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February 23, 2021

Patrick Wruck
Acting Commission Secretary
British Columbia Utilities Commission
Suite 410, 900 Howe Street
Vancouver, BC, V6Z 2N3
commission.secretary@bcuc.com

**Re: Nelson Hydro – Cost of Service Analysis and Rate Design Application –
Project No. 1599166 – Residential Consumer Intervener Group (via its agent
Midgard Consulting Incorporated) Information Request (IR) No. 1 to Nelson
Hydro**

Dear Mr. Wruck,

In accordance with the Regulatory Timetable set by the British Columbia Utilities Commission (BCUC) Order G-346-20, please find enclosed the Residential Consumer Intervener Group (RCIG) IR No. 1 to Nelson Hydro on the above noted Application.

If further information is required, please contact the undersigned.

Sincerely,

Original signed by:

Sam Mason
Consultant on behalf of the Residential Consumer Intervener Group

REQUESTOR NAME: **Residential Consumer Intervener Group (RCIG)**

INFORMATION REQUEST ROUND NUMBER: 1

TO: **Nelson Hydro (NH)**

DATE: **February 23, 2021**

APPLICATION NAME: **Cost of Service Analysis (COSA) and Rate Design Application**

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A. Project Need and Justification

1. Reference: Exhibit B-1 Section 1.4 p.3

“The Report prepared by InterGroup addresses the Commission’s directive and also provides information relevant to the approvals sought in this Application. The Report concluded that an after-tax rate of return on equity for the Rural portion of the utility is appropriately set at 9.25%.”

1.1 What equity thickness, if any, was assumed in the InterGroup Report that suggested the 9.25% after-tax ROE?

1.2 What tax rate, if any, was assumed in the InterGroup Report that suggested the 9.25% after-tax ROE?

- 1.3 What pre-tax ROE, if any, was assumed in the InterGroup Report that suggested the 9.25% after-tax ROE?
- 1.4 Is NH a taxable entity?
 - 1.4.1. If not, please confirm that NH's after-tax ROE and pre-tax ROE are identical.
- 1.5 What debt rate, if any, was assumed in the InterGroup Report that suggested the 9.25% after-tax ROE?
- 1.6 Please enumerate the risks facing NH that resulted in the InterGroup Report concluding that NH's after-tax ROE should be higher than the BC benchmark after-tax ROE.
- 1.7 What is NH's weighted average cost of debt (WACD) that is used in the filing?
- 1.8 What is NH's weighted average cost of capital (WACC) that is used in the filing?
- 1.9 Please compare the components of the NH WACC used in the filing with those used by FortisBC in a recent filing.

2. Reference: Exhibit B-1 Section 3.3 p.15

“When evaluating this disproportionate increase in power purchases, it was the City's conclusion that the Rural customers were responsible for a significant portion of the increased consumption and should therefore be responsible for the related increased cost.”

- 2.1 What is the electricity consumption (total energy and peak demand) by NH's rural and urban customers, respectively, in each calendar month for the past 5 years and forecast for the next 5 years? Include system losses in the above response.
- 2.2 What is the average production capability of the NH generating plant (energy and peak production) in each calendar month for the past 5 years and forecast for the next 5 years? Account for physical constraints (such as tailwater elevation) and regulatory constraints (such as licensed water diversion limitations) in the above response.

B. Stakeholder Engagement

3. Reference: Exhibit B-1 Section 5.3 p.45 Table 5-1

“76% of Urban customers indicated that they are very satisfied or satisfied with Nelson Hydro's customer service.”

“64% of Rural customers indicated that they are very satisfied or satisfied with Nelson Hydro's customer service.”

- 3.1 Does NH consider these customer service satisfaction results to be acceptable?
 - 3.1.1. Please explain why or why not.

3.2 Has NH benchmarked its customer satisfaction results against those of any other utilities?

3.2.1. If yes, please provide documentation.

3.3 Has NH benchmarked its customer satisfaction results against its own historic measures?

3.3.1. If yes, please provide documentation.

4. Reference: Exhibit B-1 Section 5.3 p.46 Table 5-1

“68% of Urban customers indicated that they are very satisfied or satisfied with the frequency of outages;

72% of Urban customers indicated that they are very satisfied or satisfied with the length of outages;

82% of Urban customers indicated that they are very satisfied or satisfied with the length of response time to outages; and

82% of Urban customers indicated that they are very satisfied or satisfied with the utility’s reliability overall.”

“32% of Rural customers indicated that they are very satisfied or satisfied with the frequency of outages, while 47% indicated they are not satisfied;

36% of Rural customers indicated that they are very satisfied or satisfied with the length of outages while 35% indicated they are not satisfied;

53% of Rural customers indicated that they are very satisfied or satisfied with the length of response time to outages; and

50% of Rural customers indicated that they are very satisfied or satisfied with the utility’s reliability overall, while 27% indicated they are not satisfied.”

4.1 Does NH consider these reliability satisfaction results to be acceptable?

4.1.1. Please explain why or why not.

4.2 Please provide annual reliability performance measures (i.e., SAIDI and SAIFI) for (i) rural and (ii) urban customers for the past 5 years, with and without major events or loss of supply.

4.3 Has NH benchmarked its reliability satisfaction results against those of any other utilities?

4.3.1. If yes, please provide documentation.

4.3.2. If no, please explain why not.

4.4 Has NH benchmarked its reliability satisfaction results against its own historic measures?

4.4.1. If yes, please provide documentation.

4.4.2. If no, please explain why not.

C. Rate Design

5. Reference: Exhibit B-1 Section 9.3 p.63

“The proposed Residential Rural rate increase is consistent with Bonbright Principles 1 and 2 regarding the recovery of costs and the fair apportionment of costs among customers. The COSA evidences that the RCC ratio for the Rural residential class is currently at 80.4%, indicating that this customer class is not contributing equally in recovering the cost of service provided by the utility. The proposed rate design results in a fairer and more equitable rate structure and will make Nelson Hydro’s rates more consistent with Bonbright Principles 1 and 2.”

- 5.1 Has NH compared the typical cost of service ratio between rural and urban residential customers in other jurisdictions?
 - 5.1.1. If yes, please provide this information.
 - 5.1.2. If no, please explain why not.
- 5.2 How does the COSA evidence treat the marginal cost of purchasing power? Are these costs allocated to rural customers?
 - 5.2.1. If yes, what is the RCC ratio if all power costs are treated as at a single blended rate?
- 5.3 Has NH incorporated any rural versus urban customer reliability adjustments into the COSA evidence?
 - 5.3.1. If yes, please provide this information.
 - 5.3.2. If no, please explain why not.

6. Reference: Exhibit B-1 Section 9.3 p.64

“The Rural service area is dispersed in a challenging geographical location that faces many vegetation management issues (i.e. dead or dying trees that pose a hazard to power lines). Additionally, this area appears to be facing an increasing amount of severe storm and wind events as a result of changes in climate.”

- 6.1 Is the frequency of severe storms and wind events in the rural service area increasing faster than it is in the urban service area? Please provide documentation.
- 6.2 Is the frequency or duration of outages caused by severe storms and wind events in the rural service area increasing faster than it is in the urban service area? Please provide documentation.
- 6.3 Has NH estimated the cost-benefit ratio of increasing vegetation management activities to lessen the frequency or duration of rural service area outages? Please provide documentation.

7. Reference: Exhibit B-1 Section 9.3 p.64

“Of particular relevance are the rates of FortisBC, as FortisBC would otherwise be the service provider for Nelson Hydro’s Rural service area. Nelson Hydro’s current rates are significantly lower than FortisBC residential rates. The proposed rate changes, over the course of the proposed phase-in period, would bring Nelson Hydro’s Rural residential within range of the FortisBC rates.”

- 7.1 What are FortisBC SAIFI and SAIDI statistics compared to NH rural customer SAIFI and SAIDI statistics over the past 5 years?

8. Exhibit B-1 Section 9.3 p.66 Figure 9-2

“Figure 9-2 compares Nelson Hydro Rural residential and FortisBC bills after the proposed phase-in with full rate increase for the bi-monthly consumption levels ranging from 1,000 kWh to 5,500 kWh. The figure shows that the customers with average or below consumption would pay bills similar to FortisBC current bills, while customers with higher consumption levels would still pay less than FortisBC customers.”

- 8.1 Please overlay a bar graph showing the number of NH rural customers in each of the bi-monthly consumption ranges shown in Figure 9-2.
- 8.2 After the full rate increase has been implemented, what percentage of NH’s rural customers will be paying more than they would in the FBC service area, ceteris paribus, and what percentage will be paying less?

9. Exhibit B-1 Section 9.5 p.69

“The COSA evidences that currently Nelson Hydro is not adequately recovering the cost of service for the Rural residential service area. The circumstances that existed nearly 100 years ago when the City of Nelson began servicing the Rural service area justified the service expansion. Namely, the City was generating surplus power and there were no other service providers that could serve the Rural service area. However, those conditions changed dramatically as the load required to serve the Rural service area grew and the cost to purchase power in order to meet this growing load increased to the point where it was significantly more expensive than the utility’s own generated power. Furthermore, servicing the Rural area requires that Nelson Hydro be regulated under two frameworks, each with their own unique requirements and standards. This form of dual regulation results in significant regulatory expenses.”

- 9.1 Confirm that when NH originally began to serve the rural customers, both NH and its urban customers gained net economic benefits from the arrangement by establishing a reliable long-term market for generating capacity that would have otherwise been unused. If not confirmed, please explain.
- 9.2 Over the full existence of NH, what portion of NH revenues have been recovered from the rural customer base?
- 9.3 Confirm that the above-mentioned benefits to NH from serving rural customers continued to accrue for decades, and that the additional revenues collected from

rural ratepayers helped offset the costs associated with operating and maintaining NH's generating facilities that would otherwise have been solely borne by NH's urban customers. If not confirmed, please quantify and explain.

- 9.4 Confirm that despite having obtained these benefits from rural customers for many decades, NH now intends to notionally prioritize delivery of the low cost energy produced by its generating facilities to its urban customers, and to require the rural customers to bear the bulk of the cost of the higher priced energy imported from FBC to serve NH load during most months. If not confirmed, please quantify and explain.
- 9.5 Confirm that it is not presently possible for NH to physically direct delivery of the energy produced by its generators preferentially to its urban customers and energy imported from FBC to its rural customers. If not confirmed, please explain.
- 9.6 Is the cost of serving a rural customer located immediately outside of the municipal boundary materially different than the cost of serving an urban customer located immediately inside the municipal boundary?
- 9.6.1. If yes, please why explain in detail.
- 9.6.2. If no, given that all rural customers pay the same rate, does this mean that rural customers located near the municipal boundary are subsidizing the rural customers located further from the boundary?
- 9.6.2.1. If yes, is this situation unfair according to any of the Bonbright principles cited by NH?

D. Appendix 5-1: NH Open House Presentation Slides (7 Feb 2019)

10. Exhibit B-1 Appendix 5-1 PDF pg 237

“Set ROE = 12.45%”

- 10.1 Does this slide indicate that comparable Investor Owned Utilities would expect to achieve a return on equity of 12.45%?
- 10.1.1. If not, explain what it indicates?
- 10.2 Please confirm that 12.45% is a pre-tax ROE, which compensates for the tax expense that must be borne by taxable utilities.
- 10.3 If NH does not have a tax expense, please explain why this is an appropriate ROE supposition for the Open House Presentation materials.

E. Appendix 5-2: NH Open House Presentation Slides (6 Nov 2019)

11. Exhibit B-1 Appendix 5-2 PDF pg.258

“The application of a debt to equity ratio at current NH levels is a fair and reasonable approach versus industry standard because of NH’s unique circumstances as a

municipality.”

11.1 Notwithstanding NH's debt restrictions, confirm it is still possible to apply a deemed capital structure similar to methodologies employed by other utilities regulated by the BCUC.?

11.1.1. If yes, explain why that would not be a reasonable approach.

11.1.2. If no, explain why not.

11.2 What are the approved debt to equity ratios of the Ontario utilities that NH cited in Exhibit B-1 Appendix 6-1 (pg.8)?

11.3 Please explain, using the Bonbright principles, why it is fair for NH to employ a debt to equity ratio and subsequent cost structure that is materially different than other BCUC regulated utilities.

F. Appendix 5-3: NH Open House Take Home Information (6 Nov 2019)

12. Exhibit B-1 Appendix 5-3 pg.7

“2016 Residential Approx. Monthly Energy Bill”

12.1 Please indicate what the blue and orange bars on this graph each represent.

13. Exhibit B-1 Appendix 5-3 pg.8

“Nelson Hydro General Rate Changes”

13.1 What is NH's forecast of CPI inflation in each year 2020 to 2024?

13.1.1. If NH's proposed % rate increase is consistently higher than forecast CPI inflation over these years, please explain in detail why that is the case and why it is reasonable.

13.2 What is NH's forecast of CPI inflation beyond 2024?

13.2.1. If NH's expected % rate increase is consistently higher than forecast CPI inflation beyond 2024, please explain in detail why that is the case and why it is reasonable.

14. Exhibit B-1 Appendix 5-3 pg.10

“Fcst. Monthly Residential Electric Cost”

14.1 Confirm that this chart compares the FBC residential and NH Rural residential monthly costs.

14.1.1. If not confirmed, what does it compare?

G. Appendix 5-3: NH November 2019 Survey Results (Rural Only)

15. Exhibit B-1 Appendix 5-5 pg.36

“Q36 Expenditures that would increase supply and need to rely less on power purchases from FortisBC.”

15.1 Has NH checked if customers would support expenditures to increase supply and reduce purchases from FBC if doing so would increase power rates?

15.1.1. If yes, please provide documentation.

15.2 Has NH investigated the cost of power purchases from entities such as BC Hydro, Columbia Power Corporation or other power marketers?

15.2.1. If yes, please provide documentation.

15.2.2. If no, explain why not.

16. Exhibit B-1 Appendix 5-5 pg.38

“Q38 Expenditures on new green energy products.”

16.1 Please compare the all-in costs of energy produced by NH's existing green projects (excluding NH's Bonnington Falls plant) with (i) the cost of power produced by NH's Bonnington Falls plant, (ii) power purchases from FBC and (iii) any other power acquired by NH to serve customers.

16.2 How will the cost of new green energy projects be allocated between rural and urban customers?

H. Appendix 6-1: NH Appropriate Level of ROE Document (March 2020)

17. Exhibit B-1 Appendix 6-1 pg.7

"The low cost hydraulic generation owned by the City of Nelson for the benefit of the citizens of the City of Nelson is not generally available to service the Rural service area. Where hydro surpluses occur over and above the usage by the City customers, it is only appropriate to price these at a fair market value, which could be reasonably represented by the FortisBC wholesale rate. This is the cost of alternative power that the customers would be using but for the City of Nelson making hydraulic generation available. Rural service area customers are not owners of the hydro assets in any sense. They are only part of a commercial transaction for power with Nelson Hydro."

17.1 Is this a fair apportionment of the low cost hydraulic generation, in consideration that for many decades the rates paid by rural customers helped to offset the all-in cost of building and operating these facilities?

17.1.1. Please elaborate in consideration of the Bonbright principles.

18. Exhibit B-1 Appendix 6-1 pg.7

“The actual capital structure is heavily skewed to equity, but this is a feature of the municipal ownership and challenges and limits on municipalities regarding excessive borrowing. As the utility is properly financed by a capital structure roughly 85% equity and 15% debt, there is little reason to utilize an alternative deemed structure.”

- 18.1 Please quantify the customer rate impact of utilizing an 85% equity thickness rather than a more typical debt/equity ratio allowed for other utilities regulated by the BCUC, such as 40% Equity/60% Debt.
- 18.2 Please confirm that the justification for imposing the above rate impact is because NH is a municipal entity required to maintain a very constrained debt/equity ratio.

19. Exhibit B-1 Appendix 6-1 pg.8

“Nelson Hydro is a municipally owned utility with a combination of generation and distribution assets. This is an unusual situation, and provides for a difficulty identifying a group of utilities for direct comparison. Some municipality level utilities in Ontario include provision for return on equity based on approved amounts by Ontario Energy Board. For example, utilities with their own small generation sources, Kenora Hydro at 9.58% and Thunder Bay Hydro at 8.78%, and Kingston Hydro at 9.19%.”

- 19.1 Confirm that the listed utilities are also subject to performance based ratemaking, which requires these utilities to achieve specified KPIs to achieve these ROE values. Further confirm that NH does not face the same KPI risks in achieving its approved ROE.

20. Exhibit B-1 Appendix 6-1 pg.11

“Risk Matrix included in GCOC Stage 1 Review”

- 20.1 Please calculate the annual carrying cost per million dollars of undepreciated capital rate base using both the FortisBC and the NH WACC. Please provide assumptions used in the calculations.

21. Exhibit B-1 Appendix 6-1 pg.11

“Customer Base, Nelson Hydro: Established, however residential and commercial only, slow growth”

- 21.1 Confirm that this means NH does not face the significant revenue risk associated with losing large industrial loads.
 - 21.1.1. If not confirmed, please explain why not.
- 21.2 Confirm that NH's risk is lower in this respect than is FortisBC's.
 - 21.2.1. If not confirmed, please explain why not.

22. Exhibit B-1 Appendix 6-1 pg.12

“Future construction cost risk, Nelson Hydro: Depends on the nature of individual project. Potentially high for hydro assets over the long term.”

22.1 Is the long-term cost risk for hydro asset projects higher than the long-term cost risk for natural gas generation or other generation projects?

22.1.1. If yes, please explain why and quantify.

23. Exhibit B-1 Appendix 6-1 pg.12

“Provincial Climate Change and Energy Policies”

23.1 Are NH's risks materially different than FortisBC's risks in this category?

23.1.1. If yes, please explain in detail.

24. Exhibit B-1 Appendix 6-1 pg.12

“Business Development Risk”

24.1 Is FortisBC's risk lower in this category than NH's risk?

24.1.1. If yes, please explain why, including an evaluation of the ratio of urban to rural service areas and customer counts for each utility, and the relative risk of wildfires and storm damage faced by each utility.

I. Appendix 6-2: NH Appropriate Rate of Return (Non-Municipal) Policy

25. Exhibit B-1 Appendix 6-2 pg.4

“During the review process Nelson Hydro also highlighted that the revenue-to-cost coverage ratio for the Rural service are customers have been consistently below 100%, while urban customers are above 100%.”

25.1 Confirm that these ratios are calculated by assigning most of the cost of the purchased power to the rural customers and providing urban customers with preferential access to NH's low cost hydro power.

25.2 What would the relative revenue-to-cost ratios be for rural and urban residential customers if all customers were deemed to have access to uniformly blended energy?

J. Appendix 8-1: Cost of Service Analysis (November 2020)

26. Exhibit B-1 Appendix 8-1 pg.6 Table 4

“Nelson Hydro Purchases [surplus energy]”

26.1 Please provide details showing how the above-cited line was calculated, showing all inputs and assumptions used in the calculation.

27. Exhibit B-1 Appendix 8-1 pg.8

“The hydraulic generating plant owned by the City of Nelson primarily serves the City residents (Urban customers) and surplus energy is provided to Rural service area. Where Nelson’s own generation output is insufficient for servicing all Urban needs, a portion of the purchased power from FortisBC is allocated to serve Urban needs. Rural needs are served from Nelson Hydro surplus energy plus purchased power as reviewed in next section.”

- 27.1 Is it common practice for utilities to preferentially assign power derived from low cost resources to one class of its customers and power from higher cost resources to another class of its customers? If yes, please provide examples. Exclude any examples where customers voluntarily agree to purchase power with specific environmental attributes to encourage development of such resources, or cases where the customers receiving higher cost power are not grid-connected.