

**PRE-FILED 2<sup>ND</sup> SUPPLEMENTARY TESTIMONY OF  
C.F. OSLER  
IN REGARD TO NEWFOUNDLAND & LABRADOR HYDRO  
GENERAL RATE REVIEW**

*Submitted to*

The Board of Commissioners of Public Utilities

*On behalf of*

Island Industrial Customers

*Prepared by*

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1     **1.0     INTRODUCTION**

2     This testimony has been prepared for the four Island Industrial Customers (IC) of Newfoundland and  
3     Labrador Hydro (Hydro) by InterGroup Consultants, Ltd. (InterGroup) under the direction of Mr. C.F.  
4     Osler. It is additional supplementary evidence to the pre-filed testimony of C. F. Osler filed on August 15,  
5     2001 and the supplementary evidence filed on September 12, 2001 for the public hearing into an  
6     Application (the "Application") by Hydro to the Board of Commissioners of Public Utilities (Board) dated  
7     May 31, 2001, and addresses matters arising from review of questions and answers specifically related to  
8     Hydro's Rate Stabilization Plan (RSP).

9  
10    As noted in the August 15, 2001 testimony, InterGroup has been asked to identify and evaluate issues  
11    relating to the following aspects of Hydro's filing, taking into account normal regulatory review  
12    procedures and principles appropriate for Canadian electric power utilities:

- 13  
14           1. revenue requirements for 2002 as submitted by Hydro; and  
15           2. cost of service and rate structures, particularly insofar as these rates affect the Island IC.

16  
17    The August 15, 2001 testimony addressed the RSP issues in general, and the September 12, 2001  
18    supplementary testimony addressed the operation of the RSP in 2002 and beyond, but Hydro's responses  
19    up to that time had provided insufficient information to allow a full assessment of the past allocation of  
20    RSP amounts between various rate classes.

21  
22    This second supplementary testimony focuses on the RSP and in particular issues related to operation of  
23    the RSP in the years prior to 2002.

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26  
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## 1 2.0 RATE STABILIZATION PLAN OVERVIEW

2 As noted in Hydro's Application Schedule A page 5 of 27, Hydro's Rate Stabilization Plan addresses three  
3 primary variables:

- 4 • **Hydraulic Production Variation:** The RSP protects Hydro from variations in the  
5 amount of energy produced by hydraulic plants, which is intended to be a proxy for the  
6 uncontrollable variation in water flow availability. Note however that the RSP also protects  
7 Hydro from variations in plant availability that are not related to water flows<sup>1</sup>.
- 8 • **Fuel Cost Variation:** The RSP protects Hydro from variations in the price of fuel  
9 purchased to operate Holyrood generating station from the GRA approved price.
- 10 • **Load Variation:** The RSP compensates Hydro for any variation in net income (change in  
11 revenues less change in fuel costs) due to changes in loads from the GRA forecast levels.

12  
13 In addition, to the above, the **Rural Rate Alteration** component of the plan requires Hydro to credit the  
14 RSP with any increases in revenue that it receives as a result of increases in NP's retail rate (due to the  
15 application of NP's retail rates to Hydro's rural customers).

16  
17 Other than the revenue portion of the load variation, which is considered to be customer-class-specific,  
18 the RSP is entirely based on fuel cost variations from the various sources (hydraulic, fuel price and load)  
19 Fuel expenses are normally considered to be related to customer's use of energy (as opposed to demand)  
20 and this is consistent with Hydro's traditional and proposed treatment of #6 fuel costs in the Cost of  
21 Service (COS), where fuel is assigned 100% to energy. As reviewed in the September 12, 2001  
22 supplementary evidence, this is the basis for Hydro proposing to assign RSP-related balances to NP, IC  
23 and Rural based on 12 months-to-date energy use in 2002 and beyond.

24

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<sup>1</sup> By using the metered hydraulic generation as the input to the RSP calculation (rather than a measure such as volume of water passed by each various hydraulic station), Hydro effectively is protected from reductions in hydraulic generation regardless of whether these are due to uncontrollable rainfall and water flow variations, or due to poor maintenance procedures on the part of Hydro, such as lengthy repairs to hydraulic units or transmission outages on generation-interconnection lines.

### 1    **3.0       RSP OPERATION PRE-2002**

2    The operation of the RSP has resulted in ongoing balances (positive or negative) being carried forward  
3    from year-to-year since 1985. Hydro proposes to continue to operate the RSP in order to collect the full  
4    current outstanding balance from customers in future years. The amounts Hydro now includes in the plan  
5    balance that it proposes to recover from customers is based on the charges to the fund each year since  
6    1985, the assignment to each of NP and IC in each of those years, and the collection of RSP amounts  
7    from customers via the per-kW.h rider that varies from year-to-year. As a result, review of the operation  
8    of this fund in past years is required to determine that the current balance proposed to be collected from  
9    customers is fair; that is, amounts charged to the plan are properly calculated and that a fair allocation of  
10   these costs between NP, IC and Rural Interconnected customers is being performed.

11

12   In addition, this is the first time that charges to IC via the RSP have been reviewed by the Board.

13

14   Hydro has now filed sufficient detail regarding the operation and allocation of the RSP for interveners to  
15   be able to follow the process used in the monthly and annual calculations<sup>2</sup>. Although there is not  
16   sufficient detail to follow the calculations made in each month, the available evidence now clarifies the  
17   approach and methods used by Hydro. Based on this clarification, it is concluded that Hydro's process  
18   results in substantive balances in the fund being improperly allocated to NP, IC and Rural Interconnected  
19   customers based on reallocation of cost-of-service amounts that are not properly part of the RSP.

20

21   Hydro's filings provide the ability to review certain months where sufficient information has been provided  
22   to detail the mechanics Hydro applies in operating the RSP. The most complete example is December,  
23   2000.

### 24   **3.1       REVIEW OF RSP OPERATION**

25   The December 2000 RSP report is included in IC-73. This report shows an annual charge to the RSP of  
26   \$12,765,000 at page 14, which includes interest of \$378,000. Excluding interest, the amount charged to  
27   the plan is \$12,388,000. These figures are discussed in further detail in Appendix A.

28

29   The specific mechanics of the various components of the RSP have been reviewed by Hydro and other  
30   intervenors. The hydraulic and fuel price components are operated as one would expect, and the rural  
31   rate alteration component is similarly simple.

32

33   The load variation component, however, is the exception. In order to determine the revenue variation  
34   due to variation in loads, Hydro is required to track sales by customers, and to apply the somewhat  
35   coarse assumption that any incremental load changes from forecast (up or down) result in either extra

---

<sup>2</sup> IC-73 shows the monthly operation of the RSP charges back to 1992. IC-271 (Rev) shows the December 2000 allocation of the balances in the plan to NP and IC, other than the derivation of the Rural deficit allocation ratios (similar information is filed in IC-272 (a) for December 2001 and IC-278 for April 2001). IC-282 (including IC-282 (d) filed on November 23, 2001) shows the derivation of the rural deficit assignment ratios for April 2001.

1 costs for #6 fuel at Holyrood, or savings in #6 fuel, at the 1992 COS fuel price. Hydro then tracks  
2 separately the revenue variation component for NP and IC (which are specifically assigned to each of  
3 these customers), and the fuel cost variation component (which is added to the other variations noted  
4 above (hydraulic and fuel cost) to be allocated via a Cost-of-Service adjustment).

5  
6 As reviewed in NLH-99, the load variation component provides substantial protection to Hydro from  
7 errors in its load forecast and changes in all factors influencing energy sales, including weather,  
8 economy, changing consumer fuel mix requirements, etc. The load variation component has provided  
9 Hydro with substantial additional income in 8 of the past 9 years<sup>3</sup> – as much as \$5.3 million in 1999 –  
10 which has clearly played a marked role in Hydro being able to avoid regulatory review by the Board over  
11 this period.

12  
13 The load variation component also required Hydro to carry forward the 1992 forecasts for comparison to  
14 loads in each year up to 2001. This results in the RSP being adjusted based on the degree to which each  
15 customer class varies from a sales forecast that is as much as a decade old. It also leads to the industrial  
16 customer class sales being compared to a forecast that includes Albright and Wilson Americas and Royal  
17 Oak Mines as customers of Hydro (even after these entities had ceased to be customers of Hydro).

18  
19 There does not appear to be any basis to operate the RSP using Albright and Wilson and Royal Oak loads  
20 when these customers have closed. The net effect of including these customers is to collect from the  
21 remaining industrial customers all lost revenue from the two now closed operations (approximately  
22 \$500,000 per year) so Hydro is “kept whole” from revenue impacts due to their closure. It is not apparent  
23 that there is any basis for assigning such costs specifically to the remaining Industrial Customers (as  
24 distinct from assigning these costs to either the shareholder or all customers of the system).

25  
26 In summary, the December RSP report shows that the hydraulic generation was above forecast, which  
27 saved Hydro some costs for fuel, and a resulting credit was made to the RSP. The December fuel cost  
28 was higher than forecast, which cost Hydro more than forecast, so a charge was made against the RSP.  
29 The load variation shows the IC maintaining its load very near the forecast in the month (where that  
30 forecast includes the two customers who are no longer on the system), and NP increasing its load by 4%  
31 over forecast. Hydro charges the fund for the additional costs it incurs to generate this extra load (at  
32 \$12.50 per barrel) and credits the fund for the extra revenue that it receives from the increased sales.  
33 Hydro also credited the fund with the extra revenue it received from rural customers as a result of NP  
34 rate increases since 1992.

### 35 3.2 REVIEW OF ALLOCATIONS TO NP AND IC

36 IC-271 (Rev) page 2 shows the balance to be charged to the plan as \$12,293,133 plus Labrador  
37 Interconnection Allocation of \$94,680 totals \$12,387,813 – the same balance from the IC-73 December  
38 2000 report.

39  
40 The specific details of the December 2000 calculations and allocations are shown in Appendix A.

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<sup>3</sup> See NLH-99 for the amounts from 1992 to 2000; the total increased income to Hydro for this nine year period from the load variation component is over \$18.8 million.

1  
2 Overall, the Island Interconnected system energy sales to NP and IC remained at about one-sixth to IC  
3 and five-sixth to NP<sup>4</sup> in 2000. In contrast, the RSP charges are shown as \$2,802,000 charged to the IC  
4 plan in 2000 and \$3,653,000 charged to the NP plan, or a breakdown of over one-third to IC and less  
5 than two-thirds to NP<sup>5</sup>. In short, the actual RSP allocation to IC for the RSP is almost double what would  
6 be expected based on relative energy use. There does not appear to be any basis for any difference  
7 between the relative use of energy and the relative allocation of RSP-related costs. In support of this  
8 perspective, it can be noted that Hydro agrees that an energy-only allocation is fair and has therefore  
9 included it in the proposed 2002 RSP rules.

10  
11 The increase in allocation of costs to IC appears to be largely linked to increased Non-Coincident Peak  
12 (NCP) demand estimates for the IC customers (i.e. a lower load factor for the class) – something that has  
13 no apparent link to the RSP adjustment for fuel-related changes. Furthermore, nowhere in the RSP  
14 calculation is there any recognition of increased revenue that Hydro receives by way of Industrial demand  
15 charges as a result of increases in the IC peaks<sup>6</sup>

### 16 3.3 REVIEW OF ALLOCATION OF RURAL DEFICIT

17 The operation of the RSP results in costs for hydraulic variation and fuel costs variation, etc. being  
18 assigned to the Rural Interconnected customers based on their relative loads. These amounts have to  
19 then be reallocated to NP, IC and Labrador consistent with the approved treatment of the rural deficit  
20 amounts. Amounts assigned to Labrador are written off to Hydro's income, and amounts assigned to IC  
21 in 2000 onwards are now similarly treated (after the recent adjustment made as a result of the current  
22 hearing review process)<sup>7</sup>.

23  
24 The 1992 COS provided Board-approved ratios for allocation of the rural deficit as shown in IC-1(a),  
25 Schedule 1.2 page 1. The actual rural deficit allocation ratios used by Hydro from 1993 to 2001 are  
26 shown in IC-282 (d) and further explained in Appendix A.

27  
28 Hydro's calculation of revised rural deficit allocation ratios result in allocation of rural deficit costs to  
29 customers on a different distribution than the Board approved in 1992. Replacing the data shown in IC-  
30 282 (d) with the 1992 COS data shows the revised allocations results in \$911,000 extra Rural deficit  
31 being allocated to IC from 1993 to 2001<sup>8</sup>; NP gets assigned \$324,000 less rural deficit than the 1992 COS

---

<sup>4</sup> Per the December 2000 RSP report at page 6, the IC sales were forecast at 96,900,000 kW.h and NP sales at 477,500,000 kW.h. The IC actual sales were 97,422,262 kW.h and NP sales were 496,553,001 kW.h. In each case, the breakdown is within half of one percent of the one-sixth/five-sixths ratio.

<sup>5</sup> The breakdown is 36.3% to IC and 63.7% to NP.

<sup>6</sup> It is important to recognize that industrial customers pay a rate for use of demand that is calculated via the COS modeling, and increases in the IC peak result in additional revenue to Hydro (in contrast to NP, who pays no demand-charges to reflect increases in their peak demands).

<sup>7</sup> See September 12 supplementary testimony of C. F. Osler, section 4.1, which indicates overall adjustment of \$2.7 million plus interest for the years 2000 and 2001.

<sup>8</sup> Once the 2000 and 2001 years are removed from the IC allocation, due to the *EPCA, 1994*, the extra assignment to industrials is \$354,000.

1 ratios provide over the same period, and Labrador gets assigned \$587,000 less. The IC amounts are  
2 charged to Industrial Customers via the RSP, NP amounts are credited back to NP's portion of the plan,  
3 and the Labrador amounts are written off by Hydro (in this case it is a credit rather than a charge, so the  
4 amounts are retained by Hydro as earnings rather than refunded to Labrador customers).  
5

6 It may be argued that the allocation ratios for the rural deficit should be adjusted to reflect changes in  
7 energy use since the 1992 COS (since such changes are reflected in the RSP). However, the revenue  
8 requirement adjustments actually used by Hydro in its rural deficit allocations for the RSP in these years  
9 go beyond addressing only energy use changes (i.e., as noted, these adjusted revenue requirements also  
10 reflect estimated demand adjustments). It is also not clear that there is merit in trying to use "partial"  
11 COS adjustments for the purpose of rural deficit allocations.  
12

13 The IC customers have raised a further issue with respect to allocation of rural deficit to them after  
14 December 31, 1995.<sup>9</sup> The matter of gradually reducing, in accordance with *EPCA 1994*, the allocation to  
15 IC of the rural deficit during the period from January 1, 1996 to December 31, 1999 is not addressed in  
16 this evidence.

### 17 3.4 EFFECT OF RSP OPERATING RULES

18 The overall effect of the RSP operation as described above and in Appendix A is to develop a completely  
19 revised Cost-of-Service on the basis of actuals, and to reallocate Hydro's entire revenue requirement  
20 based on these results.  
21

22 As outlined in Hydro's letter to the Board dated March 26, 1985 (provided in response to IC-284 (e)), this  
23 reallocation results in each customer group being allocated costs based on year-end actual results. This is  
24 inconsistent with the prospective form of regulation of Hydro currently applied in Newfoundland and  
25 Labrador, and fails to fairly address principles of cost-causation. For example, short-term variations in CP  
26 or NCP on a month-to-month basis fails to reflect the causation of demand-related costs on Hydro's  
27 system, which are by their nature long-term costs (i.e. the construction of generating facilities).

### 28 3.5 INITIAL INTENT COMPARED WITH ACTUAL OPERATION UP TO 2002

29 The RSP was created by the Board's 1985 Report on Hydro's Rate Proposals. In that hearing, and as  
30 reviewed at pages 39-43 of the Board's report, Hydro applied for an RSP to address water variation and  
31 fuel price variation, and proposed an interest coverage cap to prevent over-earnings on their part.  
32

33 The Board approved the RSP as proposed by Hydro except for certain specified changes. Specifically, the  
34 Board "concluded that NLP's proposal that Hydro's Rate Stabilization Plan be modified along the lines  
35 suggested in Dr. Kolbe's first method be recommended"<sup>10</sup>. The NLP proposal is described at page 51 of

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<sup>9</sup> Under EPCA, which came into force January 1, 1996, Section 3(a)(iv) directs that the subsidies of the cost of power to rural customers paid for by industrial customers on the date when the Act comes into force shall be gradually reduced during the period prior to December 31, 1999 and totally eliminated thereafter.

<sup>10</sup> Board's 1985 report, page 86.

1 that report, including NLP's criteria that the "plan should be reasonably simple for the utility to administer  
2 and for customers to understand"<sup>11</sup>.

3  
4 The specific changes the Board approved are outlined at pages 87 to 88 of the Board's report, and  
5 include the following change:

6 "(vi) Any earnings variation because of a difference between the estimated load and the actual  
7 load be included in the Rate Stabilization Plans of Hydro and NLP."  
8

9 This change is further described at page 90, where the Board states:

10 "The Board recommends that any earnings variation because of a difference between the  
11 estimated load and the actual load be included in the Rate Stabilization Plan so that Hydro's  
12 earnings will not vary."<sup>12</sup>  
13

14 Our review of the 1990 and 1992 Board reports on the respective Hydro rate referrals suggests that no  
15 substantive review of the RSP operating mechanisms, or Board approvals of the RSP mechanics, arise  
16 from either of those hearings. In other words, the only basis for Hydro's RSP operating rules appears to  
17 be the direction received in 1985.  
18

19 Two salient points arise in regards to the 1985 Board Order that do not appear to have been followed by  
20 Hydro since that date:

- 21 1. The RSP was intended only to adjust for load variation to the extent that it caused an  
22 earnings variation for Hydro.
- 23 2. The RSP was intended to be simple for the utility to administer and for customers to  
24 understand.  
25

26 Neither of these principles have been applied in the current RSP: the operation of the plan is clearly  
27 complex to a degree that is unnecessary<sup>13</sup>, and the plan adjusts and reallocates substantial costs  
28 between customers that are in no way related to variations in Hydro's earnings<sup>14</sup>.  
29

30 Hydro has provided a copy of a letter they sent to the Board dated March 26, 1986 in response to IC-284  
31 (e). This letter describes the practical methodology for implementation of the RSP, but provides no details  
32 to inform the Board that Hydro is proposing to reallocate demand-related costs that are beyond the  
33 stated purpose and intent of the RSP (and which are not varied by operation of the RSP) based on year-  
34 end actuals. In fact, the letter clearly states under the heading of "The Two Rate Stabilization Plans" that  
35 separate plans for retail customers and IC will be established, and "each plan will reflect on a monthly  
36 basis the changes in Hydro's total costs related to variations in fuel price, hydraulic production and load,

---

<sup>11</sup> Board's 1985 report, page 51.

<sup>12</sup> Board's 1985 report, page 90.

<sup>13</sup> Consider, for example, that the current RSP proposal from Hydro for operation in 2002 and beyond significantly simplifies the RSP in a manner that is more consistent with the 1985 Board direction than the current rules. There does not appear to be any reason to explain why Hydro has not operated the fund on these "proposed" rules from 1985 to 2001.

<sup>14</sup> This is confirmed by Hydro at IC-283 (b).

1 as recommended by the Board in its report<sup>15</sup>; this specific reference to changes in “total costs” would  
2 appear to exclude reallocations which are not related to changes in costs, including Production Demand  
3 related costs and Transmission Demand related costs<sup>16</sup>. In addition, the letter includes a calculation of  
4 the RSP for February, 1986, which shows an allocation of the RSP balance in that month of 28.56% to  
5 IC<sup>17</sup> which is relatively consistent with the IC portion of the COS energy consumption in that month of  
6 26.70%<sup>18</sup>. Contrast this with December 2000 (discussed in Appendix A) where the IC share of the COS  
7 energy consumption is 16.87%<sup>19</sup> but the IC share of the RSP charges as calculated by Hydro in that  
8 month is 36.30%<sup>20</sup>.

9  
10 Finally, Hydro has filed in response to IC-286 (e) a copy of a 1993 letter to Mel Dean of Abitibi-Price  
11 showing the calculation of the January, 1993 RSP allocations. In this case, Hydro specifically  
12 acknowledges that the increased energy use by each class for that month is consistent with the relative  
13 COS forecasts – in other words there is no reallocation in that month required related to energy use.  
14 However, the letter states that the industrial customers get allocated \$361,000<sup>21</sup> in that month (more  
15 than half of the total RSP charge in that month) entirely on the basis of an increase peak of 4 MW. That  
16 calculates to over \$90/kW charged to the IC class (\$361,000 divided by the extra 4,000 kW), or well over  
17 10 times the demand charge that existed at that time!

### 18 3.6 RECOMMENDATION

19 In order to address the significant inconsistencies and improper operation of the RSP since the Board last  
20 reviewed Hydro in 1992, it is necessary to recalculate and restate the RSP back to 1992 making the  
21 following adjustments:

- 22 1. Do not reallocate Production Demand or Transmission Demand related costs between the  
23 various customer groups
- 24 2. Remove Albright and Wilson Americas and Royal Oak Mines from the load forecast for all  
25 months after they had disconnected as primary industrial customers of Hydro.
- 26 3. Assign the rural deficit based on PUB-approved rural deficit allocation ratios from the 1992  
27 COS. (Based on this assignment, additional adjustments to the allocation can then be  
28 considered to reflect energy use changes and the *EPCA 1994* related phase out of rural  
29 deficit allocation to IC during the 1996 through 1999 period.)

---

<sup>15</sup> Hydro's letter to the Board dated March 26, 1986 page 3, filed in response to IC-284 (e).

<sup>16</sup> Hydro has confirmed at IC-283 (b) that there is no cost implication for Hydro in respect of Production Demand related costs or Transmission Demand related costs.

<sup>17</sup> Per Schedule 1.1, page 8 of the attachment to IC-284 (e), the IC allocation of the February, 1986 RSP credit is \$315,000 and the NP portion of the credit is \$788,000. The IC portion calculates out to be 28.56%.

<sup>18</sup> Per page 11 of the attachment to IC-284 (e), the IC COS forecast load in February, 1986 is 126.5 GW.h and the NP COS forecast load is 347.4 GW.h. The IC portion calculates out to be 26.70%.

<sup>19</sup> Per the December 2000 RSP report page 6 (filed in IC-73), the IC COS energy is 96.9 GW.h and the total IC and NP COS forecast energy is 574.4 GW.h. The IC share calculates to be 16.87%.

<sup>20</sup> Per the December 2000 RSP report page 16 (filed in IC-73), the IC RSP allocation is \$2.082 million and the NP RSP allocation is \$3.653 million. The IC share calculates to be 36.30%.

<sup>21</sup> This is shown in the line entitled “Cost Sharing Ratios Impact” in the schedule attached to the letter to Mel Dean, IC-286 (e).

1 There is insufficient information on the record to quantify the specific impact of these changes, but for  
2 2000 alone, the impact is expected to be a credit to the IC RSP on the order of \$1.5 million<sup>22</sup>.  
3  
4 When the above adjustments have been calculated and reviewed, it will then be possible to assess the  
5 overall adjustments (including interest) that need to be made to the RSP balances as at the end of 2001  
6 prior to the commencement of the modified RSP as applied for in the Application.  
7  
8  
9  
10

---

<sup>22</sup> The annual forecast sales to Albright and Wilson and Royal Oak mines is included in the RSP at 21,500,000 kW.h, which would result in a revenue credit to IC of \$415,810. The Production Demand related reallocation is shown in IC-284 Table 2 as \$904,203. the Transmission Demand related reallocation is shown in IC-285 Table 3 as \$273,208. The rural deficit allocation has already been removed from the IC RSP for 2000.

1   **APPENDIX A**

2   **December 2000 Report from IC-73**

3   The December, 2000 RSP report is filed in response to IC-73. This report shows a total charge to the RSP  
4   in the current period of \$12,765,000 at page 14. Excluding interest charged during the year, the charge  
5   to the RSP in 2000 for the various components totals \$12,388,000. This is made up of the following  
6   components:

7

8       •    **Hydraulic:** The hydraulic variation is shown at page 2 of the report, and in this month a  
9       positive variance (extra generation compared to the forecast) of 42.88 GW.h is shown. At  
10      the monthly PUB approved price of \$12.50 per barrel and the Holyrood efficiency of 605  
11      kW.h/barrel, this works out to a credit to the RSP of \$885,950.41. The hydraulic variances  
12      for the rest of the months in 2000 are shown at page 14 in the first column, and total a  
13      credit to the RSP of \$16,612,486<sup>23</sup>.

14

15       •    **Fuel Price:** The fuel price variation is shown at page 10 of the RSP report in two parts.  
16      The top of the page derives the average price for the fuel consumed; in this case  
17      \$35.9906 per barrel. The bottom of the page calculates the variance in actual fuel price  
18      from the \$12.50 1992 COS price times the number of barrels required in that month. The  
19      total adjustment to the RSP for December is a charge of \$7,159,235.22. The total charge  
20      to the RSP for the fuel variation component in 2000 is shown at page 14 in the tenth  
21      column and total \$29,360,984<sup>24</sup>.

22

23       •    **Load Variation:** the load variation components are calculated at page 6 of the report.  
24      Although there are two subcomponents to the load variation calculation, this page  
25      combines the two to derive the charge/credit to the RSP. Specifically,

26           •    NP shows a sales variance of 19,053,001 kW.h over the forecast monthly load, which  
27           is 4% increase to the NP load over forecast. This equates to a revenue variation of  
28           \$863,291<sup>25</sup> which is credited to the RSP. The associated load variation impact on fuel  
29           cost is an increase of \$393,635<sup>26</sup> which is charged to the fund. The variance in  
30           secondary energy sales is incidental (\$57.17). The annual total revenue impact is a  
31           charge to the plan of \$952,250<sup>27</sup> (i.e. the annual load was less than forecast, so  
32           Hydro charges the plan for the forecast revenue that it did not collect), and annual

---

<sup>23</sup> Derived from data from RSP reports from January through December.

<sup>24</sup> Derived from data from RSP reports from January through December.

<sup>25</sup> 19,053,001 kW.h times the NP energy rate of 45.31 mills.

<sup>26</sup> 19,053,001 kW.h times the forecast fuel cost mill rate of 20.66 mills (\$12.5 per bbl/605 kwh/bbl).

<sup>27</sup> From IC-271 (Rev) page 4 column 5.

1 total cost variance is a credit to the plan of \$427,063<sup>28</sup> (due to less fuel being  
2 required than forecast).

- 3 • IC shows a sales variance of 522,262 kW.h over the forecast monthly load<sup>29</sup>, which is  
4 an increase of about one-half of one percent. The revenue increase calculated to be  
5 associated with this load increase is \$10,101<sup>30</sup>. The associated fuel cost increase is  
6 \$10,790<sup>31</sup>. The annual total revenue impact is a charge to the plan of \$78,184<sup>32</sup> (i.e.  
7 the annual load was less than forecast, so Hydro charges the plan for the forecast  
8 revenue that it did not collect), and the annual total cost impact is a credit to the  
9 RSP of \$83,095<sup>33</sup> (due to less fuel being required than forecast).

- 10  
11 • **Rural Rate Alteration:** the Rural Rate Alteration fro December is shown at page 14 as a  
12 credit to the RSP of \$63,000. The annual rural rate alteration without interest is \$880,000  
13 (derived from information at page 14).

14  
15 The total adjustment to the fund is:

	<b>Fuel Components</b>		<b>Revenue Component</b>	
	December 2000	Full Year 2000	December 2000	Full Year 2000
19 Hydraulic	-\$885,950	-\$16,612,486		
20 Fuel Price	\$7,159,235	\$29,360,984		
21 Load Variation				
22 Revenue NP			-\$863,291	\$952,250
23 Cost NP (firm)	\$393,635	-\$427,063		
24 Cost NP (sec.)	-\$57	-\$1,333		
25 Revenue IC			-\$10,101	\$78,184
26 Cost IC	\$10,790	-\$83,095		
27 Rural Rate Alteration	<u>-\$63,000</u>	<u>-\$880,000</u>		
28 Total	\$6,614,710	\$11,357,007	-\$873,392	\$1,030,434

29  
30 Page 16 of the December report shows the final result of the allocations between IC and NP, but the  
31 detail to do this allocation is not included in the report<sup>34</sup>. The final result is \$2,082,000 charged to the IC  
32 plan in 2000 and \$3,653,000 charged to the NP plan, or a breakdown of over one-third to IC and less

<sup>28</sup> The December RSP report does not provide sufficient detail to calculate the entire load variation breakdown for all months – it is necessary to look at each of the January through December reports to derive the annual fuel component and revenue component for each of NP and IC.

<sup>29</sup> Note that this forecast load includes 1,600,000 kW.h for Albright and Wilson Americas and 600,000 kW.h for Royal Oak Mines Inc., both of which are no longer customers of Hydro.

<sup>30</sup> 522,262 kW.h times the IC energy rate of 19.34 mills.

<sup>31</sup> 522,262 kW.h times the forecast fuel cost mill rate of 20.66 mills.

<sup>32</sup> From IC-271 (Rev) page 4 column 5.

<sup>33</sup> The December RSP report does not provide sufficient detail to calculate the entire load variation breakdown for all months – it is necessary to look at each of the January through December reports to derive the annual fuel component and revenue component for each of NP and IC.

<sup>34</sup> Page 16 is also reported net of allocations to Labrador, which cannot be derived from the RSP report.

1 than two-thirds to NP<sup>35</sup>. To determine the process used to do the allocations, it is necessary to review IC-  
2 271 (Rev).

### 3 December 2000 Allocations from IC-271 (Rev)

4 To continue the RSP calculations for December 2000, it is necessary to refer to IC-271 (Rev) to determine  
5 the allocations between IC and NP. Page 2 of the attachments show the \$11,357,000 as the 2000 RSP  
6 fuel (cost) components from the table above, and the \$1,030,000 as the 2000 RSP revenue components  
7 from the above table. The total annual activity is \$12,387,813 excluding interest<sup>36</sup>. Interest is excluded  
8 from allocation since for the purposes of the RSP the interest is calculated separately on each of the IC  
9 and NP balances, and therefore it occurs following the allocation process.

10

11 The report then does the allocations of the fuel (cost) components and the revenue components  
12 separately:

13 • **Fuel (cost) components:** The sum of the fuel-related components of the RSP - which  
14 includes hydraulic variance, fuel price variance and the fuel portion of the load variance –  
15 is allocated at pages 3, 5, and 6 of the IC-271 (Rev) response. Note that for the purposes  
16 of the allocation, the rural rate alteration is also included in this fuel-related allocation.

17

18 • **Page 3:** Page 3 shows the breakdown between fuel costs and rural rate alteration at  
19 lines 1 to 3. Lines 4 to 7 show the breakdown of the total costs from line 3 between  
20 NP, IC and Rural Interconnected. Lines 8 to 11 shows the reallocation of the  
21 amounts assigned to Rural Interconnected in line 6 to the NP, IC and Labrador  
22 customers. Lines 12 to 15 shows the total IC, NP and Labrador amounts (the sum of  
23 the lines 4 to 7 amounts and the lines 8 to 11 amounts). No information is provided  
24 on this page to show how this allocation was done.

25

26 • **Page 5:** The tables at page 5 show in line 1 the 1992 COS costs for each of  
27 Production Demand, Production and Transmission Energy, Transmission Demand,  
28 Distribution and Customer Costs and Specifically Assigned Customers amounts.  
29 These values are the same that were presented in the 1992 Forecast Final COS that  
30 was provided in IC-1(a) schedule 2.1A at line 16.

31

32 Line 2 of Page 5 shows some small reallocation for “revised rural customers” – Hydro  
33 has provided an explanation of this revision in IC-289, which is related to the  
34 interconnection of the GNP. This revision results in a net increase to Hydro’s revenue  
35 requirement of \$195,854.

36

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<sup>35</sup> The breakdown is 36.3% to IC and 63.7% to NP.

<sup>36</sup> Note that IC-271 shows an error in the last line of column 3 (\$12,293,133) by failing to adjust the balance total for the Labrador interconnected of \$94,680, which total the \$12,387,813 total adjustment to the fund for 2000 excluding interest.

1 Line 3 of page 5 shows the RSP fuel-related activity being added to the production  
2 and transmission energy component. This is consistent with the COS treatment of  
3 fuel costs.

4  
5 Line 4 is the revised COS to be allocated.

6  
7 Lines 5 to 8 show allocation ratios which Hydro uses for allocating the revenue  
8 requirement shown at line 4. These are derived on page 6 using the actual load data  
9 from 2000. Note that these allocation ratios are markedly different than the  
10 allocation ratios approved by the Board in 1992. The energy ratios are properly  
11 adjusted to reflect each customer's revised use of energy for the purposes of  
12 allocating the RSP adjustment – however, the demand-related allocators (production  
13 demand and transmission demand) are in no way related to the RSP adjustment or  
14 variations in Hydro's net revenue as confirmed by Hydro in IC-283(b). As a result,  
15 there does not seem to be any basis for revision of the ratios in RSP allocation  
16 process<sup>37</sup>.

17  
18 Lines 9 to 12 show the resulting allocation based on the applying the revised COS  
19 ratios shown on lines 5 to 8. A comparison of these allocated costs to the PUB  
20 approved values is shown in Table 2 of IC-284 for Production Demand<sup>38</sup> and Table 3  
21 of IC-285 for Transmission Demand<sup>39</sup>:

- 22 - **Production Demand:** Hydro's reallocation results in \$2.1 million less  
23 (compared to the 1992 COS) production demand costs being allocated to NP  
24 in 2000, \$0.9 million more being allocated to IC, and \$1.2 million more being  
25 allocated to Rural Interconnected.
- 26 - **Transmission Demand:** Hydro reallocation results in \$0.64 million less  
27 (compared to the 1992 COS) transmission demand costs being allocated to  
28 NP in 2000, \$0.27 million more being allocated to IC, and \$0.36 million more  
29 being allocated to Rural Interconnected.

30  
31 Lines 13 to 16 show in the first column the sum of the amounts allocated to each  
32 customer class in lines 9 to 12. This is compared to the COS amounts approved in  
33 1992 to develop a "current year customer activity" at column 7 which is the amounts  
34 Hydro proposes to recover from each customer group prior to reassignment of the  
35 rural deficit (see page 3, rows 4 to 7, column 12). Column 8 shows the rural rate  
36 alteration (plus the net impact of the GNP "revised rural customers" from line 2  
37 above) to come to a net rural deficit to be collected from other customers of  
38 \$3,093,982.

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<sup>37</sup> Also note that Hydro has confirmed this type of demand-related reallocation is not proposed to occur in 2002 and beyond under the new RSP rules (IC-284 (f) and IC-285 (f)).

<sup>38</sup> Hydro confirms this table is accurate at IC-284 (a).

<sup>39</sup> Hydro confirms this table is accurate at IC-285 (a).

1 Lines 17 to 20 show the assignment of the rural deficit between NP, IC and Labrador  
2 Interconnected. There is no information in IC-271 (Rev) to show how this allocation  
3 is derived. The assignment of the rural deficit is discussed below as it is presented in  
4 IC-282 (d).  
5

- 6 • **Page 6:** This page shows the derivation of the allocation ratios used at page 5 rows  
7 5 to 8. The derivation is based on the actual sales to NP, IC and Rural for 2000, but  
8 also includes actual Non-Coincident Peaks and revised AED ratios for the allocation.  
9 As there is no demand-related component to the RSP, there does not appear to be  
10 any basis for use of revised NCP and Demand-related allocation values. We are also  
11 unclear on the figures used in the calculation and to what extent they reflect  
12 adjusted values – for example, the IC MW.h at generation at line 2 column 3 show  
13 1,289,275 MW.h for the purposes of allocating the energy-related costs, but this  
14 figures is adjusted downwards to 1,285,649 MW.h at line 6 column 1 for allocating  
15 the demand-related costs via AED (no similar adjustment is made for NP or Rural  
16 Interconnected). We also note that the actual 2000 loads and peaks shown in IC-271  
17 (Rev) for allocating the RSP amounts are different than the actual 2000 loads and  
18 peaks shown in the 2000 actual COS study<sup>40</sup>, although there is no explanation from  
19 Hydro as to how two different sets of actuals for the same year can be different. In  
20 each case the difference in “actuals” results in assignment of more of the RSP  
21 balance to Industrials.  
22

- 23 • **Revenue Allocations:** The revenue variation component due to increases or decreases  
24 in sales is shown at page 4, and is directly assigned to IC and NP based on the customer  
25 class which gave rise to the variation (i.e. the customer class is charged additional  
26 amounts to make up for any decrease in sales and credited with all revenues from  
27 increases in sales).  
28

29 Page 7 shows the calculation of the mill rate adjustment.

### 30 December 2000 Rural Deficit Allocation from IC-282 (d) Page 9

31 The allocation of the rural deficit within the RSP is shown in the response to IC-282 (d) (as provided on  
32 November 23, 2001) for the years 1993 to 2001 (forecast).  
33

34 The RSP allocates costs to IC, NP and Rural customers based on the relative use of energy on the Island  
35 Interconnected System. Amounts assigned to Rural serve to increase the rural deficit for that year, and  
36 these amounts require re-allocation back to NP, IC and Labrador customers. These amounts are shown at  
37 line 2 of IC-282 (d) page 9 for 2000 and are consistent with the calculation of the rural deficit in IC-271  
38 (Rev) at page 5 line 15 column 9. The amounts shown at line 1 of the IC-282 (d) page 9 response are  
39 the 1992 COS rural deficit consistent with the 1992 Final Forecast COS filed in IC-1(a) at Schedule 1.2  
40 page 1.  
41

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<sup>40</sup> IC-18 Rev.2 (c) Schedule 4.1 page 1, Schedule 4.2 page 1, and Schedule 3.1A.

1 Instead of using the 1992 COS Board-approved rural deficit allocation ratios, Hydro recalculates ratios for  
2 reallocation based on the revised revenue requirement for NP and IC calculated in IC-271 (Rev), page 5,  
3 lines 13 to 16, column 5, combined with a marginally adjusted revenue requirement for Labrador  
4 Interconnected<sup>41</sup>. The calculation shown in IC-282 (d) shows the application of the revised rural deficit  
5 allocation ratios to both the 1992 rural deficit (which already had a Board-approved allocation ratio) and  
6 the increase in rural deficit due to the RSP allocations shown in IC-271 (Rev).

7  
8 As shown in IC-282 Table 1<sup>42</sup>, the allocation results in 6.77% less of the rural deficit being allocated to  
9 NP in 2000 compared to the approved COS levels, 9.11% more of the rural deficit being allocated to IC<sup>43</sup>,  
10 and 2.35% less of the rural deficit being allocated to Labrador customers<sup>44</sup>.

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<sup>41</sup> The 1992 COS revenue requirement for Labrador Interconnected (Industrial and Rural) is \$12,123,695. In contrast, IC 282 (d) at column 2 row 6 shows \$12,096,251. Review of IC 282 (d) for other years from 1992 to 2001 show marginal adjustments in each year. No explanation or supporting analyses have been provided to explain the derivation of these adjustments as part of the derivation of the rural deficit reallocation ratios for the purpose of the RSP during these years.

<sup>42</sup> Hydro confirms Table 1 is correct in IC-282 (a) except for small revisions relating to Labrador's "small change in rural customers" which is not explained.

<sup>43</sup> In this case (2000) the rural deficit assigned to IC is written off by Hydro and not charged to these customers due to the provisions of the *EPCA, 1994*.

<sup>44</sup> The assignment to Labrador is the sum of the Labrador Interconnected Rural and the Labrador Industrial.