbine units at Stephenville Hardwoods.

15
16 IC 93-NLH Provide the same information as requested in questions 88-
17 91above for the Roddickton mini-hydro plant.

18
19 IC 94-NLH Provide the same information as requested in questions 88-91 with
20 respect to Hydro owned generation on the Burin Peninsula.

21
22
23 IC 95-NLH Are any costs of the Roddickton wood chip plant allocated to
24 Hydro's current customers? If so, to whom, on what basis and what are
25 those costs?

26
27 IC 96-NLH Provide the question and Hydro's answer to IC 203 in the 2001
28 General Rate Referral.

29
30 IC 97-NLH In 1995, the Board recommended "that the prudence of costs
31 associated with the St. Anthony/Roddickton interconnection be reviewed

1 at the next Hydro rate referral, following the interconnection, for the
2 purpose of determining recoverable costs.” Provide all evidence available
3 to Hydro as to why this interconnection was undertaken, and that the costs
4 were prudently incurred and in the best interest of customers on the Island
5 Interconnected System.

6

7 IC 98-NLH Provide a copy of Hydro’s answer to IC-8 from the 1998 Isolated
8 Rural Rate Hearing.

9

10 IC 99-NLH Provide a copy of Hydro’s response to IC-14 from the 1995 Isolated
11 Rural Rate Hearing.

12

13 IC100-NLH Provide the forecast deficit for the Rural Interconnected System if
14 all transmission, generation and distribution costs on the Great Northern
15 Peninsula were specifically assigned to Hydro’s Island Interconnected
16 Rural Customer class. If this information appears in any Cost of Service
17 Study that has been already provided, identify the page and line number
18 where the information appears.

19

20 IC101-NLH Provide copies of NLH-1, NLH-2, NLH-3 and NLH-4 from the 1995
21 Isolated Rural Rate Hearing.

22

23 IC102-NLH Provide a copy of Hydro’s answer to IC-38 from the 1995 Isolated
24 Rural Rate Hearing.

25

26 IC103-NLH Please provide a definition, including names of all communities, for
27 the following terms as used by Hydro:

28 i) St Anthony’s and Roddickton area

29 ii) Area north of Hawke’s Bay

30 iii) Hawke’s Bay area

31 iv) GNP interconnection area.

1 IC104-NLH With reference to PU26 (1999-2000), please provide copies of the
2 Hydro application for this hearing, including pre-filed testimony, a copy of
3 the report of Dr. Wallace Read to the Board, any follow up testimony or
4 evidence filed by Dr. Read, and any other expert testimony filed in that
5 proceeding. Also, please provide a copy of information request PUB-8
6 from the hearing.

7
8 IC105-NLH Provide a list of all communities and areas which are part of the
9 Island Interconnected Rural System and which are adjacent to areas
10 served by NP together with the loads by month for each community and
11 area, the peak loads by month month for each community and area, the
12 local generation capacity that is in place month for each community and
13 area and the location of that generation.

14
15 IC106-NLH Provide a breakdown, based on the forecast 2004 Cost of Service,
16 of the cost of service impacts to each customer class of transferring to NP
17 each of the areas described in the previous question assuming that only
18 Hydro generation in those areas remains assigned as a Common cost.

19
20 **Capital Structure and Rate of Return**

21
22
23 IC107-NLH Indicate the Revenue to Cost Coverage Ratios (RCC's) for the
24 Industrial Class and NP by year from 1992 to 2004 based on all of Hydro's
25 available COS studies (prospective and actual) for these years. Indicate in
26 each instance the portion (if any) of the RCC for each of these rate
27 classes affected by Rural Deficit charges.

- 1 IC108-NLH What was the margin in dollars, the Board's approved interest
2 coverage ratio and the resulting inferred rate of return on equity for each
3 of the years 1991 to 2001?
4
- 5 IC109-NLH Provide copies of the Annual Reports of NLH for the years 2001
6 and 2002.
7
- 8 IC110-NLH Provide a copy of the latest five year financial plan of NLH.
9
- 10 IC111-NLH Provide the interest coverage ratios of NLH, both regulated and
11 consolidated, for each of the years 2001, 2002 and projected 2003, as
12 well as the forecast interest coverage ratio for 2004.
13
- 14 IC112-NLH Produce the Consensus Forecasts for March 10, 2003 as referred
15 to in footnote 2 on page 10 of the Cost of Capital Evidence.
16
- 17 IC113-NLH Produce the report "Demographic Change: Newfoundland and
18 Labrador Issues and Implications", April 2002 referred to in footnote 3 on
19 page 10 of the Cost of Capital Evidence.
20
- 21 IC114-NLH Produce the Provincial Outlook, Long-Term Forecast 2003 of the
22 Conference Board of Canada referred to at line 6 of page 10 of the Cost of
23 Capital Evidence.
24
- 25 IC115-NLH Produce the Dominion Bond Rating Service report on NLH of July
26 30, 2002 referred to at line 28 of page 11 of the Cost of Capital Evidence.
27
- 28 IC116-NLH Produce the Standard & Poor's report "Canadian Regulation
29 Reassessed as a Ratings Factor" March 5, 2003, referred to at line 7 of
30 page 12 of the Cost of Capital Evidence.
31

- 1 IC117-NLH Provide a table showing annual debt to equity ratios for NLH, both
2 regulated and consolidated for each of the years 1977 through 2002 with
3 projections for 2003 and forecast for 2004.
4
- 5 IC118-NLH Produce the report The Canadian Electric Industry in 2002, DBRS
6 referred to at line 27 of page 15 of the Cost of Capital evidence.
7
- 8 IC119-NLH Provide the debt to equity ratios of the Newfoundland and Labrador
9 Liquor Corporation and the Newfoundland and Labrador Housing
10 Corporation.
11
- 12 IC120-NLH Define the meaning of the words “near term” as they appear in line
13 24 on page 17 of the Cost of Capital evidence.
14
- 15 IC121-NLH In reference to lines 6-7 at page 18 of the Cost of Capital evidence,
16 is it the view of Ms. McShane that NLH has been operating as self-
17 supporting commercial enterprise, and, if so, for how long has it been so
18 operating?
19
- 20 IC122-NLH If a shareholder in an investor-owned average risk utility receives a
21 before-tax return of 11.5%, what is, on average, the shareholder’s after tax
22 return?
23
- 24 IC123-NLH Restate the numbers at lines 30-31 of page 26 and lines 1-4 of
25 page 27 of the Cost of Capital evidence using as inputs the numbers from
26 each forecast published by Consensus Economics between January 1,
27 2002 and June 30, 2003.
28
- 29 IC124-NLH Identify any of the LDC’s referred to in line 19 at page 44 of the
30 Cost of Capital evidence and any of the companies referred to in line 1 at
31 page 50 the Cost of Capital evidence which have the benefit of a rate

1 stabilization scheme which allows it to recover over time all of the revenue
2 associated with actual sales varying from its forecast sales.

3

4 IC125-NLH Provide details of any rate stabilization schemes associated with
5 the companies referred to line 1 of page 50 of the Cost of Capital
6 evidence.

7

8 IC126-NLH Provide particulars of any decisions by Canadian utility regulators in
9 the past 20 years which have specifically adopted and relied upon the
10 comparable earnings test for the purpose of determining rate of return on
11 equity for a utility.

12

13 IC127-NLH Provide a copy of the Electricity Policy Review referenced on p. 12,
14 lines 10-12 of the Cost of Capital evidence.

15

16 IC128-NLH Reference: Cost of Capital: Evidence Schedule I. Provide
17 comparable debt ratios and interest coverage figures for 2002.

18

19 IC129-NLH Reference: Cost of Capital: Evidence Schedule. Confirm that the
20 gas LDC's included in the analysis in Schedule XV is the same as those
21 listed in Schedule XVI and, if you cannot confirm this, please provide a list
22 of the companies included in the study for each time period listed.

23

24 IC130-NLH Reference: Cost of Capital: Evidence Schedule XIII. Confirm that
25 TSE Review betas are adjusted betas and, if you cannot confirm the
26 above, please provide the details of TSE Review's estimation procedures.

27

28 IC131-NLH Provide a copy of the TSE Review issue underlying Schedule XIII.

29

30 IC132-NLH Reference: Cost of Capital: Evidence p. 26-27 and p. 42-43. Based
31 on a March 10, 2003 Consensus Forecast for the long-term government

1 bond yield of on average 5.45% (p. 26 line 30 to p. 27 line1), a March
2 2003 spread between 10 and 30 year Canadas of 49 basis points (p. 27
3 lines 1-2), a market risk premium of 6.0 – 6.5% (p. 43 lines 4-5) and
4 electric betas of .60 - .65 (Table 8 p. 42), Ms. McShane estimates the
5 equity risk premium for an average Canadian utility at approximately 4.0%.
6 Provide an estimate as of today (July 2003) with all documents relied upon
7 for the estimation, including but not limited to the interest rate forecast
8 relied upon, current beta estimates, and the current spread between 10
9 and 30 year Canada long bonds.

10

11 IC133-NLH Reference: Cost of Capital: Evidence p. 8 lines 20-21 and
12 Schedule II to Corporate Overview Evidence (Discussion Paper on Hydro
13 Dividends For Minister of Mines and Energy p. 2). Provide a complete list
14 of the amount of cash and other assets contributed to Newfoundland and
15 Labrador Hydro by its “equity shareholders” in the same format as the
16 dividend payout schedule. i.e. provide the dollar amounts contributed and
17 the date of the contribution.

18

19 IC134-NLH Reference: Corporate Overview Evidence p. 23-24. The evidence
20 states that Newfoundland and Labrador Hydro currently is discussing the
21 issue of dividend payments from Newfoundland and Labrador Hydro to the
22 Province with the Minister of Mines and Energy. Has a response to the
23 correspondence attached as Schedule II to Mr. Well’s evidence been
24 received? If a response has been received, provide a copy of the
25 complete response. If no response has been received to the
26 correspondence attached as Schedule II of this Evidence, explain what
27 steps Newfoundland and Labrador Hydro has taken or plans to take to
28 resolve the issue.

29

30 IC135-NLH Reference: Cost of Capital: Evidence p. 13 lines 9-11. Please
31 confirm that Newfoundland and Labrador Hydro currently face no

1 competition in Newfoundland and Labrador's power market. If you cannot
2 confirm this please provide a schedule showing the demand that has been
3 met by competitors during the past five years.
4

5 IC136-NLH Reference: Cost of Capital: Evidence p. 13 lines 9-11. Confirm
6 that Newfoundland and Labrador Hydro is not subject to deregulation. If
7 you cannot confirm this, please explain the degree to which Newfoundland
8 and Labrador Hydro is being deregulated and provide relevant
9 documentation.
10

11 IC137-NLH Reference: Cost of Capital: Evidence Schedule XIV. Provide a
12 copy of the data sources used in Schedule XIV. Also, indicate which data
13 series from the documents were relied upon.
14

15 IC138-NLH Reference: Cost of Capital: Evidence Schedules XX and XXI.
16 Provide a copy of the Standard & Poor's Research Insight used to develop
17 the information in the schedules.
18

19 **Rate Stabilization Plan**
20

21 IC139-NLH Produce the monthly Rate Stabilization Plan reports from October,
22 2001 to date.
23

24 IC140-NLH Restate the Rate Stabilization Plan report for January 2003 on the
25 assumption that Newfoundland Power was charged a demand/energy rate
26 consistent with the recommendations of Stone and Webster.
27

28 **Depreciation**
29

30 IC141-NLH What is the net change in depreciation cost for forecast 2004 over
31 final forecast 2002 and what is the net effect for each of Hydro's Customer

1 Classes? Provide a breakdown of the depreciation components affecting
2 or contributing to the net change.

3

4 IC142-NLH Provide a copy of the most recent depreciation study applicable to
5 Hydro and a copy of any amendments or updates to the study which have
6 been approved by the Board.

7

8 IC143-NLH Provide a list of the capital assets at or associated with the
9 Holyrood generating station , their in-service dates, their expected useful
10 lives and the depreciation schedule for each.

11

12 IC144-NLH Provide the actual depreciation for the Island Interconnected
13 System for the years 1995 to 2002 inclusive plus the estimate for 2003
14 and 2004.

15

16 IC145-NLH Assuming no additional assets, provide the depreciation for the
17 Island Interconnected system for each year 2005 through 2010.

18

19 **New generation**

20

21 IC146-NLH Provide the estimated energy supply costs for 2004 in cents/kWh
22 (indicating separately the costs for fuel, other O&M and capital cost
23 recoveries); estimated MW capacity, firm and average annual energy
24 capability, and nearest reasonable potential in-service date for each of the
25 following proposed or potential developments for additional system
26 generation:

27

- 28 1. Granite Canal hydro electric project;
- 29 2. Island Pond hydro electric project;
- 30 3. A combined cycle plant at Holyrood;
- 31 4. Holyrood Unit 4 conventional steam.

1 **Holyrood**

2
3 IC147-NLH Describe the function of the Holyrood unit #3 as a synchronous
4 condenser including what effect, if any, such use has on fuel consumption.
5

6 IC148-NLH Explain the synchronous condenser use impacts reported for 1992
7 and 2000 in Schedule V of R. J. Henderson's 2001 GRA evidence, and
8 provide similar numbers and explanations for each additional year since
9 2000 when such impacts have occurred. Explain if and why impacts from
10 condenser use are forecast for the 2004 test year and beyond, and
11 explain under what conditions the condenser use could provide benefits in
12 this test year.
13

14 IC149-NLH What benefits, if any, would accrue from equipping another unit at
15 Holyrood to act as such a condenser?
16

17 IC150-NLH Provide a schedule showing for each day in the years 1996, 2000,
18 2001 and 2002 and 2003 to date how many units at Holyrood were
19 operating.
20

21
22 IC151-NLH Provide a Schedule in the form of Schedule V to the evidence of R.
23 J. Henderson in the 2001 General Rate Application showing each of the
24 years from 1992 to 2004. Break out Holyrood No. 6 fuel generation from
25 other thermal.
26

27 IC152-NLH Provide Holyrood capacity factor data for the five years 1996 –
28 2000 and for the five years 1997-2001 and 1998-2002 in the same format
29 as in Greneman's schedule 4.3 together with a copy of Schedule 4.3 to
30 Brickhill's evidence in the 2001 General Rate Application.
31

1 IC153-NLH Provide the 2004 Forecast Cost of Service with the Holyrood
2 capacity factor being the average for the three year period 2001 – 2003.

3
4 IC154-NLH Provide, on the same basis as Schedule 4.3, the calculations to
5 indicate the forecast net capacity factor for Holyrood for the year 2004.
6 Explain the factors affecting variances in this capacity factor for the years
7 1997 through 2002. Assuming that the COSS for 2004 assumes No. 6 fuel
8 consumption based on average hydraulic generation availability and
9 forecast loads, why would it not be more appropriate to use the net
10 capacity factor consistent with these assumptions rather than one based
11 on the prior 5-year actual average? In the alternative, given the dramatic
12 differences from 2001 forward, why isn't a three year average more
13 appropriate?

14
15 **Load**

16
17 IC155-NLH Provide a Schedule in the form of Schedule XI to the evidence of
18 Mr. Haynes showing each of the years from 1994 to 2001.

19
20 IC156-NLH What is Hydro's "firm energy requirement" for 2004?

21
22 IC157-NLH What were Hydro's "firm energy requirements" in each of 1992 -
23 2002, both forecast and actual?

24
25 IC158-NLH Provide a copy of the most recent LOLH study and a copy of the
26 study submitted in the 2001 GRA.

27
28 IC159-NLH Provide the short and long term load forecasts filed with the Board
29 in each of the rate referrals made by Hydro since 1985 together with
30 actual loads experienced in each of the years covered by such forecasts
31 to date.

- 1 IC160-NLH Indicate the average energy capability of each of Hydro's
2 hydro-electric generating stations for the years 1994 to 2004 and identify
3 the changes to such capability associated, in each year, with the addition
4 of the previous year's hydrological data to the long term average (and with
5 any other changes). Explain the assumptions and derivation for Schedule
6 IV of Mr. Haynes' evidence on total system energy storage by month
7 (minimum energy storage target and maximum energy operating level),
8 and provide equivalent schedules for each year from 1994 to 2004.
9
- 10 IC161-NLH Provide the economic forecasts prepared by the Provincial
11 Government and used in creating the Long-Term Planning Load Forecast.
12
- 13 IC162-NLH Outline the assumptions on provincial economic activity and relative
14 energy prices used in formulating the Long-Term Planning Load Forecast,
15 including inflation, exchange rates, and borrowing costs for different short
16 and long-term debt.
17
- 18 IC163-NLH Recalculate the LOLH as shown on Table 8 in the evidence of Mr.
19 Haynes assuming that the Corner Brook and Paper and Exploits River
20 capacity did not exist and assuming that the total load was reduced by an
21 amount equal to the amount of load which those facilities are forecast to
22 meet in each year and provide the monthly breakdown of those LOLH
23 figures.
24
- 25 IC164-NLH Provide monthly LOLH calculations for 2004 omitting the generation
26 provided by the Roddickton Mini-Hydro, the St. Anthony Diesel, the
27 Hawke's Bay diesel and the Roddickton diesel.
28
- 29 IC165-NLH Identify all equipment on the Island Interconnected System
30 primarily used for voltage support and outline the nature of the support

1 provided and the extent to which each contributes to voltage support for
2 the system.

3

4 IC166-NLH What was the actual load factor for the Island Interconnected
5 System in 2002?

6

7 IC167-NLH What was the forecast load factor for the Island Interconnected
8 System for 2002 used in the 2002 Final Forecast Cost of Service?

9

10 IC168-NLH Provide the actual 2002 Cost of Service assuming that the Island
11 Interconnected System load factor was as forecast.

12

13 IC169-NLH For the Island Interconnected System, provide actual system load
14 factor information in the same format as Greneman's schedule 4.2 for
15 each year 1992 – 2002 inclusive plus the 2003 and 2004 forecast.

16

17 IC170-NLH Provide the actual customer operating load and the forecast
18 customer operating loads for the Island Industrial Customers,
19 Newfoundland Power and Hydro Rural for each of the years 1995 - 2002.

20

21 **Losses**

22

23 IC171-NLH Provide the total energy supply, the system losses and the system
24 loss percentage for the years 1992 to 2002 inclusive.

25

26 **Preferential rates**

27

28 IC172-NLH With respect to Rural Customers, what is the proposed percentage
29 increase to the fish plants, churches and community halls as a result of
30 Hydro's May, 2003 filing, what is the proposed increase as a result of the

1 recent Government directive and what are the expected savings in dollars
2 to those customers as a group as a result of the re-filing?

3

4 IC173-NLH Provide the difference in the cost over the next five years for Rural
5 Government agencies and departments (including schools and hospitals)
6 between the rate plan that Hydro proposed in its May 2003 GRA and the
7 rate plan to be proposed in its Revised GRA as a result of recent Orders in
8 Council.

9

10 IC174-NLH Provide the difference in the cost over the next five years for Rural
11 fish plants between the rate plan that Hydro proposed in its May 2003
12 GRA and the rate plan to be proposed in its Revised GRA as a result of
13 recent Orders in Council.

14

15

16 **Rate Structure**

17

18 IC175-NLH Compare in detail the COSS firm energy cost and the non-firm
19 energy charge rate as proposed in Schedule A of the Application,
20 assuming the average cost of fuel assumed for the COSS; indicate how
21 this charge could likely vary by month and time of day, based on the
22 assumptions adopted for COSS as to expected fuel use. Explain how in
23 practice it will be determined what fuel source is used to supply non-firm
24 energy. What will happen if this energy is supplied in whole or in part from
25 non-thermal sources?

26

27 IC176-NLH Provide a copy of all studies and/or analysis done by Hydro since
28 1992 on the issue of implementing a demand and energy charge pricing
29 structure for Newfoundland Power. Assess these rate options in light of
30 each of the rate design principles set out in the Pre-filed evidence.

31

1 IC177-NLH Indicate the factors that Hydro believes to support an energy only
2 rate for NP as being in the best interests of efficient and fair rates.
3

4 IC178-NLH Based on the 2004 test year COSS, provide the demand and
5 energy rates which would need to be charged to NP based on the criteria
6 for the demand and energy rates proposed for the Industrial Customers.
7

8 IC179-NP Please provide NP's incremental revenues from increased sales to
9 its customers, by class and by demand/energy rates;
10

11 IC180-NP Please provide NP's forecast sales for 2002, 2003 and 2004 by
12 customer class;
13

14 IC181-NP Please provide an estimate of the incremental revenues to NP from
15 sales to its customers if sales in 2004 exceed the load forecast by 5% (i.e.
16 due to a cold winter);
17

18 IC182-NLH Please provide an estimate of the incremental costs to NP for
19 purchased power in 2004 if loads exceed the load forecast by 5% based
20 on Hydro's proposed rates;
21

22 IC183-NLH Please explain in detail any additional costs, other than purchased
23 power, for NP if sales exceed the load forecast by 5% and explain in detail
24 how the above situation would be addressed by Hydro's RSP and by NP's
25 rate stabilization mechanisms
26

27 IC184-NLH Provide any reports or analysis done by Hydro since 1998 to
28 assess time of use rates for Industrial or other customer classes on the
29 Island Interconnected System.
30

1 IC185-NLH Indicate the extent to which Hydro's bulk costs for generation and
2 transmission on the Island Interconnected System vary on a time of use
3 basis under normal conditions. Indicate likely peak and off peak periods
4 during each season on this System that might be used for rate purposes,
5 as well as any material variations in seasonal costs that might be
6 considered for such rates.

7
8 IC186-NLH Indicate Hydro's assessment of time-of-use rate implementation
9 within the next five years at least for NP and/or Industrial Customers, and
10 explain fully the basis for this assessment.

11
12
13 **NP generation credit**

14
15 IC187-NP Please provide the costs to NP in 2003 and 2004, broken out by
16 O&M, return on rate base and depreciation, for its peaking generation.
17 Please confirm that all fixed O&M, depreciation, and return on rate base is
18 recovered in the rates charged to NP's customers. Please confirm that all
19 fuel and variable O&M is recovered from Hydro when NP is requested to
20 operate the units.

21
22 IC188-NLH Please confirm all times that the NP peaking generation units were
23 run from 1996 to the present; providing a full schedule showing all times
24 the units were run, the reason for the units being run, whether they were
25 operated for Hydro peaking requirements and the reason these were not
26 considered 'purchases of power' by Hydro.

27
28 IC189-NLH What is the net capacity credit (i.e. generation credit less
29 adjustment to include load supplied by NP)

30

1 IC190-NLH How does the generation credit impact the revenue requirement
2 from Newfoundland Power and what is the total amount of the impact?

3
4 IC191-NLH Provide a revised cost of service assuming that Newfoundland
5 Power's peak is not reduced for generation credit.

6
7 IC192-NLH In each of the years 1992 through 2000, on how many occasions
8 has Hydro requested Newfoundland Power to operate its stand-by gas
9 turbines and diesel units? For how long on each occasion?

10
11 IC193-NLH In each of the years 1992 through 2000, on how many occasions
12 has Hydro interrupted Stephenville ACI pursuant to its interruptible
13 contract? For how long was power interrupted on each occasion?

14
15 IC194-NLH Does Hydro plan to renew or extend its interrupted/curtailable
16 power arrangement with ACCC - Stephenville when it expires? If not, why
17 not? If not, what does Hydro propose to replace that lost capacity? If not,
18 what is the anticipated cost per kilowatt of the alternate source of energy?

19
20 **General questions**

21
22 IC195-NLH What has happened since 2001 with respect to the proposed Wind
23 Demonstration Project?

24
25 IC196-NLH What is the average cost in cents per kWh for wind generation in
26 other places in Canada where it is used or being tried?

27
28 IC197-NLH List the customers and annual sales that make up the non-
29 regulated sales.

IC198-NLH What has Hydro's experience been with respect to water to energy conversion factors since the implementation of the Energy Management System in 1989?

IC199-NLH Outline the actual cost savings which have been achieved as a result of each of the capital projects approved for 1999, 2000 and 2001 and the dollar impact of each of those projects on operating and maintenance costs in 2000, 2001 and 2002.

IC200-NLH With respect to each of the projects referred to in the previous question, which, if any, have resulted in increased production and provide the data or evidence to back that up.

Dated at St. John's, this 18th day of July, 2003.

STEWART MCKELVEY STIRLING SCALES

POOLE ALTHOUSE

Janet M. Henley Andrews, Q.C.

Joseph S. Hutchings, Q.C.

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Attention: Maureen Greene, Q.C.

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TO: Newfoundland Power
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