Direct Testimony of P. Bowman and H. Najmidinov on behalf of the Island Industrial Customers Group (IIC Group) –

Excluding Items Covered by Settlement Agreements

NEWFOUNDLAND AND LABRADOR HYDRO 2013 AMENDED GENERAL RATE APPLICATION

Overview and Summary of Recommendations *[items not settled]*

Revenue Requirement

1. Accept Holyrood Gross Efficiency of 650 kW.h/bbl. Adjust the station service estimate of 43 kW.h/bbl downwards by 7 kW.h/litre based on historical experience, plus a further 8 kW.h/bbl due to capital improvements since 2007. *[s.4.3 of Pre-Filed Testimony]*

- This includes the Variable Frequency Drive project which is projected to reduce station service by 8 kW.h/bbl itself.
- Net Holyrood efficiency would be 622 kW.h/bbl.

2. Adjust Hydro's Cost of Capital downwards by $5 million. *[s.4.4]*

- Reflects pay out of NP RSP balance of $133 million (plus other RSP accounts paid out) which presently attract interest from Ratepayers of 6.8% (compared to 3.6% for replacing this capital with LTD)

Overview and Summary of Recommendations (2)

RSP and Deferral Accounts

3. The Load Variation component of the RSP should be eliminated. *[s.6.3]*

4. Deferral and stabilization of IPP and Exploits volumes is appropriate. Deferral and stabilization of prices is not, as this does not meet normal principles for deferral/stabilization. *[s.6.4]*

Overview and Summary of Recommendations (3)

Specifically Assigned Charge

5. CBPP Specifically Assigned Charge O&M costs should be adjusted downwards *[s.7.5]*

- O&M increases justified solely on capital spending, without any assessment of actual operating costs
- Evidence suggests O&M effort needed not rising, if anything may be reduced compared to past GRAs.

Settlement

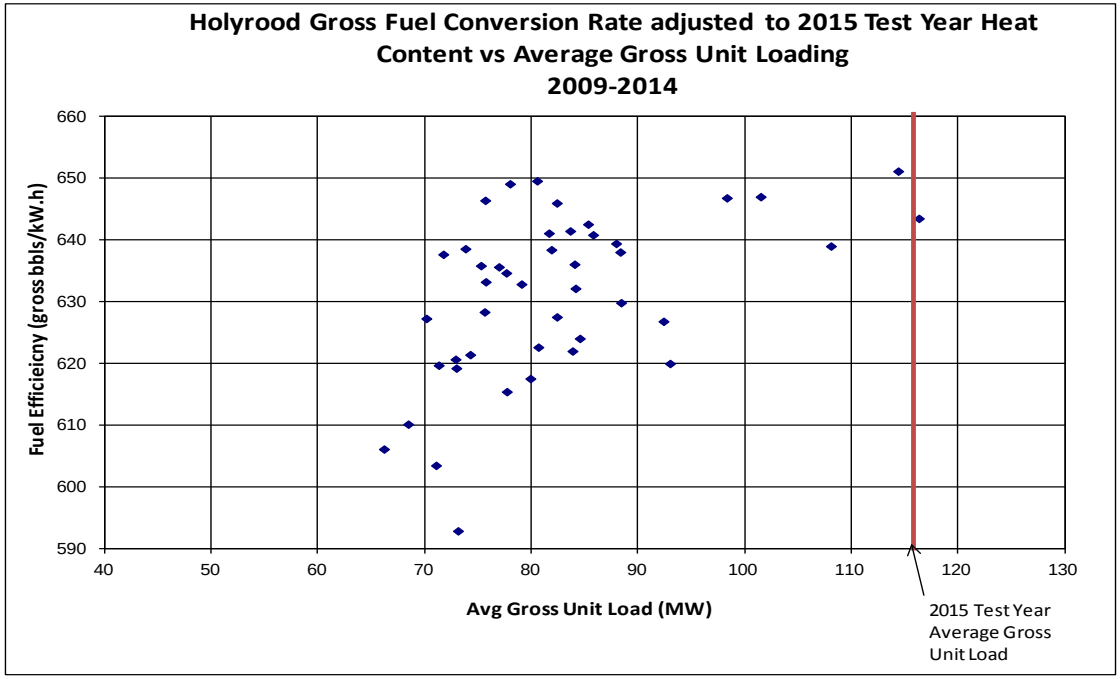
- All other issues raised by the Bowman/Najmidinov evidence have been addressed as part of the 2 Negotiated Settlements.
- In addition, all RFI responses provided by Bowman/Najmidinov relate to topics covered by Settlements, with the exception of portions of PUB-IC-016 related to the proposed New Energy Supply Cost Deferral Account.
- Settlement provides for review at hearing of one other IC-related issue: “The use of the forecast 2015 load for rate setting purposes”
- This was addressed in Bowman/Najmidinov 2013 evidence, updated in 2014 evidence. Current conclusion is:

  “For Test Year 2015, the noted customers (Vale and Praxair) have transitioned to a mode of operation more typically consistent with high load factor industrials. As a result, no adjustments are necessary to the 2015 COS”

Revenue Requirement Topics

1. Holyrood Efficiency

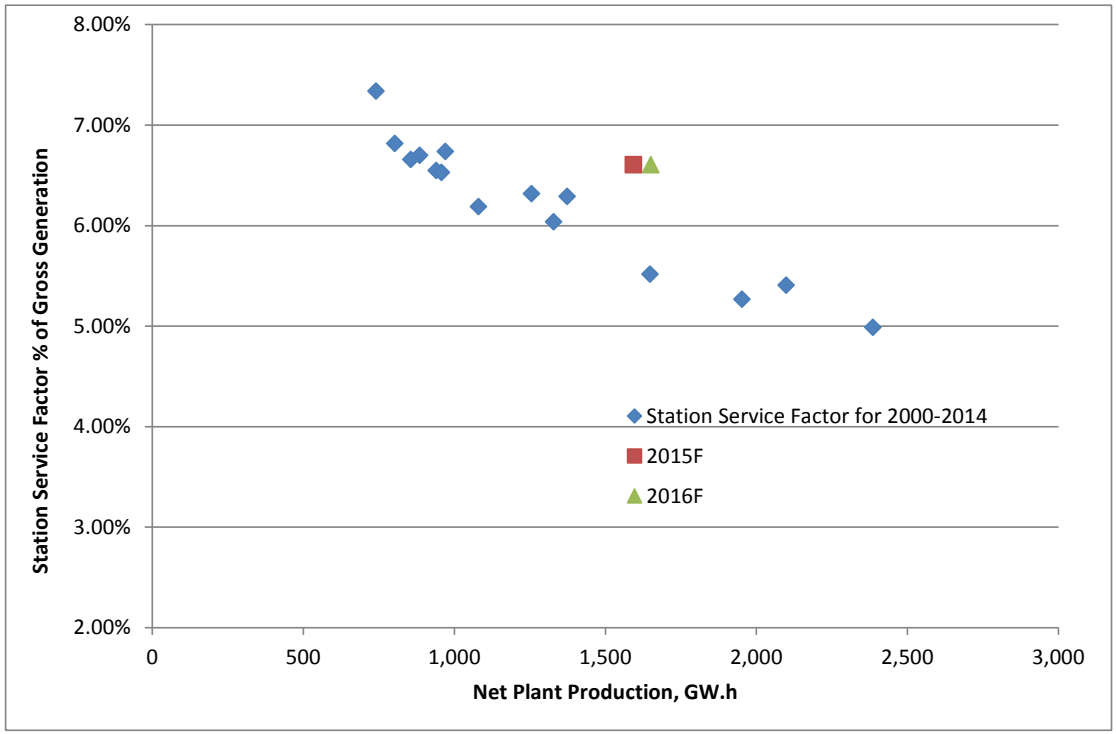
- Hydro proposes 650 kW.h/bbl. Of this, 43 kW.h/bbl powers the station itself, 607 kW.h/bbl serves load.
- 650 kW.h/bbl efficiency does not fit data since 2009 (0.7% sulphur fuel).



- Efficiency is linked to loading.
- Few recent data points on modern low sulphur fuel at the Test Year average loading (117.3 MW).
- Weak relationship in data, but 650 kW.h/bbl is credible.

Holyrood Efficiency

- The 43 kW.h/bbl station service estimate is not consistent with modern operating levels:



- Hydro used percentage estimates based on recent lower loading (5 yr average June 2009-May 2014)
- Using percentage consistent with projected loading lowers station service by 7 kW.h/bbl

Holyrood Efficiency

- The 43 kW.h/bbl station service estimate also does not take into account capital improvements.
- Hydro often indicates capital work at Holyrood will have positive effect on station consumption (often used as justification for project).
- Largest recent example is VFD fan project.
  - Was to be completed August 2014. The 2013 Capital Budget indicates will save $4.7 million in fuel per year (through less station service) at a project cost of $3.36 million.
  - Estimated as 8 kW.h/bbl improvement per NP-NLH-191 Rev.1
  - Majority of VFD units already being commissioned in late 2014 (per IC-NLH-064 Rev. 1)

Holyrood Efficiency

- Recommendation – lower forecast station service by 15 kW.h/bbl.
- This represents the sum of:
  - 7 kW.h/bbl for the adjusted station service percentage analysis, reflective of the higher Test Year usage
  - 8 kW.h/bbl for the improvements for the VFD
- This still ignores any adjustments for the other capital projects that were projected to yield station service savings (all much smaller than the VFD project).
- Reduces Test Year fuel costs by approximately 63000 barrels

2. Cost of Capital

- Hydro's rate base in principle is financed by long-term capital
- Hydro's total capital for financing rate base, on a mid-year basis, in 2015 is approximately $1.78 billion [The 2015 opening balance is $1.639 billion and closing is $1.916 billion, for a mid-year average of $1.777 billion, as per Hydro's Amended 2013 GRA, Finance Schedule I page 4 of 11].
- However, this capital is financing a mid-year rate base (assets) of $1.80 billion plus Capital Work in Progress averaging $0.14 billion (which is also financed by Hydro long-term capital) [2013 Amended GRA, 2015 COS, Schedule 1.1, page 2 of 2 and Finance Schedule I page 5 of 11.].
- The result is approximately $160 million more in assets than in available capital [$1.80 billion plus $0.14 billion less $1.78 billion].

Cost of Capital

- The largest part of this difference is the RSP balance.
- In effect the current RSP balance is functioning as an additional form of high-cost financing for rate base (effectively a loan to Hydro), at the average WACC, increasing the required return from customers as part of base rates. [The December 2014 RSP Report, page 3 confirms RSP balance at about $250 million].
- On $160 million difference moving from 6.817% WACC to a 3.6% new long-term debt issuance interest rate will lead to immediate savings to Hydro of about $5 million (more if a promissory note interest rate is assumed).
  - This is consistent with the values in NP-NLH-020 Rev. 1 which shows the cost of debt financing rate base dropping from $89.3 to $84.5 million from the year 2015 to the year 2016 as the RSP balance is paid out and new financing assumed.
- Cost of capital is one item not stabilized via the RSP. The results is that, absent some GRA directed adjustment, this known savings (arising out of the OIC directive to pay out the RSP balance) would accrue directly to Hydro's net income as refinancing occurs.

RSP and Deferral Accounts

3. RSP Load Variation

- The load variation provision reflects an inappropriate risk sharing between Hydro as vendor and NP and the Industrial Customers as purchasers.
  - Net effect is that if Hydro's doesn't sell the forecast amount of power, all other customers are liable in future years.
- The provision is anomalous among North American utilities.
  - In response to V-NLH-1 from the 2013 RSP proceeding, Hydro states that "Neither Hydro, nor its cost of service and rate design consultants, Lummus Consultants International Inc., are aware of any other utilities in North America that utilize a load variation component within their rate stabilization plan or fuel adjustment charge."
- If the Board were to elect to retain the load variation provision for the time being, the best time to eliminate the provision may be upon initiation of the Labrador infeed, as a new incremental cost of power is incorporated into the purchase rates.

4. Energy Supply Cost Deferral

Hydro's proposal is to stabilize both the volume and the price of IPP supply.

Volume of Power Purchases

- The proposal with respect to variations in IPP volumes appears consistent with the underlying principles of the RSP.
  - Relates to protection for Hydro from factors that generally fall into the category of material, uncontrollable, set by external forces such as markets or weather, and inherently unstable variables (e.g., hydrology).
- It is not apparent why Hydro did not retain the original proposal to include this within the RSP, which would be an appropriate mechanism for the period until the initiation of the Labrador Infeed.

Energy Supply Cost Deferral

Power Purchase Prices

There are in effect two types of power purchase contracts:

- one type that sees price changes due to change in Consumer Price Index (CPI) [page 3.49 of its 2013 Amended GRA].
- a second related to Exploits purchases, that has no formal escalator, but which had prices fixed only until June 30, 2014. Per PUB-NLH-8 Rev.1, after this date the future for the Nalcor plants under PPAs is uncertain but no change is expected until 2016 (PUB-NLH-365).

On **inflationary price increases**, this component does not appear to follow underlying stabilization or deferral account principles (inflationary pressures occur in all aspects of Hydro's operation, and are not similarly stabilized or deferred).

Energy Supply Cost Deferral

- The change price for **Exploits generation** is not an uncontrollable external market force. It is a policy decision imposed by Hydro's own shareholder.
  - A deferral account to protect the utility from decisions of its own shareholder would not be appropriate.
- In addition in respect of the Exploits generation, the proposal is possibly unworkable if the letter attached to PUB-NLH-8 Rev.1 remains accurate (that the province intends to transfer the assets to Hydro's regulated operations as a rate base asset).

Specifically Assigned Charges

5. Specifically Assigned Charge O&M

- Specifically Assigned Assets in Hydro's system lead to a direct allocation to the customer of a share of O&M costs purported to relate to the asset. (not typical)
- These O&M costs, however, are not calculated with reference to any real consideration of the amount of O&M an asset requires, but just a standard ratio allocation in the COS study.
- The use of standard ratio allocation in a COS study is a normal practice, so long as the underlying results continue to be supportable as a reasonable estimate of the underlying costs.
- The estimates in this hearing for the Corner Brook Frequency Converter are not reasonable. (proposed O&M charge increase from $140k/yr to $352k/yr)

Specifically Assigned Charge O&M

- In 2007, the Frequency Converter was allocated $140k/year in O&M cost.
- Since that time, there have been no changes cited to the mode of operation, except for one capital project (a remote vibration monitoring system in 2013) which was to reduce the "labour intensive" checks.
  - Hydro's material notes that as of 2007 "there had been very few known problems identified with vibration"
  - After 2008 capital work (to rotor and stator) significant vibration issues were noted.
  - Hydro notes that vibration issues were apparently "…rectified in accordance with Hydro's specifications by the contractors before completing the project."
  - Subsequently, Hydro retained additional contractors in 2010 to deal with vibration which resulted in the unit being "…within an acceptable vibration zone."
  - In 2013 Hydro noted that a capital project was required for a remote vibration monitoring system as: "Considering the history of vibration problems, and the fact that the unit operated for over a year with an imbalance and misalignments, eventually resulting in a rotor pole failure, it is critical that an online vibration system be installed on the unit".

Specifically Assigned Charge O&M

- Hydro was also asked for substantiation regarding the level of O&M and evidence that it requires $352k/yr. No staff timesheet or other analysis was provided (IC-NLH-144, 145).
- In short, since 2007, there has been no apparent reason for an increase in allocated O&M (with the potential for a reduction in O&M due to added remote monitoring rather than on-site checks).
- The proposed COS allocation of O&M is not reasonable or supported and should not be approved. A lower allocation more representative of the 2007 level should be used unless Hydro can provide substantiation in the form of a timesheet analysis or other measure of service effort.
- Mel Dean offers alternative suggestion for SAC O&M. Rationale is sound, but this approach does not eliminate need to make sure final result is reasonable.

Unsettled Issues

6. 2015 Load Forecast

- Issue first raised in Bowman/Najmidinov 2013 evidence.
- Vale and Praxair not operating similar to industrial customers in 2013, also not a high load factor in 2013 forecasts (Vale at 28%, Praxair at 8%). This was unlike the other ICs
- Also subject to special PUB Order that Power On Order not apply same as other ICs.
- In 2013 evidence, COS needed review to make sure (a) Vale and Praxair were appropriately included in industrial class and (b) the effect of PUB Orders re: Power On Order were not being neutered.

2015 Load Forecast

- Conclusion in 2013 evidence (re: 2014 COS) was that these effects were occurring, were adversely affecting the industrial customer class, and adjustment were needed. The Bowman/Najmidinov evidence recommended “normalizing” the 2013 load per Hydro’s calculations in IC-NLH-140:
  - No change to forecast energy. No change to forecast billing demand units (Sch. 1.3.2 stays the same).
  - No change to Revenue Requirement, fuel required, internal consistency of COS (no mismatch of loads from different years).
  - The only change was to the new industrial customer responsibility for the COS annual peak demand. This was consistent with P.U. 6 (2012) regarding avoiding the use of annual peaks and Power On Order calculations during the Vale phase-in, (and similarly per P.U. 9 (2013) for Praxair).

2015 Load Forecast

- Compared to the 2013 issues, 2015 does not show same effects (Vale load factor at 65%, Praxair at 98%). There is no need to do the same type of adjustment to 2015 as was proposed for the 2013 COS. (also see IC-NLH-140 Rev. 1)
- Regarding the "unsettled" item in the Negotiated COS Settlement (use of 2015 load forecast versus 2016 or 2017), there is no basis to mix and match loads and costs from different years. Not only does this cause a mismatch regarding costs versus loads, but also:
  - (a) it does not cause any material difference in IC rates and if anything appears to lower the rates, plus
  - (b) if it is applied to lead to different (lower) rates for NP and IC than proposed, it would cause an inability for Hydro to recover its full revenue requirement.

2015 Load Forecast

- The reason for the revenue shortfall is dividing the 2015 revenue requirement across a large number of units (representative of 2017 loads) despite these units not existing in 2015.
- The lower load means Hydro will not recover its costs in 2015. It will also lead to an improper Test Year benchmark for the RSP Load Variation provision, if it is maintained.
- This is confirmed by preliminary calculations shared by Hydro regarding using a mismatched 2015 costs with 2017 loads
  - IC energy rates drop from 5.151 cents/kW.h to 4.911 cents/kW.h (at $93.32/bbl fuel price)
  - IC demand rates either stay the same at $8.38/kW or drop to $8.22/kW depending on load forecast used.
  - NP's energy and demand rates drop as well.
- However, these are not viable rates, as they will not collect the revenue requirement in 2015.