



Suite 101, 310 Ward Street, Nelson, British Columbia, V1L 5S4

March 15, 2021

British Columbia Utilities Commission
Suite 410, 900 Howe Street
Vancouver, BC V6Z 2N3

Attention: Patrick Wruck, Commission Secretary

**RE: Nelson Hydro – Cost of Service Analysis and Rate Design Application – Project No. 1599166 –
Response to the British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1**

Dear Mr. Wruck,

On November 27, 2020 Nelson Hydro filed its Cost of Service Analysis and Rate Design Application. In accordance with BCUC Order G-346-20 (as amended by Order G-57-21) setting out the Regulatory Timetable for the review of the Application, Nelson Hydro respectfully submits the attached responses to BCUC IR No. 1.

If further information is required, please contact the undersigned.

Sincerely,

A handwritten signature in black ink, appearing to read "Gabriel Bouvet-Boisclair".

Gabriel Bouvet-Boisclair
Deputy Corporate Officer
City of Nelson
Email: dco@nelson.ca | Phone: 250-352-8254

cc: Scott Spencer, Nelson Hydro General Manager
Kevin Cormack, City Manager

Enclosure

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Nelson Hydro
 Cost of Service Analysis and Rate Design Application

RESPONSES TO BCUC INFORMATION REQUEST NO. 1

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A. GENERAL

1.0 Reference: **STAKEHOLDER ENGAGEMENT** **Exhibit B-1, Section 5.1, p. 43; Section 5.2, pp. 43–44** **Open Houses**

Nelson Hydro held two open houses on February 7, 2019 and November 6, 2019. The open houses provided stakeholders with a forum to comment on and ask questions about Nelson Hydro’s rate design including Nelson Hydro’s Cost of Service Analysis (COSA) study, service models, rate design process, rate design concepts and rate design methodologies.

Nelson Hydro held a virtual open house on December 10, 2020.

- 1.1 Please provide the attendance information (e.g. number of attendees, who they represent, etc.) for each of the three Nelson Hydro open houses. If available, provide a breakdown of representation between Urban and Rural¹ customers for each session.

RESPONSE: At the February 7, 2019 in-person Open House 14 members of the public attended along with 2 elected officials from the City and 6 City staff members. Of the 14 members of the public approximately 50% of them were Rural customers.

At the November 6, 2019 in-person Open House, 5 members of the public attended along with 5 elected officials from the City and 13 staff members. Of the 5 members of the public, 4 were Urban customers and 1 was a Rural customer.

At the December 10, 2020 virtual Open House, 14 members of the public attended along with a number of elected City officials and staff. Of the 14 members of the public, 8 were Urban customers and 6 were Rural customers.

- 1.2 Please provide an update on the December 10, 2020 Annual Open House, including any meeting minutes/outcomes.

RESPONSE: Nelson Hydro has included this information in its response to IR 1-3.1 to the BCUC in Project No. 1599167, 2021 General Rate Increase Application (GRI Application). This is available at: https://www.bcuc.com/Documents/Proceedings/2021/DOC_61134_B-3-Nelson-Hydro-response-to-BCUC-IR-No1.pdf.

- 1.2.1 Please provide the questions and feedback received in regard to this COSA and Rate Design application (Application).

RESPONSE: The chat forum from the December 10, 2020 Open House and email correspondence with the Nelson Hydro General Manager received after the Open House is attached as part of Nelson Hydro’s IR Responses as Appendix 1-3.2 in the GRI Application and is available at: https://www.bcuc.com/Documents/Proceedings/2021/DOC_61134_B-3-Nelson-Hydro-response-to-BCUC-IR-No1.pdf.

¹ As noted on page 1 of the Application, as a result of its municipal ownership, Nelson Hydro is regulated by the British Columbia Utilities Commission (BCUC) with regard to the non-municipal (Rural) service area, and by City of Nelson Council (City Council) with regard to the municipal (Urban) service area.

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2.0 Reference: STAKEHOLDER ENGAGEMENT
Exhibit B-1, Section 5.3, p. 44; Section 9.3, p. 63; Appendix 5-2; Appendix 5-3
Customer Survey

In November and December 2019, Nelson Hydro conducted an online survey of customers’ rate design preferences and understanding, and states:

The survey was mainly focused on customers’ understanding of rates and rate design, but also touched on customer satisfaction, service reliability, and infrastructure investment. Notably, of the 743 respondents (which reflects a 7% response rate), 94% were residential customers and 49% were from the Rural service area.

On page 63 of the Application, Nelson Hydro states that the customer survey included the following result:

- 74% of Rural ratepayers strongly agree or agree with the statement that “All customer classes should pay their fair share of costs.”
- 67% of Rural ratepayers strongly agree or agree with the statement that “Potential rate increases as a result of the COSA review should be phased in to moderate the rate increase in any one year.”

2.1 Please confirm if Rural customers were aware, at the time of completing the online survey, of Nelson Hydro’s COSA outcomes and Nelson Hydro’s intention to increase Rural residential rates by the proposed 18.17% compounded rate adjustment to rebalance the Revenue Cost Coverage.

RESPONSE: At the time of the survey, in November and December of 2019, Nelson Hydro’s Rural customers were not aware of the proposed 18.17 percent compounded rate adjustment. The precise proposed figure of 18.17 percent increase was not arrived at by the utility until later in 2020 as the COSA & RDA was being prepared. Rather, at the time of the survey the utility was anticipating an approximate required rate adjustment of 17.2% as shown in the November 2019 open house materials (*see* COSA & RDA, Appendix 5-2, Slide 18). At that point the utility had not settled upon any proposed implementation such as the three-year phase-in that is currently proposed. The 18.17% required rate adjustment was arrived at after the online survey as the COSA was revised and finalized.

The survey and its results provide valuable information as it sought customer input on a series of principles rather than on any specific proposals. The survey and its results have helped the utility understand what principles its customers believe in, which ultimately was used as a factor in devising the precise rate adjustment as proposed in the COSA & RDA.

2.1.1 If not, please confirm if Nelson Hydro has sought Rural customer feedback (e.g. at the December 10, 2020 Open House) after Nelson Hydro filed this Application to seek approval of the proposed 18.17% compounded rate adjustment.

RESPONSE: Yes, Nelson Hydro has sought feedback from the Rural ratepayers. The December 10, 2020 Open House specifically detailed the 18.17% proposed rate adjustment. The contact information for Nelson Hydro’s General Manager and other staff involved in preparing the COSA & RDA has been broadly available and these individuals have engaged in numerous phone and video calls with individuals that have questions or input on the proposed rate adjustment.

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Nelson Hydro also published the BCUC-prepared advert clearly notifying ratepayers of the proposed rate adjustment on its social media accounts and in two local newspapers. The advert was also mail-dropped to all ratepayers that live in the Rural area. Further, Nelson Hydro’s General Manager sent a letter to all Rural customers via mail with additional information regarding the COSA & RDA and further providing contact information. The letter is attached as Appendix 1-2.1.1.

The advert and letter have led to many phone calls and emails from ratepayers with questions and input on the rate proposals. Finally, many ratepayers have provided input to the proceeding directly and Nelson Hydro staff have been reviewing all of the letters of comment filed in the proceeding.

2.1.1.1 Please elaborate on customer feedback, if any, Nelson Hydro has received.

RESPONSE: As would be expected with any material rate increase for any service, Rural ratepayers have generally expressed opposition to the proposed rate adjustment. A small number of Rural ratepayers that have carefully reviewed the COSA & RDA have indicated that while they are not enthusiastic about the proposed rate adjustment they believe it is well supported by the COSA & RDA and consistent with the principle that customers should pay their fair share of costs.

B. COST OF SERVICE ANALYSIS

3.0 Reference: Cost of Service Analysis Exhibit B-1, Appendix 8-1,² Executive Summary, pp. i-ii; Section 1.4, p. 2 Customer classes and current rates

On page 2 of Appendix 8-1, Nelson Hydro’s consultant Intergroup Consultants Ltd. (InterGroup) states that it “maintains three types of customer classes - residential, commercial and streetlighting. These customer classes are also broken down into Urban and Rural customer types. The COSA analysis for the system benefits from the simplicity of having no large industrial, wholesale or other customer class with vastly different usage characteristics than the average customer.” [Emphasis added]

3.1 Please explain what is meant by “the average customer” and describe the usage characteristics of that average customer.

RESPONSE: The referenced text meant to highlight the fact that the COSA for Nelson Hydro is not generally impacted by large load customers with vastly different usage characteristics than residential and commercial customers [more than 65% of total sales are residential customer sales, about 34% commercial sales and less than 1% streetlight sales]. Generally, residential customers, and to the lesser extent commercial customers, are considered as low load factor customers with lower annual energy consumption compared to the demand they place to the system during the peak periods. “The average customer” noted in the preamble simply refers to the residential and commercial customers with typical loads.

² On page 4 of the Application, Nelson Hydro states that it has “retained InterGroup to conduct a COSA study to analyze whether each rate schedule adequately recovers its allocated cost of service, and to assist in developing the proposed rate design.” Nelson Hydro is seeking BCUC approval of the COSA prepared by InterGroup, as set out in Appendix 8-1 of the Application.

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- 3.2 Please describe the usage characteristics of a Rural residential customer, a Rural small commercial customer, a Rural commercial service customer and a Rural streetlight customer and discuss the extent to which each of these customers’ characteristics are similar or different from the “average customer.”

RESPONSE: The information provided in response to BCUC IR No. 1-9.2 shows the following:

- Rural commercial customer classes are small [4.5-7.3% of total Rural sales], while customers under Rural residential customer class use about 88% of total Rural sales.
- Rural residential monthly have an average usage of 1,140 kW.h which is higher than the average residential usage for the utility at about 918 kW.h/month. However, higher Rural residential usage appears to be disproportionately impacted by a small number of large use customers. The review of Rural residential accounts suggests that about half of the energy for this class is used by ¼ of customers with some of the customer’s monthly energy consumption reaching as high as 14,000 kW.h/month. Nelson Hydro is reviewing the Rural residential accounts with large energy consumptions to determine if they should be under commercial rate class, though the rate proposals themselves may help address the problem of customers misidentifying (at present rates it costs less to be classified as a residential customer, even though the costs to serve this class are higher – as residential rate disparities are addressed there will not be the same incentive for customers to potentially misidentify). On average consumption of 1,140 kW.h/month about 6.4% of the Rural residential customer’s bill is fixed and remaining 93.6% variable.
 - By way of example, Fortis BC’s 2017 COSA shows the average residential consumption for the utility at 976 kW.h/month [2009 COSA was 1,056 kW.h/month]. At 1,140 kW.h level Fortis BC residential customer’s bill include 11.2% fixed and 88.8% variable.
- Rural small commercial monthly average usage is 1,165 kW.h which is lower than the average usage for the utility at about 1,409 kW.h/month. This is small number of customers with annual energy consumption of about 4.5% of total Rural energy sales.
 - By the way of example, Fortis BC’s 2017 COSA shows the average small commercial consumption for the utility at 1,817 kW.h/month [2009 COSA was 1,886 kW.h/month].
- Rural general service monthly average usage is 9,002 kW.h which is lower than the average usage for the utility at about 18,053 kW.h/month. This is also a small number of customers with annual energy consumption of about 7.3% of total Rural energy sales.
 - By the way of example, Fortis BC’s 2017 COSA shows the average large commercial consumption for the utility at 30,704 kW.h/month [2009 COSA was 16,042 kW.h/month].
- Rural streetlights sales are less than 0.5% of total Rural sales.

For the COSA purposes, the same load factors were used for Urban and Rural customers at customer class level [please see Table 9 of the 2019 COSA Report] which was deemed reasonable, and is consistent with the fact that detailed load research was not undertaken on individual customer classes, which requires a significant amount of load research effort and data that is not available.

As discussed above, the portion of the fixed bill for the Rural residential customers are very low which mutes the impact of load factors. By the way of example, at average monthly usage of 1,140

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kW.h Rural residential customer pays \$127.98/month with only 6.4% fixed portion – this is average 11.22 cents/kW.h of energy consumption which is low compared to what Fortis BC customers pays [13.4 cents/kW.h before February 25, 2021 increase or about 14 cents/kW.h based on February 25, 2021 rates].

- 3.3 [Please describe the usage characteristics of an Urban residential customer, an Urban small commercial customer, an Urban commercial service customer and an Urban streetlight customer and discuss the extent to which each of these customers’ characteristics are similar or different from the “average customer.”](#)

RESPONSE: The information provided in response to BCUC IR No. 1-9.2 shows the following:

- The Urban residential customer class is responsible for about 48.9% of total Urban sales, while the small commercial customers are at 14.8%, municipal customers at 3.9%, the general service customers at about 31.7% and streetlights at 0.7%.
- Urban residential monthly average usage is 735 kW.h which is lower than the average usage residential usage for the utility overall at about 918 kW.h/month. It is also lower than Fortis BC average residential sales - Fortis BC’s 2017 COSA shows the average residential consumption for the utility at 976 kW.h/month [2009 COSA was 1,056 kW.h/month].
- Urban small commercial monthly average usage is 1,476 kW.h which is higher than the average usage for the utility at about 1,409 kW.h/month. The average consumption is lower than Fortis BC average small commercial sales - Fortis BC’s 2017 COSA shows the average small commercial consumption for the utility at 1,817 kW.h/month [2009 COSA was 1,886 kW.h/month].
- Urban general service monthly average usage is 21,608 kW.h which is higher than the average usage for the utility at about 18,053 kW.h/month. The average consumption is lower compared to Fortis BC’s 2017 COSA average consumption for large commercial [at 30,704 kW.h/month], but higher compared to 2009 COSA [at 16,042 kW.h/month].
- Urban streetlights sales are about 0.7% of total Rural sales.

[InterGroup presents the rates related to four customer classes in Table 1 of Appendix 8-1 but only presents the RCC ratios related to two customer classes in Table E-1 and E-2 of Appendix 8-1.](#)

- 3.4 [Please clarify why InterGroup grouped the small commercial and commercial service customer classes for the purpose of the COSA analysis.](#)

RESPONSE: To be clear, Nelson Hydro has only 3 classes – Residential, Commercial and Streetlight. The Commercial class encompasses a number of different rate schedules (Small Commercial B-4, General Service C-4, Commercial Flat Service F-2, and Municipal Service) that each apply depending on the practicalities of serving the specific customers. For example, very small customers (under 400 kW.h/bimonthly billing cycle) will be on Flat Service, while very large customers (over 25 KVA) will be on General Service with more sophisticated demand meters. As well, there are various charges and discounts that can apply based on the customer owning their own transformation or not. But, under normal Cost of Service language, these are all one class.

Despite this nomenclature, there are times when the term “class” is applied to the different rate schedules but properly, as the term is applied in Cost of Service analysis, they are one class. They

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are each too small to be analyzed as a class of their own to have reliable data (e.g., Rural General Service has only 44 customers, and Rural Commercial Flat Rate has no estimate of kW.h available).

Although the response to the BCUC IR No. 1-3.4.1 provides breakdown of the largest groupings, Nelson Hydro does not consider breakdown of the commercial class would be reliable for ratemaking purposes for the reasons noted.

3.4.1 **If possible, please provide the COSA result for these two classes of commercial customers separately.**

RESPONSE: Tables below provide revenue-cost-coverage ratios for Urban and Rural service areas with commercial class broken into small commercial and general service.

For the purpose of the table, the customers served under the small commercial and general service rate schedules were assumed to use the same load factors, but this may not be a valid assumption when applying to discrete small groupings of this type. The load factors used for the combined class were determined to be relevant to all commercial as a group. Once a subdivision of the group is undertaken, it is possible different load characteristics should apply to each. This is part of the reason Nelson Hydro does not recommend dividing the class to such a small size, but suggests looking at General Service/Commercial as a single class.

For the purpose of the table commercial flat and municipal customers are combined. No RCC ratio is provided for Rural for these customers as there are no associated energy costs in the COSA [energy use information is not available].

Also note that the RCC ratios are consistent with what would be expected were the residential class analyzed based on small customers versus large – because Nelson Hydro collects substantial parts of the fixed cost of serving each customer from variable energy rates, larger customers in the class would tend to show higher RCC ratios than the smaller customers. This is a normal and expected part of ratemaking when emphasis is placed on revenue recovery from variable costs, as is the case for most utilities, due to the benefits of conservation signals and fairness for low versus large homeowners.

Table E-1: Revenue-cost-coverage Ratios for Rural Service Area

	2019 COS Allocation with 9.25% ROE	2019 Actual Revenues	Variance	RCC Ratio
	\$000	\$000	\$000	%
Residential - Rural	\$8,056	\$6,476	(\$1,580)	80.4%
Small Commercial - Rural	\$404	\$409	\$6	101.4%
General Service - Rural	\$570	\$646	\$76	113.2%
Commercial Flat, Other Adjustments - Rural	\$21	\$28	\$6	NA
Streetlight - Rural	\$37	\$33	(\$4)	89.4%
Total Rural	\$9,089	\$7,592	(\$1,496)	

Table E-2: Revenue-cost-coverage Ratios for Urban Service Area

	2019 COS Allocation with 9.25% ROE plus \$2.877 million Capital Reserve Transfer	2019 Actual Revenues	Variance	RCC Ratio
	\$000	\$000	\$000	%
Residential - Urban	\$5,800	\$5,196	(\$605)	89.6%
Small Commercial - Urban	\$1,618	\$1,783	\$165	110.2%
General Service - Urban	\$3,181	\$3,594	\$413	113.0%
Commercial Flat, Municipal, Other Adjustments - Urban	\$417	\$419	\$2	NA
Streetlight - Urban	\$93	\$97	\$4	104.3%
Total Urban	\$11,109	\$11,089	(\$21)	
Total	\$20,198	\$18,681	(\$1,517)	

Note that during the preparation of the IR responses an error was identified in the number of customers for the Urban service area used in the COSA, where the Urban residential number of customers were stated at 5,166 while the correct number should be 5,080 and commercial number of customers were stated at 924 while the correct number should be at 1,010 as shown in response to BCUC IR No. 1-9.2 [no change in total number of customers]. The tables above reflect the corrected number of customers.

- 3.5 Please clarify whether the COSA analysis includes the streetlight customer classes. If they are included in the COSA, please revise Table E-1 and E-2 of Appendix 8-1 to include the Rural and Urban streetlight customers respectively.

RESPONSE: The COSA includes the streetlight customer class. However, considering the streetlight class revenues are insignificant compared to the other classes, the streetlight class was not presented in the summary table. Please see response to BCUC IR No. 1-3.4.1 with tables that include the streetlight class.

- 4.0 **Reference:** [Cost of Service Analysis Exhibit B-1, Appendix 8-1, Section 2.0, p. 3 Revenue requirement methodology](#)

On page 3 of Appendix 8-1, InterGroup states that “[t]he application was consistent with Nelson Hydro’s previous rate application where Nelson Hydro included a dividend and transfer to capital reserve as part of the costs to serve customers, while under a rate base/rate of return method these will be replaced by return on equity and amortization expense.”

- 4.1 Please confirm, or otherwise explain, that a transfer to capital reserve is still included in the calculation of revenue requirement for Urban customers.

RESPONSE: Confirmed, a transfer to capital reserve is still included in the revenue requirement for Urban Customers as this is a necessary component of running the utility and meeting capital spending requirements. For the purpose of calculating the revenue-cost-coverage ratios for 2019, the capital reserve transfer was added as a cost to the Urban customer classes considering the status of Nelson Hydro as a municipality owned utility and the need to generate revenues to fund capital.

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The transfer to capital reserves is not included for Rural customers. The 2019 COSA was prepared using a rate base/rate of return method consistent with the approach used for the regulated utilities and no capital reserve transfer was added to the Rural service area.

The Urban service area costs, in contrast, reflect the best practices of municipal utility finance in BC, where rates are used to provide a return on the assets as well as used to fund capital through capital reserves. This allows elected officials to decide what is the best mix of rates, taxation and, where prudent, borrowing to fund capital improvements. This is also recognized by the BCUC in the previous decisions as municipal governments have restrictions on how much debt they can carry and taxpayers, not ratepayers, ultimately are required to approve all long-term borrowing. Most taxpayers are somewhat risk averse when local governments attempt to borrow. Therefore, without building capital reserves local governments would not be able to fund their capital programs which are needed to maintain utility service quality, including safety, reliability and growth. If elected officials are restrained from using all of the available tools to fund capital improvements, the sustainability and quality of the utility service could be compromised. Inclusion of a capital reserve reflects the practice that has been in place in City of Nelson for more than 100+ years and is specifically contemplated in the Community Charter.

Please also see response to BCUC IR No. 1-4.2.1.

- 4.2 [Please confirm, or otherwise explain, that the transfer to capital reserve in the previous rate application applied to both the Urban and Rural customers.](#)

RESPONSE: Please see the response to BCUC IR 1-4.2.1.

- 4.2.1 [If so, please explain InterGroup’s rationale for changing the methodology to calculate its revenue requirement for Rural customers.](#)

RESPONSE: Nelson Hydro’s previous general rate applications included a dividend and transfer to capital reserve as part of the costs to serve all customers, while the 2019 COSA was prepared using a rate base/rate of return method where dividend and capital reserve transfer are replaced by return on equity and amortization expense.

Under the normal utility regulations typically applied to investor-owned utilities, the revenue requirement includes return on equity, cost of debt and amortization expense. This approach generates a part of the capital needed for utility investments, but capital is also required to be sourced from sale of shares (equity) and from material borrowing (debt). However, in contrast to the investor-owned utilities, Nelson Hydro is regulated by and must comply with the Municipal Liabilities Regulation under the Community Charter as part of the City of Nelson. This means Nelson Hydro cannot raise “equity” through sale of shares, and does not have the liberty to seek debt to finance its capital projects - the amount of debt is a component of overall municipal operations where there are limits to the amount of liabilities or borrowing that a municipality is able to incur. Therefore, the capital reserve transfer was added to Urban customers reflecting the need to generate cash to fund capital. Please also see response to BCUC IR No. 1-4.1.

The reason for changing the approach for Rural customers was an understanding that for regulatory purposes, it was difficult for the BCUC to assess the rates for Rural customers on a

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consistent basis with other utilities that it regulates. Also, the approach Nelson Hydro uses in the Urban area generates more cash in a given year, in order to fund capital, but left an impression that this approach to cash generation from the Rural areas was not as well-understood under a normal utility lens.

As indicated in response to BCUC IR No. 1-4.1, the City citizens/taxpayers as the ultimate owners of the City assets can decide how to fund the capital projects, as they have been and continue to bear the risk related to these assets. There are multiple examples when the City electorate rejected borrowing for capital projects, including the initial project to build the Bonnington Falls Generating Station, then G5, and failed referendums on the Recreation Complex, to name a few.

Rural customers, on other hand, are ratepayers of Nelson Hydro in the same way as customers of Fortis BC and BC Hydro. Rural customers have no ownership right in the assets, have no ongoing entitlement to risks and rewards achieved by Nelson Hydro, and have a simple framework transaction that consists of paying the approved rates and receiving the commensurate service.

**5.0 Reference: Cost of Service Analysis
Exhibit B-1, Appendix 8-1, Section 2.0, Table 2, pp. 3–4
Revenue requirement 2019 base data**

On page 3 of Appendix 8-1, InterGroup states that “[f]or the purpose of this COSA, all analysis has been done on the basis of the most recent actuals, 2019 as adjusted, illustrated using a rate base/rate of return method. There is no reason to expect that use of 2019 actuals as adjusted would lead to any material problematic or misleading COSA output, but adds to clarity and transparency.”

InterGroup also states that an “[a]djustment was made to reduce Rural service area Vegetation Management Costs for 2019 actuals by \$0.298 million to reflect the average cost for 2017-2019 years.”

Table 2 on page 4 shows the \$298,000 “vegetation management adjustment” and “other adjustments” for an amount of \$86,000.

5.1 Please confirm, or otherwise explain, that the revenue requirement shown in Table 2 is the revenue requirement pertaining to both Urban and Rural customers.

RESPONSE: Not confirmed. The amounts shown in Table 2 are only Nelson Hydro’s expenses to serve all customers. They do not include any equity returns or, for the Urban portion, Capital Reserve transfers.

The COSA was developed to include both Urban and Rural classes so both the BCUC, as the regulator of Rural rates, and the City of Nelson Council, as the regulator of Urban rates, could make informed decisions on the parts of the utility that they are responsible for rate and policy setting. Table 2 of the 2019 COSA Report as a starting point shows some revenue requirement components for Nelson Hydro [i.e., pertaining to both Urban and Rural customers]. Table 4 clarifies that regardless of the approach to setting a ROE or Capital Reserve or any other approach, the Rural customers are not even covering their share of Nelson Hydro’s basic measurable costs.

5.1.1 If confirmed, please clarify why an adjustment was made to vegetation management costs related to the Rural service area only.

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RESPONSE: Vegetation management costs in the Rural service areas [North Shore and South Shore] are substantially higher than in the Urban area. Excluding emergent situations and required work, Nelson Hydro’s vegetation management is performed based on a three-year cycle [for example, the first year in the Urban service area, next year North Shore service area, the year following South Shore service area]. The actual vegetation management costs for the Rural service area in 2019 were high considering efforts by Nelson Hydro to increase reliability and reduce outages. Therefore, an adjustment of \$0.298 million was made to reduce the actual vegetation management costs for Rural service area taking the average for the last three years, 2017 through 2019 inclusive. Without these adjustments, the vegetation management costs in rates for Rural service area would be higher than the cost under a normalized three-year cycle. No adjustments were made for the Urban service area costs as it will not impact the COSA outcomes for Rural customers, which was the primary purpose of the COSA.

5.2 [Please clarify why only vegetation management costs were normalized, as opposed to all Operations and Maintenance \(O&M\) costs.](#)

RESPONSE: Please see the response to BCUC IR 1-5.1.1.

5.2.1 [Could a three-year average be used for the period 2017–2019 to normalize all O&M costs? Why or why not?](#)

RESPONSE: Nelson Hydro’s vegetation management is performed based on a three-year cycle, therefore, the vegetation management costs vary notably year-over-year. There is also other maintenance work that is conducted on a cycle basis [for example, pole test and treat], however, these expenses are not significant as vegetation management and also, they are treated as common costs. Nelson Hydro does not do cycling for the majority of O&M costs, therefore, no adjustments were made to the other O&M costs.

5.3 [Please clarify the purpose for “other adjustments,” which costs were adjusted for a total amount of \\$86,000, and the method for adjusting those costs.](#)

RESPONSE: The adjustment reflects the following:

- Table 2 is prepared based on the City of Nelson’s 2019 Annual Report. For consolidation purposes the Annual Report removes internal charges, i.e., payments within the City of Nelson and Nelson Hydro O&M costs were reduced by \$0.138 million for that purpose [i.e., the payments made by Nelson Hydro to other City departments/services]. This cost was added back as it is actually incurred cost by Nelson Hydro.
- For the Annual Report purposes the power purchase costs were reported at \$6.518 million which is the sum of \$6.636 million power purchase costs offset by \$0.118 million energy export revenues. For the purpose of the COSA, the actual cost of \$6.636 million was used.
- The Annual Report includes \$0.342 million 3rd party expenses which are fully recovered as part of other revenues. This expense was removed from Nelson Hydro O&M expenses.
- The sum above \$0.138M+\$0.118M-\$0.342M= -\$0.086M.

5.4 [Please explain whether rate revenues or electricity sales may be normalized or warrant any adjustments, as opposed to using 2019 actual revenues.](#)

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RESPONSE: Nelson Hydro does not see any reason to normalize rate revenues or electricity sales when conducting an actual COSA that otherwise predominantly uses actual results. There was no indication 2019 sales were sufficiently outside the norm to merit adjustment. The only adjustments made to “normalize” amounts in the COSA were for vegetation management for the reasons noted in response to BCUC IR 1-5.1.1.

6.0 Reference: [Cost of Service Analysis Exhibit B-1, Appendix 8-1, Section 2.0, Table 2, pp. 3–4; Section 4.1.2, Table 7, p. 11 Supplies and services](#)

On page 3 of Appendix 8-1, InterGroup states that O&M expenses included \$9.462 million for Supplies and Services. On page 4, Table 2 shows an amount of \$9.758 million for Supplies and Services. On page 11, Table 7 shows an amount of \$9.374 million for Supplies and Services.

6.1 [Please reconcile these three figures for Supplies and Services.](#)

RESPONSE: The 2019 actual supplies and services cost reported in the City of Nelson’s 2019 Annual Report is \$9.462 million. The loss on disposal of assets of \$0.296 million was added to the O&M expenses as noted in footnote #7 on page 3 of the 2019 COSA Report [\$9.462 million + \$0.296 million=\$9.758 million].

Considering the adjustments noted in the response to BCUC IR 1-5.1 [vegetation management cost adjustment] and BCUC IR 1-5.3 [other adjustments] are related to the supplies and services, they were included to the supplies and services costs for the purpose of Table 7 [\$9.758 million - \$0.298 million-\$0.086 million=\$9.374 million]. There is no impact to the COSA results from showing those adjustments separately or including them under supplies and services costs.

7.0 Reference: [Cost of Service Analysis Exhibit B-1, Appendix 8-1, Section 2.0, Table 2, pp. 3–4; Section 3.0, p. 5 O&M expenses](#)

In footnote 12 on page 5 of Appendix 8-1, InterGroup states:

[Estimated based on total operating and maintenance expenses \[salaries and wages plus supplies and services\] at \\$11.8 million based on 2019 actuals provided in Table 4.](#)

[On page 2, InterGroup cites O&M expenses that total \\$11.91 million. In Table 2 on page 3, the total of “salaries and wages” plus “supplies and services” amounts to \\$12.206 million.](#)

7.1 [Please reconcile these three figures for O&M expenses.](#)

RESPONSE: The number \$11.910 million noted on page 3 of the 2019 COSA Report is the sum of salaries and wages [\$2.448 million] and supplies and services [\$9.462 million] reported in the City of Nelson’s 2019 Annual Report. The loss on disposal of assets of \$0.296 million was added to the O&M expenses as noted in footnote #7 on page 3, which increases total expenses to \$12.206 million.

As shown in Table 2 of the 2019 COSA Report and noted in responses to BCUC IRs 1-5.1, 1-5.3 and 1-6.1 the O&M expenses were reduced by \$0.384 million for vegetation management [\$0.298 million] and other adjustments [\$0.086 million]. After these adjustments the O&M expense at \$11.822 million [\$12.206 million -\$0.298 million-\$0.086 million= \$11.822 million].

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**8.0 Reference: Cost of Service Analysis
Exhibit B-1, Appendix 8-1, Section 3.0, p. 5
Rate base and return**

On page 5 of Appendix 8-1, InterGroup states:

Based on information provided by Nelson Hydro it is estimated that lag days for bill payments for consumed energy would be up to 52 days (15 days consumption lag plus one week billing lag and 30 days to pay the bill) with weighted average of 28 days to pay O&M expenses (wages and benefits every second week, power purchases total of 36 days, including 15 days consumption lag and 21 days to pay the bill, plus 29 days for other supplies and services expenses, based on comparable representative industry values). The net lag days are estimated to be 23.5 days, which leads to approximately a net \$0.768 million cash working capital requirement to be included as part of rate base. Inventory balances are approximately \$0.874 million, for a total working capital of \$1.643 million.

8.1 Please clarify how the net \$0.768 million was calculated for cash working capital requirement as \$11.8 million / 365 * 23.5 = \$0.760 million.

RESPONSE: The cash working capital requirements are calculated based on \$11.910 million O&M expenses including \$2.448 million salaries and wages, and \$9.462 million supplies and services as reported in the annual report before any adjustments [please see response to BCUC IR 1-7.1]. The net lag days are calculated at 23.62 days based on 52 days lag for revenue collection less 28.38 days for O&M expenses (which was rounded to 23.5 days in the text of the report). The calculation is as follows: \$11.910 million/366*23.62= \$0.768 million.

8.2 Please describe what constitute the inventory balances.

RESPONSE: The inventory balances included in working capital requirements are based on average for 2018 and 2019 actuals. The inventory balances are primarily made up of replacement components of capital assets, such as polemount and padmount transformers, wires and poles so they are available when required to maintain reliable energy delivery. The remainder is made up of smaller replacement parts necessary for the maintenance and repair of the infrastructure.

Also on page 5, InterGroup states that “The allocation of the common costs is based on cost of service results provided in section 5.5.”

8.3 Please clarify which section InterGroup intended to reference as there is no section 5.5.

RESPONSE: A typographical error was made and correct reference should be section 4.

**9.0 Reference: Cost of Service Analysis
Exhibit B-1, Appendix 8-1, Section 4.1, pp. 7–8
Assign costs to service areas**

On pages 7 to 8 of Appendix 8-1, InterGroup states that:

The O&M expenses as well as capital assets are assigned to the service areas based on information provided by Nelson Hydro.

The costs are assigned into three groups¹⁵:

- Urban – the costs which are 100% related to serve Urban customers;
- Rural – the costs which are 100% related to serve Rural customers; and
- Common – the costs which cannot be assigned 100% to Urban or Rural, and are thus broken out to all customers based on usage.

The COSA is prepared separately for each cost group indicated above and the results are combined to summarize COSA outcomes. [Emphasis added]

9.1 Please confirm, or otherwise explain, that InterGroup has applied the three COSA steps (functionalization, classification and allocation) to each of the three groups “Urban,” “Rural” and “Common.”

RESPONSE: Confirmed.

9.1.1 If so, please clarify why InterGroup allocated the “common costs” to all customers based on usage when some of the costs could be demand-related, energy-related or customer-related and have a different allocator than usage.

9.2 Please complete the table below for 2019:

	Urban		Rural		Total	
	Customers	Sales (MWh)	Customers	Sales (MWh)	Customers	Sales (MWh)
Residential						
Small Commercial						
Commercial Service						
Streetlight						
Total						

RESPONSE: Please see table below for requested information. Note that there are only 3 rate classes – Residential, Commercial and Streetlight. The division of Commercial into the different rate schedules under which a customer can be served is discussed in BCUC IR-3.4.

Rate Class	Urban		Rural		Total	
	# of Customers	Sales, MW.h	# of Customers	Sales, MW.h	# of Customers	Sales, MW.h
Residential	5,080	44,779	4,203	57,522	9,283	102,301
Small Commercial	765	13,554	210	2,935	975	16,488
Commercial	112	29,042	44	4,753	156	33,795
Other Commercial [Flat, Municipal]	133	3,606	75	0	208	3,606
Subtotal Commercial	1,010	46,202	329	7,688	1,339	53,889
Streetlight	23	658	35	226	58	884
Total	6,113	91,639	4,567	65,435	10,680	157,074

On page 7, InterGroup states that:

A COSA starts with a utility’s revenue requirement, and in general has three key steps – functionalization of the costs (determining what function or role the costs relate to, such as generation, transmission/distribution and general), classification (for each function, determining what types of use drive the cost, such as demand, and/or energy, customer or direct assigned) and allocation (determining which users impose loads of the specified type).

The COSA for Nelson Hydro includes one more step to assign costs. Prior to functionalization, where possible, the costs are first assigned directly to the service area where the cost responsibility arises; i.e., Urban and Rural.

9.3 Instead of first assigning costs into three groups (Urban, Rural and Common), could InterGroup have kept all costs in the Common group and prepared the COSA for that group, ultimately resulting in costs assigned to each of the six customer classes (Urban residential, Urban commercial, Urban Streetlight, Rural residential, Rural commercial, and Rural Streetlight)?

RESPONSE: Yes, but the result would have been the same. The approach noted would simply have had a large number of zero allocations (e.g., the Urban Residential class and the Urban Commercial class would have each made zero use of the Rural Distribution assets, and vice versa).

The purpose of the “zoning” approach - assigning costs into two service areas then to three classes - was to make clear and simple the fact that many of the cost to serve Rural customer class are readily identified as are the cost to serve customers within the City of Nelson boundaries. This is also common practice for utilities where multiple geographic zones on an interconnected system have some readily identified costs (for example, Northwest Territories Power Corporation). Nelson Hydro is a small utility and the decision that was made back in 1922 was that Rural customers would pay their costs plus a return to the City and therefore the City has been accounting for these direct costs from the very beginning. In fact, rates were different for every service area to ensure cost recovery and return when new rural customers service areas were added. Please see Sections 1.2 and 3.3 of the COSA & RDA for more details where Nelson Hydro provides historical context. The COSA approach, outlined above, reflects these historical decisions and also meets the regulatory principles of today.

9.3.1 If yes, please explain why InterGroup chose to separate costs into three groups first

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rather than starting with the functionalization step.

RESPONSE: Please see the response to BCUC IR 1-9.3.

9.3.2 If not, please explain why not.

RESPONSE: Please see response to BCUC IR 1-9.3.

10.0 Reference: [Cost of Service Analysis Exhibit B-1, Appendix 8-1, Section 4.1.1, p. 8 and Table 5, p. 9; Nelson Hydro, 2019 Rural Rate Application, Exhibit B-1, Nelson Hydro 2017 COSA, Table 7, p. 17 Rate base](#)

On page 8 of Appendix 8-1, InterGroup states that:

- 1) 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.

In Table 5, InterGroup has assigned all the generation assets to the Urban group.

10.1 Please clarify why InterGroup has assigned all the generation asset to the Urban group when the Rural group also benefits from these generation assets when surplus energy is generated.

RESPONSE: The approach adopted was to assign 100% of the costs of generation to the Urban classes, but then credit back an amount from the Rural classes for the portion of the hydro generation used by Rural customers. The reason for this approach as to reflect the Nelson Hydro Generation Rates Policy adopted by City of Nelson [see Appendix 7-2 of the Application], which notes that Nelson Hydro generation is first available to customers within the City of Nelson’s municipal boundaries and any surplus will then be made available to Rural customers. As noted in Sections 1.2 and 3.3 of the COSA & RDA this reflects the decisions that were made when the City agreed to serve these rural customers.

To operationalize this policy, all costs related to generation plant are assigned to Urban customers. The estimated surplus energy delivered to Rural customers is then assumed to be delivered to Rural customers at the Fortis BC wholesale energy rate [energy rate only, without any customer or demand charges – this is assumed to reflect a lower bound of the value of the energy received by the Rural customers from the asset]. This leads to a credit of \$0.396 million to Urban customers, and an equal cost added to Rural customers as illustrated in Table 7 of the 2019 COSA Report.

There are also benefits from Nelson Hydro owned generation to Rural customers which are not quantified. For example, as illustrated in BCUC IR No. 1-12.1 Attachment 1, in April 2016 Nelson Hydro’s generation reduced Rural demand by 3,201 kVA and by 4,564 kVA in June 2018. In 2019 Fortis BC’s Power Supply charge for Nelson Hydro was at \$4.77/kVA which would results in \$15,268 and \$21,770 Power Supply cost savings for Rural customers for those months. These

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added benefits were not recovered from Rural customers, to their benefit.

In Table 5, InterGroup has assigned transmission/distribution assets to each of the three groups.

10.2 Please clarify the basis on which InterGroup has directly assigned each of the following asset categories to either Urban or Rural:

- Substations
- Primary and secondary poles & conduct
- Underground conduct & devices
- Transformers
- Meters
- Streetlight
- Other?

In Table 7 of its 2017 COSA, included in the Nelson Hydro 2019 Rural Rate Application, InterGroup had assigned \$6.131 million of substations to Urban, \$0.325 million to Rural and no cost to Common. In Table 5 of its 2019 COSA, Nelson Hydro assigns \$3.389 million of substations to Urban, \$0.298 million to Rural and \$2.660 million to Common.

RESPONSE: The capital assets are assigned to Urban and Rural based on the physical location of the asset [within the City boundaries, North Shore, or South Shore]. Where the labour and material cost inputs for a specific asset at that location is clearly defined, then that cost is used. In other cases an average cost is used to allocate to each asset at each location based on the total for the project.

Substation and generating station assets are clearly defined by the location of the facility and the area it services.

The above is consistent with the decisions made in 1922 when the City agreed to serve these Rural customers as noted in Sections 1.2 and 3.3 of the Application.

10.3 Please clarify why no amount for substations had been assigned to the Common group in the 2017 COSA but \$2.660 million of costs were moved from the Rural to the Common group in the 2019 COSA.

RESPONSE: In the 2017 COSA, the substation costs were assigned to Urban and Rural service areas based on an estimate of which group made most use of each of substations [e.g., if a substation was mostly used by Urban customers then it was 100% assigned to Urban]. In the 2019 COSA Nelson Hydro reviewed the substation uses to improve and refine the cost assignment practices, and consistent with other cost assignments [where if the cost can't be 100% assigned to either Urban or Rural then it is assigned as a common cost] two substations are assigned as common. This was considered to be an ongoing improvement in the COSA accuracy, even though the net effect is small in dollar terms.

10.4 Please clarify why no streetlight capital assets have been allocated to Rural. Are there any streetlights in the Rural service area?

RESPONSE: Nelson Hydro does have agreements for the maintenance of streetlights in the Rural areas. These are located on private land or provincial road allowances, and for the most part, are attached and

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capitalized with existing Nelson Hydro poles. The lighting fixtures themselves and their replacement are normally not capitalized, and rather expensed as a maintenance cost. There have not been any new additions capitalized to Rural streetlights since 2011 when tangible capital assets were introduced to public sector accounting standards (PSAB). Any existing infrastructure would be fully amortized.

On page 9 of Appendix 8-1, InterGroup states that “[t]he working capital portion of the rate base cannot be assigned 100% to Urban or Rural, therefore working capital requirements are assigned to common.”

10.5 Please clarify how InterGroup applied the three steps of the COSA (functionalization, classification and allocation) to allocate the working capital to each customer class.

RESPONSE: The working capital in the rate base is shown as a separate line item. It was classified based on classification of total plant in service and allocated to customer classes as part of rate base [return on rate base] using allocation factors that are calculated based on share of energy, demand and number of customers.

11.0 Reference: Cost of Service Analysis
Exhibit B-1, Appendix 8-1, Section 4.1.1, p. 9
Return on rate base

On page 9 of Appendix 8-1, InterGroup states:

a) The ROE for each service group was calculated based on equity portion of rate base as shown in Table 6 and proposed ROE at 9.25%. This results in \$2.136 million ROE for Urban service area and \$1.201 million ROE for Rural service area. Capital Reserve Transfers at \$2.877 million are added to Urban service area only.

11.1 Please confirm that InterGroup meant to refer to Table 4 instead of Table 6.

RESPONSE: Confirmed, the correct reference is Table 4.

11.2 Please recalculate the return on rate base based on a deemed equity thickness of 40%.

RESPONSE: The calculations requested cannot be performed. It is impossible to finance the \$42.532 million Rate Base with equity at 40% (\$17.012 million), and debt at only \$5.467 million. There is also no way to credibly hypothesize about the missing \$20 million of capital (\$42 million Rate Base less \$17 million equity and \$5 million debt) as coming from new debt, given that there are significant challenges to Nelson Hydro’s ability to borrow on that scale. As there is no source for that capital, even to perform the calculations there would be no coherent way to price the hypothetical \$20 million in capital.

Further, the deemed equity option is not a viable option for Nelson Hydro considering its status as a department of the municipality. The BCUC has previously agreed with this position. See BCUC Order G-119-17, Appendix A, page 9 [https://www.bcuc.com/Documents/Proceedings/2017/DOC_49757_G-119-17_Nelson-Hydro_2017-Rate-Application_Decision.pdf] stating the following:

As stated by Nelson Hydro, an important difference between private and public entities relates to

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legislative requirements on a municipality incurring debt. As outlined in the Municipal Liabilities Regulation, there are limits to the amount of liabilities or borrowing that a municipality is able to incur. Put simply, a municipality is unable to incur a new liability if the cost of servicing the aggregate liabilities of the municipality for the year exceeds 25 percent of the annual revenue calculation of the municipality for the previous year. Thus, due to legislative requirements Nelson Hydro would have limited ability to meet a deemed debt level similar to other utilities. In the Panel’s view, imposing a deemed debt to equity ratio on Nelson Hydro which is similar to other regulated utilities when such a capital structure cannot be achieved would have the potential to unfairly restrict the utility from earning a fair return on its assets. Therefore, the Panel concludes that the application of a debt to equity ratio in accordance with what actually exists is a more fair and reasonable approach than that of reliance on a deemed capital structure.

Considering the above, this would be a hypothetical but unachievable exercise, that would not provide relevant information to the Commission. In addition to the borrowing restrictions in the legislation, all long-term borrowing needs electoral approval per Section 180 of the Community Charter. As this borrowing would be done by the City of Nelson it would only be the City of Nelson electorate that would be able to approve this borrowing. As noted in response to BCUC IR No. 1-4.2.1 the electorate tends to be risk adverse when local governments borrow and the fact that this borrowing would be for the assets to serve Rural customers, that makes it even more unlikely that the Nelson electorate would approve this level of borrowing considering they will take all the risks for repayment of those debts. As noted in BCUC IR No. 1-4.2.1 Nelson Hydro has provided examples when the electorate voted against borrowing. For the above reasons, Nelson Hydro is unable to provide the requested information.

11.2.1 [Please update the COSA RCC ratios for each customer class based on this revision.](#)

RESPONSE: Please see response to BCUC IR 1-11.2.

12.0 Reference: [Cost of Service Analysis Exhibit B-1, Appendix 8-1, Section 4.1.2, pp. 9–11, Table 6 & Table 7, pp. 10–11 O&M expense](#)

[On page 10 of Appendix 8-1, InterGroup states that “generation costs and the purchased power costs are assigned to Urban and Rural service areas based on allocation factors shown in Table 6. Table 6 is prepared based on a feeder loading study conducted by Nelson Hydro for the period from 2015 to 2019, the previous five-year actuals, and shows five-year averages.”](#)

12.1 [Please provide a copy of the feeder loading study.](#)

RESPONSE: Please see Appendix 1-12.1 for the summary tables from the feeder loading study. The complete Excel file comprising the study is available upon request.

[Table 6 shows that Nelson Hydro sells 88.9% of its own generation to Urban customers and 11.1% to Rural customers.](#)

12.2 [Please clarify how InterGroup can identify how much of Nelson Hydro’s own generation is sold to Urban versus Rural customers.](#)

RESPONSE: Like any electrical system, there is no manner to physically track any specific electrons or sources

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on Nelson Hydro’s systems. But conventions have been developed to know which parties are consuming what power – the basis for all Cost of Service analysis, and also all power market wholesale transactions.

For the purposes of the Nelson Hydro Cost of Service analysis, the inputs reflect the design, operation, and policies of the system. The Nelson Hydro Generation Rates Policy adopted by City of Nelson [Appendix 7-2 of the Application] notes that Nelson Hydro generation is first available to customers within the City of Nelson’s municipal boundaries and any surplus will then be made available to Rural customers [this prioritization is done on a monthly time-step basis]. This is consistent with the decisions made when the City agreed to serve the Rural customers. Please see Sections 1.2 and 3.3 of the COSA & RDA for more details where Nelson Hydro provides historical context.

The feeder load study [Response to BCUC IR No. 1, Appendix 1-12.1] was used as the basis to estimate Nelson Hydro own generation energy delivered to Urban customers and Rural customers. As illustrated in the feeder loading study, for the period from 2015 to 2019 the energy delivered to Rural customers ranged between 8.3% and 14.5% to average of 11.1% while 88.9% supplied to Urban customers.

- 12.3 [Please clarify why Table 7 shows that 100% of generation costs are assigned to Urban customers when InterGroup states it has assigned them to Urban and Rural based on allocation factors shown in Table 6, which are 88.9% Urban/11.1% Rural.](#)

RESPONSE: The percentages noted by the BCUC reflect Nelson Hydro generation, not the generation costs.

Generation costs are 100% assigned to the Urban customers.

However, surplus energy is available for Rural customers. Based on Nelson Hydro Generation Rates Policy adopted by City of Nelson [March 9, 2020] Nelson Hydro generation is first available to customers within the City of Nelson’s municipal boundaries and any surplus will then be made available to Rural customers. The feeder loading study was used to determine how much surplus energy was available to Rural customers and the review shows that 88.9% of Nelson Hydro’s own generation provided to Urban customers and the remaining 11.1% to Rural customers.

The estimated surplus energy delivered to Rural customers is then assumed to be delivered to Rural customers at Fortis BC wholesale energy rate [energy rate only, without any customer or demand charges – this is assumed to reflect a lower bound of the value of the energy received by the Rural customers from the asset]. This leads to a credit of \$0.396 million to Urban customers, and an equal cost added to Rural customers as illustrated in Table 7 of the 2019 COSA Report.

[Table 6 shows that Nelson Hydro sells 29.2% of its power purchases to Urban customers and 70.8% to Rural customers. It also shows that demand purchases are split 39.1% Urban versus 60.9% Rural.](#)

[On page 10 of Appendix 8-1, InterGroup states that “the share of the demand purchases for Urban customers is higher compared to the energy sales.”](#)

- 12.4 [Please clarify how InterGroup can identify what proportion of the purchased power is sold to Urban versus Rural customers.](#)

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RESPONSE: The feeder load study [Appendix 1-12.1] was used as the basis to estimate allocation of demand purchases between Urban [39.1%] and Rural [60.9%] service areas.

As noted in response to BCUC IR No. 1-10.1, there are also benefits from Nelson Hydro’s own generation to Rural customers which are not quantified. For example, as illustrated in BCUC IR No. 1-12.1 Attachment 1 in April 2016 Nelson Hydro generation reduced Rural demand by 3,201 kVA and by 4,564 kVA in June 2018. In 2019, Fortis BC’s Power Supply charge for Nelson Hydro was at \$4.77/kVA which would have resulted in \$15,268 and \$21,770 Power Supply costs for Rural customers for those months, which was avoided.

12.5 [Please clarify why, for the purchased power, the percentage share between Urban and Rural is higher for demand purchase than energy sale.](#)

RESPONSE: Nelson Hydro winter generation is limited by its water licence to about 9.1 MW. Therefore, Urban customers share higher demand purchases compared to energy purchases.

12.6 [Please clarify why Table 7 shows that 33.5% of power purchase costs are assigned to Urban customers versus 66.5% to Rural customers when InterGroup states it has assigned them to Urban and Rural based on allocation factors shown in Table 6, which are 29.2% Urban/70.8% Rural.](#)

RESPONSE: The power purchase costs in Table 7 include energy and demand purchase costs as well as basic charges paid to Fortis BC. Urban customers share about 33.5% of total power purchase costs that is based on about 29.2% share of energy purchase costs and 39.1% of demand purchase costs (per BCUC 12.4) and 57.3% of basic charges (based on number of customers).

12.7 [Please clarify how InterGroup assigned the transmission and distribution costs shown in Table 7 to the three groups \(Urban, Rural and Common\).](#)

RESPONSE: As noted on page 9 of the 2019 COSA Report, the accounting for Nelson Hydro permits a portion of the O&M expenses to be directly charged to Urban or Rural. For example, the labour costs related to the City of Nelson distribution system are recorded under a separate account “Distribution-City”, while the labour costs related to distribution systems in Rural areas are recorded under account “Distribution-S Shore Labour” and/or “Distribution-N Shore Labour”. These types of expenses can be directly assigned to Urban or Rural. Transmission related costs are assigned to common consistent with assignment of transmission assets. Substation costs are assigned to the service areas based on the cost to serve a specific substation [i.e., costs related to substation that serves Rural area are assigned to Rural].

This is consistent with the decision that was made back in 1922, which was that Rural customers would pay their costs plus a return to the City and therefore the City has been accounting for these direct costs from the very beginning. Please see Sections 1.2 and 3.3 of the COSA & RDA for more details where Nelson Hydro provides historical context. The COSA approach, outlined above, reflects these historical decisions and also meets the regulatory principles of today.

12.8 [Please clarify how InterGroup assigned the general costs shown in Table 7 to the three groups \(Urban, Rural and Common\)](#)

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RESPONSE: The general costs are predominantly assigned as common costs as they relate to services that benefit all customers. For example, the expenses under accounts such as share of finance costs, administrative costs, computer services costs, training, office supplies and etc. cannot be directly assigned to Urban or Rural and need to be under a common cost group. Small amounts are directly assigned [e.g., district heating related costs are assigned to Urban].

12.9 Please clarify how InterGroup assigned the interest costs shown in Table 7 to Urban versus Rural customers. Please also clarify how InterGroup assigned the long-term debt to Urban versus Rural customers in Table 4.

RESPONSE: Long term debt and interest expenses are assigned to Urban and Rural service areas based on the allocation of net book value of assets between Urban and Rural, therefore Rural and Urban receive the same benefit from borrowing versus return on equity.

12.10 Is the allocation of costs between Urban, Rural and Common in Table 7 linked to the allocation methodology described in Appendix 7-1? If so, please elaborate.

RESPONSE: The allocation methods described in Appendix 7-1 states that the costs that can be directly attributable to one of the service areas should be 100% assigned to that service area. Based on this the costs in COSA that can be directly attributable to one of the service areas were assigned into Urban and Rural; while the cost that cannot be directly attributable to one of the service areas were assigned to Common cost group.

The allocation methods in Appendix 7-1 also describes the methods to be used for some specific costs categories such as power purchase costs that should be assigned based on a feeder loading study and own generation allocation which allocates first priority hydraulic generation to Urban residents based on Nelson Generation Rate Policy (Appendix 7-2).

13.0 Reference: [Cost of Service Analysis Exhibit B-1, Appendix 8-1, Section 4.2, p. 11 Functionalization of costs](#)

On page 11 of Appendix 8-1, InterGroup states that “General plant” includes general cost such as computer services, etc.

13.1 Please clarify what other costs are included in the “General plant” category.

RESPONSE: The O&M expenses included under general plant are general administrative expenses and primarily reflect expenses such as general administrative staff salaries and wages, share of City of Nelson services, computer services, material and supplies, office supplies, training, etc. The full list is provided in Exhibit B-2 filed by Nelson Hydro in this Proceeding on February 3, 2021.

14.0 Reference: [Cost of Service Analysis Exhibit B-1, Appendix 8-1, Section 4.1.2, Table 7, p. 11; Section 4.2.2, Table 8, p. 12](#)

Functionalization of the O&M expenses

Table 7 below provides summary of assigned O&M expenses.

Table 7: Assigned O&M Expenses (\$000)²¹

	2019 Actual Total	Allocation		
		Urban	Rural	Common
O&M Expenses	12,481	3,423	6,025	3,032
<i>Wages and Benefits</i>	2,448	369	307	1,772
<i>Generation</i>	179	179	0	0
<i>Transmission and Distribution</i>	553	185	307	61
<i>General</i>	1,717	6	0	1,711
<i>Supplies and Services</i>	9,374	2,792	5,323	1,260
<i>Generation</i>	394	394	0	0
<i>Power Purchases</i>	6,636	2,225	4,411	0
<i>Transmission and Distribution</i>	1,121	136	897	88
<i>General</i>	1,222	37	14	1,171
<i>City of Nelson Purchases [265 cfs]</i>	658	658	0	0
<i>Nelson Hydro Purchases [surplus energy]</i>	0	-396	396	0
Amortization	1,187	695	353	139
Interest charges	225	140	84	0
Total Expenses	13,892	4,259	6,462	3,171

Table 8 below provides summary of total expenses by function.

Table 8: O&M Expenses by Function (\$000)

	Total Expenses
Generation Expense	
Plant Operations	573
City of Nelson Purchases [265 cfs]	658
Subtotal	1,231
Power Purchase	6,636
Transmission and Distribution Expense	
Transmission Lines	15
Distribution	1,427
Substations - Transmission and Distribution	132
Meter Reading	100
Subtotal	1,674
Admin. & General Expense	
General Admin	2,461
Operations	478
Subtotal	2,939
Total O&M Expense	12,481

- 14.1 On the one hand, Table 7 seems to indicate that InterGroup started the Nelson Hydro COSA by directly assigning O&M expenses into three groups, before functionalizing the O&M expenses. On the other hand, Table 8 seems to indicate that InterGroup started the Nelson Hydro COSA by

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functionalizing O&M expenses by function without directly assigning them into three groups. Please clarify the sequence of steps that InterGroup undertook.

RESPONSE: Each account under the O&M expenses were first assigned to service areas (Rural, Urban, or common) and also functionalized. The results would be the same if the expenses were first functionalized and assigned to service areas as it was done account by account as shown in Exhibit B-2 filed by Nelson Hydro in this Proceeding on February 3, 2021.

On page 11, InterGroup states that purchased power is included in the “generation” function. However, in Table 8 above, “power purchases” are not included under “generation expense.”

14.2 Please clarify whether purchased power is included in the generation function.

RESPONSE: Although, the power purchase cost is treated as a generation function, it is the single largest cost item in revenue requirements and differs from other generation related expenses. Therefore, the classification for power purchase cost was conducted separately as discussed in response to BCUC IR 1-14.4. In addition to this, there is no generation function for the Rural area.

On page 13, InterGroup states that “[o]nce costs are functionalized, they are classified based on cost drivers between demand, energy, customer and revenue.”

14.3 Please confirm, or otherwise explain, that from Table 8, InterGroup went directly to the second step of the COSA, which is to classify costs based on cost drivers, without attempting to directly assign cost between the three groups of Urban, Rural and Common.

RESPONSE: Not confirmed. Table 8 illustrates total [combined Urban, Rural and Common] O&M expenses by function.

Prior the functionalization step, the costs were assigned to three groups: Urban, Rural and Common as shown in Table 7. Table 8 merely provides the functionalized costs. After these two steps each service area was a stand alone cost group with functionalized costs.

Then the COSA was prepared separately for each group, i.e., the Urban area COSA classifies functionalized costs and allocates to customer classes; the Rural area COSA classifies functionalized costs and allocates to customer classes; and the Common group COSA classifies functionalized costs and allocates to customer classes. The results then were combined to summarize COSA outcomes.

14.3.1 If so, please provide a table showing the results of the classification step, using Table 8 as a starting point, and breaking down each function by its cost driver, i.e., demand, energy and customer. If not, please provide such table.

RESPONSE: Please see response to the BCUC IR 1-14.3.

14.4 Please confirm, or otherwise explain, that InterGroup used the same classification factors for O&M and capital assets.

RESPONSE: Not confirmed – power purchase costs do not follow this pattern, nor do general admin O&M.

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Transmission and distribution costs are classified based on classification of Transmission and distribution plant; generation expenses except for power purchase costs are classified based on generation plant; general admin costs are classified based on total plant in service. Power purchase costs are classified as follows: energy purchases to Energy; demand purchases to Demand; basic charge to Customer.

15.0 Reference: [Cost of Service Analysis Exhibit B-1, Appendix 8-1, Section 4.3, p. 13 Classification of the costs](#)

On page 13 of Appendix 8-1, InterGroup states that “[o]nce costs are functionalized, they are classified based on cost drivers between demand, energy, customer and revenue.” [Emphasis added]

The following classification categories are used for Nelson Hydro COSA:

- Demand related
 - Coincident Peak (CP) – mostly comprised of generation and transmission related costs
 - Non-Coincident Peak (NCP) – mostly distribution related costs
- Energy related
- Customer related
 - Actual number of customers– poles, underground conduct and devices
 - Weighted number of customers– transformers and meters

15.1 Please elaborate on the category “revenue” as a cost driver and why InterGroup has chosen not to use it to classify cost.

RESPONSE: Some utilities classify costs/revenues from ancillary or non-utility services [such as residual heat] to revenue cost driver. There are no such costs/revenues identified in the 2019 COSA for Nelson Hydro. BC Hydro and Fortis BC do not use this classification factor in their cost of service studies.

16.0 Reference: [Cost of Service Analysis Exhibit B-1, Appendix 8-1, Section 4.3, pp. 13–14 Classification factors for generation plant](#)

On page 13 of Appendix 8-1, InterGroup states that “[i]n order to avoid the need for development of specific classification factors based on any range of detailed studies, the Nelson Hydro COSA uses broad industry-accepted factors which are then tested for reasonableness for application to Nelson Hydro.”

InterGroup references the following utilities to look for industry-accepted classification factors: British Columbia Hydro and Power Authority (BC Hydro), FortisBC Inc. (FBC), Yukon Energy and Yukon Electrical and Newfoundland and Labrador Hydro.

InterGroup states that FBC classified generation 20% to demand and 80% to energy in its 2017 Cost of Service Analysis and Rate Design Application and indicates in footnote 23 that FBC notes that it is based on “the basis of the demand / energy split for equivalent BC Hydro 3808 Purchases.”

16.1 Considering that the classification factors FBC chose for generation reflected its circumstances in

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respect of its BC Hydro 3808 Purchases, please elaborate on the appropriateness of using the same factors for Nelson Hydro. Please include a discussion of the similarity or difference between Nelson Hydro and FBC’s generation.

RESPONSE: FBC does not only apply the 20% Demand: 80% Energy classification ratios to BC Hydro 3808 purchases, it also applies effectively this same classification ratio to its own Kootenay River plants. As these plants are in the same geographic area and face the same hydrologic conditions as Nelson’s generation, it appears consistency between FBC and Nelson Hydro is reasonable.

16.2 Please elaborate on the similarities or differences between Nelson Hydro and BC Hydro, Yukon Energy and Yukon Electrical, and Newfoundland and Labrador Hydro in terms of interconnectedness of their system, generation mix, seasonality of generation, and any other relevant comparators.

RESPONSE: BC Hydro, Yukon Energy, and Newfoundland Hydro operate systems with baseload hydraulic generation, including storage. These systems supply significant parts of their respective winter peaks with hydraulic generation derived from stored water. This is not similar to Nelson Hydro, which operates a run of river facility where the hydraulic output is maximized when water is available during freshet, and limited by its water licence for winter generation. This seasonal factor (and the related attribute of utility-managed storage) is by far the predominate reason for Nelson Hydro adopting the FBC 20% Demand: 80% Energy classification ratio. The FBC ratio is more appropriate for a plant that is primarily an energy generator with little management for peak-period demand contribution.

16.3 Please clarify why it is more appropriate to choose classification factors that have been accepted by the British Columbia Utilities Commission (BCUC) rather than by another provincial regulator.

RESPONSE: Nelson Hydro is a small local utility in BC. It was felt that the methods adopted by Nelson Hydro should, to the extent possible minimize the costs of conducting cost of service analysis and regulatory review. Adopting classification ratios that are familiar to the regulator (while still being entirely cost-justified) was thought to be one way the regulator would be comfortable that Nelson Hydro’s methods were within a range of reasonableness.

But the overriding feature for the proposal is noted in the COSA Report (Appendix 8-1 to the Application) on page 14 – that the Nelson Hydro hydraulic generation is vastly more oriented to energy than demand.

16.4 Considering that the factors used by the other three utilities (BC Hydro, Yukon Energy and Yukon Electrical, and Newfoundland and Labrador Hydro) give a weighting to “demand” that is at least double that of FBC’s, please discuss at a high-level how different would the COSA RCC ratios for each customer class be, at least directionally.

RESPONSE: Generally, the residential customer class is considered to be a slightly lower load factor class compared to the commercial customer class, therefore, giving more weighting to demand would tend to increase costs to residential class. However, as this relates primarily to Urban related costs (the hydro plant) the effect on Rural customers would be very small.

On page 14, InterGroup states that “[t]he generation related expenses (other than purchased power)

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are classified based on the average classification factor for generation plant.”

16.5 Please confirm, or otherwise explain, that by “generation related expenses,” InterGroup means the \$1.231 million amount shown under “Generation Expense” in Table 8 (p. 12).

RESPONSE: Confirmed. These expenses are before amortization expense and return on rate base.

16.6 Please clarify whether generation related expenses are classified based on 20% demand and 80% energy. If not, please clarify what is meant by “the average classification factor for generation plant.”

RESPONSE: Confirmed, classified as 20% demand and 80% energy based on classification of generation plant.

16.7 Please clarify whether the proposed classification factors of 20% demand/80% energy for generation also applies to the \$6.636 million in purchased power from FortisBC (Table 8, p. 12).

RESPONSE: No. Power purchase costs are classified as follows: energy purchases to Energy; demand purchases to Demand; basic charge to Customer. The allocation to Urban and Rural are discussed in response to BCUC IRs No. 1-12.2 and 1-12.4 where Urban customers share more demand power purchase compared to energy purchase costs.

16.7.1 If not, please explain how purchased power costs are allocated among cost drivers.

RESPONSE: Please the response to BCUC IR 1-16.7.

17.0 Reference: **Cost of Service Analysis
Exhibit B-1, Appendix 8-1, Section 4.3, pp. 14–15
Classification factors for transmission plant**

On page 14 of Appendix 8-1, InterGroup states that “generation integration transmission is typically classified in the same manner as the underlying generation plant. Most of the utilities, including BC Hydro and Fortis BC classify the grid transmission plant 100% to demand. The same approach was used for Nelson Hydro and transmission plant was classified 100% to demand.”

17.1 Given that transmission plant is typically classified in the same manner as the underlying generation plant, and InterGroup classifies Nelson Hydro’s generation at 20% demand and 80% energy, please clarify why it chose to allocate its transmission plant 100% to demand.

RESPONSE: Transmission Plant is typically divided into two types – Generation Integration, and Grid. For the COSA, all Nelson Hydro transmission was considered Grid Transmission. Generation Integration is typically only used for long radial lines that serve to almost entirely only connect generation to the grid.

17.2 Please describe how Yukon Energy and Yukon Electrical, and Newfoundland and Labrador Hydro allocate their transmission plant and whether they are classified in the same manner as the underlying generation plant.

RESPONSE: During the Negotiated Settlement process for Newfoundland and Labrador Hydro’s 2018 Cost of

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Service Methodology Review the parties agreed that all functionalized transmission costs shall continue to be classified as 100% demand related which was accepted by Board of Commissioners of Public Utilities [Negotiated Settlement, page 3. Available at <http://www.pub.nf.ca/applications/NLH2018CostofService/settlement/Settlement%20Agreement%20-%202019-10-04.PDF>].

The 2009 Phase II GRA Compliance Filing filed by Yukon utilities note that in the 1996/97 GRA the transmission was classified 100% demand and in the 2009 GRA the companies proposed to classify as 100% energy. However, the Yukon Utilities Board directed to classify 60% energy and 40% demand – the same classification factors used for hydro plants [2009 Phase II GRA Compliance Filing, page 4. Available at https://yukonutilitiesboard.yk.ca/pdf/Phase%20II%20YEC%20and%20YECL/1194_YEC-YECL%20Phase%20II%20Compliance%20Filing%20-%20Feb%2028,%202011.pdf]. In effect, all Yukon transmission is considered Generation Integration transmission, reflecting its function. It should be noted that one of the Yukon Energy’s major hydro plants, Aishihik Hydro Plant, is located about 110 km away from City of Whitehorse [were more than 70% of the total load is located] and the remainder of the transmission is long radial lines that connect small communities that would mostly otherwise be served by diesel generators.

17.2.1 If different than a 100% to demand, please elaborate on whether it would be more appropriate to use a classification factor other than 100% to demand. If so, please discuss at a high-level how different would the COSA RCC ratios for each customer class be, at least directionally.

RESPONSE: No. Please see response to BCUC IR 1-17.1. In addition, any transmission classified based on the underlying generation would only be applicable at most to the Nelson Hydro hydraulic generation plant connection, and would effectively only affect Urban customers.

18.0 Reference: Cost of Service Analysis Exhibit B-1, Appendix 8-1, Section 4.3, p. 15 Classification factors for distribution plant

On page 15 of Appendix 8-1, InterGroup states that “utilities classify distribution costs to demand and customer using widely different factors” and that “[i]n order to develop a reasonable approach that can be applied to Nelson Hydro without requiring new asset classification categories, and that is representative of the BC experience, the classification factors used by BC Hydro were determined to be appropriate. These factors lead to all distribution assets being classified as 73% demand related and 27% customer related.”

18.1 Please clarify why it is more appropriate for Nelson Hydro to use BC Hydro’s classification factors than those of FBC or Yukon Energy and Yukon Electrical, and Newfoundland and Labrador Hydro for its distribution plant.

RESPONSE: Not all utilities account for similar assets similarly and utilities classify distribution costs to demand and customer using widely different factors. For example:

- Fortis BC in its 2017 Cost of Service Analysis classified 81% of Poles, Towers, & Fixtures, 65% of Conductors & Devices and 69% of Line Transformers as customer related, while Station Equipment was classified 100% to demand.
- Yukon utilities in their 2009 Phase II GRA classified 56% of Poles, Towers, & Fixtures and

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52% of Conductors & Devices and 28% of Line Transformers as customer related.

- Newfoundland and Labrador Hydro in its 2019 Test Year Compliance Cost of Service Study [Island Interconnected System] classified 31.9% of Poles, 11.3% of Conductors and 63.9% of transformers as customer related; substation structures & equipment was classified 100% to demand.

Considering the above and in order to avoid issues with matching asset classification categories a simple approach was taken for Nelson Hydro 2019 COSA to use the classification factors used by BC Hydro.

By way of example, if the average for the above utilities is used [59% poles, 42.7% conductors, 53.7% transformers, 0% substations to customer] then it will shift a small amount of cost from commercial to residential class slightly reducing residential RCC ratios [the residential class has slightly higher customer allocation factors compared to demand allocation factors]. The change would be very small.

- 18.2 [Please elaborate on the similarities and difference between Nelson Hydro’s distribution plant and that of these other three utilities.](#)

RESPONSE: All the other utilities are larger, if not much larger, than Nelson Hydro. Similarities with Fortis BC and BC Hydro are to an extent, the climate of the served region. Other than these observations Nelson Hydro does not have information to compare distribution plants for those utilities.

- 18.3 [Are there any concerns of using the classification factors from one utility for generation and transmission \(i.e. FBC\) and from another utility for distribution \(i.e. BC Hydro\)? Why or why not?](#)

RESPONSE: No. The selection of each factor is a separate analytical exercise and would not show any prejudice to any particular customer or group from selecting the best example in each case.

In response to the BCUC IRs 1-16.2 and 1-16.3, explanations are provided regarding why using Fortis BC’s bulk power classification factors are more appropriate; and in response to the BCUC IR 1-18.1 explanations are provided regarding why BC Hydro classification factors are used for distribution plant. Both utilities in question are in BC and Nelson Hydro does not see any concerns using the classification factors from these utilities.

[On page 15, InterGroup states that “\[t\]he transmission and distribution related expenses are classified based on average classification factor for transmission/distribution plant.”](#)

- 18.4 [Please confirm, or otherwise explain, that by “transmission and distribution related expenses,” Nelson Hydro means the \\$1.674 million amount shown under “Transmission and Distribution Expense” in Table 8 \(p. 12\).](#)

RESPONSE: Confirmed. These expenses are before amortization expense and return on rate base.

- 18.4.1 [If so, please clarify which items under “Transmission and Distribution Expenses” are classified 100% to demand and which ones are classified as 73% demand-related and 27% customer-related.](#)

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RESPONSE: All the transmission and distribution expenses are classified based on average classification for transmission and distribution plant which results in 72.8% demand, 26.9% customer and 0.3% direct assigned. Please also see response to BCUC IR 1-18.5.

18.5 Please clarify what is meant by “the average classification factor for transmission/distribution plant.”

RESPONSE: The average classification factors for the transmission and distribution plant are calculated based on:

- Sum of transmission and distribution plant classified to demand divided by total transmission and distribution plant = average demand classification factor.
- Sum of transmission and distribution plant classified to customer divided by total transmission and distribution plant = average customer classification factor.
- Sum of transmission and distribution plant directly assigned divided by total transmission and distribution plant = average factor for directly assigned.

19.0 Reference: [Cost of Service Analysis Exhibit B-1, Appendix 8-1, Section 4.3, pp. 15–16; Table 3, p. 5 Amortization](#)

On pages 15–16 of Appendix 8-1, InterGroup states:

Other rate base cost categories were classified to customer, demand, and energy related cost as follows:

- [Accumulated Amortization:](#)
 - [Generation plant related – based on the proportion of total generation assets classified to customer, demand, and energy categories.](#)
 - [Distribution plant related – based on the proportion of total distribution assets classified to customer, demand, and energy categories.](#)

19.1 Please clarify how InterGroup classified Nelson Hydro’s amortization related to transmission plant.

RESPONSE: The amortization expenses for all assets under transmission and distribution plant are classified based on average classification factors for the transmission and distribution plant. Please see response to the BCUC IR 1-18.5 for details of average classification factors for the transmission and distribution plant.

19.2 Please clarify whether InterGroup used the values in the “Mid-Year Balance” column of Table 3 to classify the accumulated amortization to customer, demand and energy related costs.

RESPONSE: Confirmed. Mid-year balances of plant in-service and accumulated amortization expense were used for COSA.

19.3 Starting from Table 3, please provide a table showing the classification of capital assets and rate base by cost driver (demand, energy and customer).

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RESPONSE: Please see table below for requested information.

	Mid-year Balance	Classification			
		Demand	Energy	Customer	Direct Assigned
Generation Plant					
Generating Stations	13,687	2,744	10,943	0	0
Substations	1,090	218	871	0	0
Subtotal	14,777	2,962	11,815	0	0
Transmission and Distribution Plant					
Transmission	5,876	5,876	0	0	0
Substations	6,347	4,633	0	1,714	0
Primary and Secondary Poles & Conduct.	15,615	11,399	0	4,216	0
Underground Conduct. & Devices	6,861	5,009	0	1,853	0
Transformers	5,195	3,793	0	1,403	0
Meters	1,216	887	0	328	0
Streetlight	223	0	0	0	223
Other	392	286	0	106	0
Subtotal	41,724	31,882	0	9,619	223
Total	56,501	34,845	11,815	9,619	223
Accumulated Amortization	15,611	8,291	4,620	2,638	62
Net Book Value	40,890	26,554	7,194	6,981	161
Working Capital Requirements	1,643	926	405	305	8
Total Rate Base	42,532	27,479	7,599	7,286	169

20.0 Reference: [Cost of Service Analysis Exhibit B-1, Appendix 8-1, Section 3.0, p. 5; Section 4.3, pp. 15–16 Working capital](#)

On pages 15–16 of Appendix 8-1, InterGroup states:

Other rate base cost categories were classified to customer, demand, and energy related cost as follows:

- Working Capital:
 - Based on the proportion of total assets classified to customer, demand, and energy categories. The inventory portion of the working capital requirements can be further detailed based on breakdown of inventory balances, however, this would be a time consuming process and will have very small impact to functionalization.

On page 5, Nelson Hydro states that “[t]he working capital requirements are calculated based on cash requirements for O&M expenses as well as the mid-year inventory balances.”

20.1 Considering that working capital is required for O&M expenses, please confirm, or otherwise explain that working capital is functionalized and classified on the same basis as O&M costs.

RESPONSE: Working capital requirements are assigned to the Common cost group and classified based on classification of the total plant in service in the Common cost group. This is because working capital is part of the rate base, so it was linked to other components of rate base. There is a reasonable logic to the approach proposed in the question (linking working capital returns to O&M), however the impact of changing to this approach and classifying the working capital based on O&M expenses is extremely small [shifts only about \$2,000-\$3,000 at utility level between rate

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classes].

- 21.0 Reference:** **Cost of Service Analysis Exhibit B-1, Appendix 8-1, Section 4.0, Table 9, pp. 16–17; FortisBC Inc. (FBC) 2009 Rate Design and Cost of Service Application, Exhibit B-1, (2009 FBC Application),³ PDF p. 41 and 123 Demand allocation factors**

On pages 16–17 of Appendix 8-1, InterGroup states:

As Nelson Hydro has a winter peaking system, and there are relatively small differences between customer usage characteristics, there is expected to be little difference between allocation based on the simpler approach of a single Coincident Peak (1 CP) and the more complicated approaches based on multiple coincident peaks (e.g., 2 CP, 4 CP, reflecting more winter months). Given data limitations are also relevant to the choice of allocation factor, the use of a 1 CP was determined to be appropriate.

[...]

Coincident Peak and Non-coincident peaks are not metered at the class level. [...] Therefore, customer class load factor and coincidence factors are estimated based on factors used by FortisBC in its 2009 COSA as per Table 9 below.

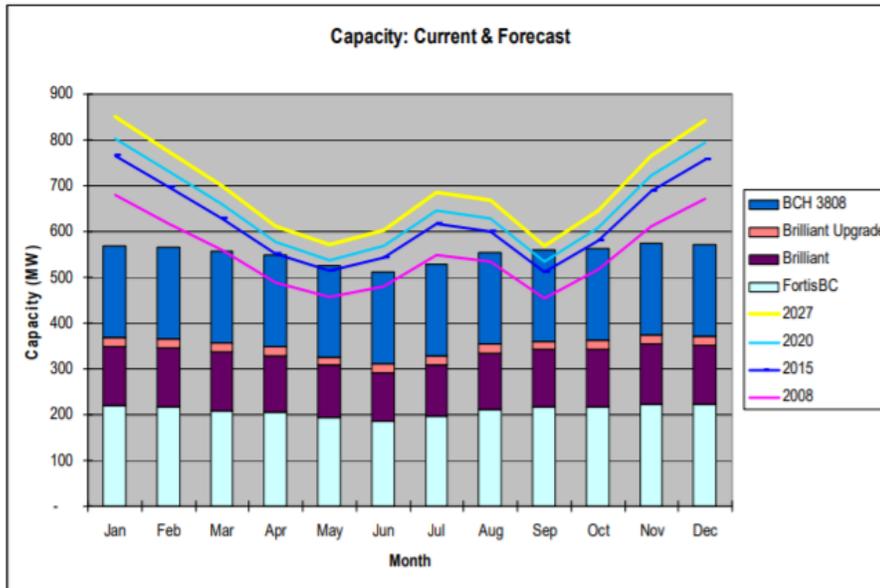
At page PDF 123 of the 2009 FBC Application, FBC states:

The demand allocation method was selected after consideration of past precedent, FERC and OEB tests, comparisons of load shapes and growth of winter and summer peaks. The 12CP approach was rejected as FortisBC does not have a flat load shape over the year. The 2 CP approach was selected rather than a 1 CP or 4CP approach because FortisBC has a significant summer peak. While the summer peak is not at the same level as the winter peak, it is growing faster than the winter peak and will increasingly have a larger impact on the system.

On page PDF 41 of its 2009 FBC Application, FBC provides the following graph showing the summer and winter peaks.

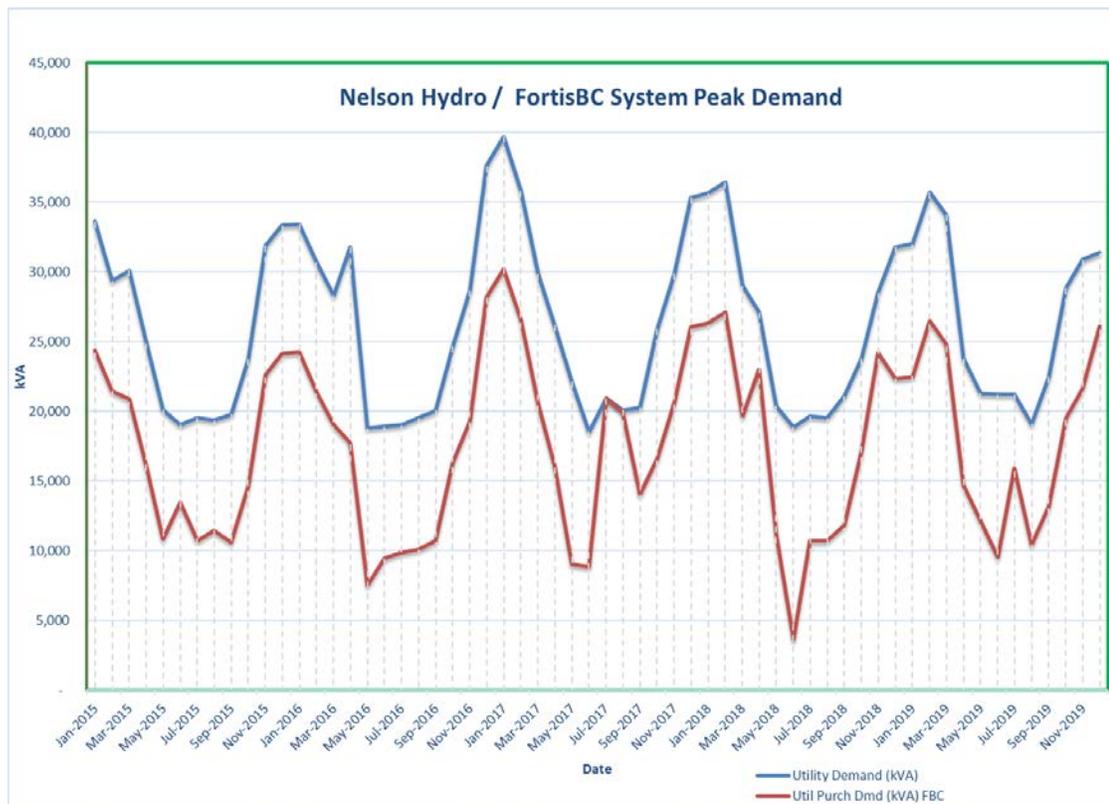
³ 2009 FBC Application, https://www.bcuc.com/Documents/Proceedings/2009/DOC_23627_B-1_FortisBC%202009%20Rate%20Design%20Application.pdf

Figure 6.3.3 – FortisBC System Peak Demand



21.1 Please provide a graph showing Nelson Hydro’s monthly peak demand for the period 2015–2019.

RESPONSE: Please see the graph provided below showing Nelson Hydro’s monthly peak demand for the period 2015 – 2019.



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- 21.2 Assuming Nelson Hydro is a winter peaking only utility, please discuss the impacts of estimating the customer class load factor and coincidence factors based on factors used by FBC in its 2009 COSA, which may be appropriate for a dual peaking utility but not for a winter peaking utility.

RESPONSE: Nelson Hydro did not conduct a study to analyze which utility’s peak profile may be more appropriate for Nelson Hydro. Fortis BC load factors were used as both utilities are in the same general area of the province. With this approach, Nelson Hydro customers would be treated the same as other West Kootenay customers of Fortis BC that share similar climate impacts.

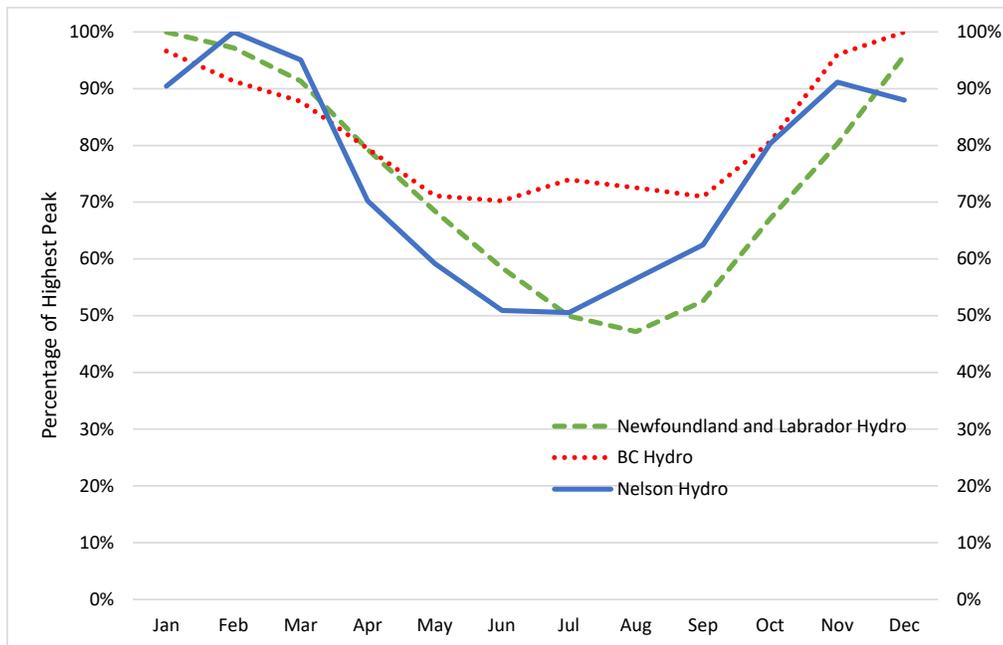
Nelson Hydro 2019 COSA used FortisBC’s 2009 COSA load factors for residential customers at 40% and general service at 43% are calculated based on Fortis BC’s winter peaks, which are maximum peaks for the year for both customer classes. For example, Fortis BC residential class load factor at 40% is calculated using NCP demand at 351,443 kW [Schedule 8.1] which is the January peak as per Schedule 8.2. Similarly, Fortis BC general service class load factor at 43% is calculated using NCP demand at 126,342 kW [Schedule 8.1] which is the January peak as per Schedule 8.2 [source: Fortis BC 2009 COSA, available at https://www.bcuc.com/Documents/Proceedings/2009/DOC_23627_B-1_FortisBC%202009%20Rate%20Design%20Application.pdf].

Please also see response to the BCUC IR 1-21.3.

- 21.3 Please compare Nelson Hydro’s monthly peak profile to that of the other utilities referenced in the COSA, such as BC Hydro, Yukon Energy and Yukon Electrical, and Newfoundland and Labrador Hydro, and discuss whether any of them would be a better comparator to use for the load parameters shown in Table 9.

RESPONSE: The following figure shows monthly peak profiles for Nelson Hydro, BC Hydro and Newfoundland and Labrador Hydro. No recent public information is available for Yukon Energy on monthly peaks. For the purpose of the figure the highest peak is included as 100% and all other peaks as percentage of the highest peak.

Although, the information was presented as per the request, the peak information may not be comparable as there is no uniform peak data is available. For example, Newfoundland and Labrador data is based on peak at customer level and does not include losses; BC Hydro peaks are based on information published by BC Hydro and it is not clarified if it is only domestic load or total load which would be impacted by energy exports.



Sources:

- Nelson Hydro is for 2019 based on Feeder Loading Study.
- BC Hydro is average for 2006-2010 [source: <https://www.bchydro.com/energy-in-bc/operations/transmission/transmission-system/balancing-authority-load-data/historical-transmission-data.html>].
- Newfoundland and Labrador is based on 2017 GRA forecast for 2019, before losses [source: <http://www.pub.nf.ca/applications/NLH2017GRA/rfi/IC-NLH-083.PDF>].

Yukon utilities in the 2009 Phase II GRA Application used 48.2% NCP load factor [56.5% CP level] for residential and 63.6% [77.4% CP level] for general service customers; Newfoundland and Labrador Hydro’s 2019 Test Year Cost of Service Study shows load factors for residential/domestic class at 47.1% and general service ranging between 64.6% and 94.6% depending on customer demand level [average at about 70.1% for customers with less than 1,000 kVA demand]. If the load factors from Yukon utilities were used then it would shift about \$0.3 million cost from commercial to residential; if Newfoundland and Labrador Hydro load factors are used then it would shift about \$0.4 million cost from commercial to residential further lowering RCC ratios for residential class.

Please also see response to the BCUC IR 1-21.2.

In footnote 28 on page 17 of Appendix 8-1, InterGroup states:

FortisBC’s 2017 Cost of Service Analysis and Rate Design Application, Schedule 8.1 shows annual NCP load factors for residential class at 42% compared to 40% in the 2009 COSA, commercial at 55% compared to 43% in the 2009 COSA. [These load factors shift more costs to residential class further worsening residential class revenue-cost-coverage ratios.](#) Without identifying underlining factors for the change, Nelson Hydro cannot use new factors in Fortis BC’s 2017 application. Therefore, for the purposes of Nelson Hydro COSA, Fortis BC’s 2009 COSA numbers have been used for residential and commercial

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customer classes. [Emphasis added]

- 21.4 Please discuss the appropriateness of using the FBC 2009 COSA to estimate demand allocation factors and using the FBC2017 COSA in other areas of the Nelson Hydro COSA, e.g., the classification factors for generation.

RESPONSE: The classification factors for generation [20% demand and 80% energy] are from Fortis BC’s 2009 COSA [please see page 17 of Fortis BC’s 2009 Cost of Service Study available at https://www.bcuc.com/Documents/Proceedings/2009/DOC_23627_B-1_FortisBC%202009%20Rate%20Design%20Application.pdf, that notes “To develop the classification split for FortisBC, the output from the Kootenay River plants was priced as if it were purchased at the 3808 tariff to determine the equivalent split in costs between demand and energy. This split was then applied to actual costs of these projects for purposes of classification. The resulting split was roughly 20% demand-related and 80% energy-related.”]. So, the demand allocation factors and generation classification factors are both from Fortis BC’s 2009 COSA.

It should be added that Fortis BC used the same classification factors for generation in both the 2009 COSA and 2017 COSA, i.e., 20% demand/80% energy.

- 21.5 Please clarify why InterGroup selected for Nelson Hydro specific NCP load factors (i.e., those in the FBC 2009 COSA rather than the FBC 2017 COSA) based on the impact they had on the residential RCC ratio as opposed to selecting NCP load factors based on a set of objective criteria.

RESPONSE: Nelson Hydro did not select the load factors based on the impact they had on the RCC ratios. The factors were selected based on judgment about which factors appeared reasonable and well supported by evidence. The new FBC ratios were simply unable to be fully tested to understand the reason for the change.

Also, the outcome of the COSA is a conclusion that Rural residential customers are materially underpaying. To refine this conclusion to show that Rural residential customers are still materially underpaying but by a slightly higher margin does not represent a significant improvement in the study quality or conclusions, at least not to the degree that the updates were considered necessary.

Please see footnote #28 on page 17 of the 2019 COSA Report where it is noted that Fortis BC’s 2017 COSA “load factors shift more costs to residential class further worsening residential class revenue-cost-coverage ratios. Without identifying underlining factors for the change, Nelson Hydro cannot use new factors in Fortis BC’s 2017 application. Therefore, for the purposes of Nelson Hydro COSA, Fortis BC’s 2009 COSA numbers have been used for residential and commercial customer classes.”

Please also see response to the BCUC IR 1-21.6.

- 21.6 Please recalculate the COSA results if the load parameters shown in Table 9 were instead based on the FBC 2017 COSA.

RESPONSE: Using Fortis BC’s 2017 COSA load factors would increase Rural residential cost by \$0.130 million further worsening revenue-cost coverage ratio [RCC ratio changes from 80.4% to 79.1%] and

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reduce Rural commercial cost by \$0.09 million [RCC ratio changes from 108.8% to 119.1% due to relatively small size of Rural commercial class].

- 21.7 Please clarify how InterGroup derived a calculated CP of 34.3 MW based on the load parameters shown in Table 9. Provide the calculations.

RESPONSE: Please see table below for the requested information.

		Residential	Commercial	Streetlight	Total
A	Sales at the Meter [MW.h]	102,301	53,889	884	
B	Load Factor	40%	43%	47%	
C=A/8.760/B	Individ. Noncoincident Peak (NCP)	29,195	14,306	215	
D	System Coincidence Factor	80%	75%	100%	
E=C*D	Coincident Peak (CP) at Meter	23,356	10,730	215	34,301

- 21.8 Please clarify how transmission demand-related costs are allocated.

RESPONSE: Transmission demand related costs are allocated based on coincident peak allocation factors.

On page 17 of Appendix 8-1, InterGroup states that “The variance is less than 5% which primarily reflects the losses and will not have any distorting effects on the COSA unless one class is materially prejudiced in respect of the peak as compared to any other class. There is no basis to conclude, on the available data, that any class is disproportionately affected by this peak allocation.”

- 21.9 Please clarify the statement that 34.3 MW (before losses) is within 5% variance of the actual peak at 35.7 (including losses).

RESPONSE: As shown in response to the BCUC IR 1-21.7, the peak estimate at 34.3 MW is based on peak at customer meters. The actual peak includes losses, i.e., it is not peak at customer meters. The variance is less than 5% [35.7 vs 34.3] which is almost the same as losses shown in Table 6 of the 2019 COSA Report. As a result, the load factors and coincidence factors selected appear to be well within the range of reasonable.

- 21.10 Please provide the data on which InterGroup based its conclusion that no class is disproportionately affected by this peak allocation.

RESPONSE: The data to conduct detailed research by class was not available, and could not be made available without incurring significant cost and efforts. The analysis undertaken on individual customer classes, or at a service area level, requires significant amount of load research effort and data that is not available. The load factors used in the Nelson Hydro’s COSA, however, are based on factors approved by the same regulator for the neighbouring utility [Fortis BC]. In electricity rate regulation, none of the utilities can confirm 100% accuracy of the load factors, but the normal cross-check for reasonableness is a comparison to the system peak (as shown in BCUC IR 1-21.9) and Nelson Hydro passes this test with a high degree of accuracy.

- 21.11 Please provide a table specifically showing the result of the third COSA step, i.e., the allocation of costs to all six customer classes (residential, commercial and streetlight for both Urban and Rural service areas), using the load parameters shown in Table 9.

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RESPONSE: Please see Appendix 1-21.11.

The attachment was prepared based on a COSA as per BCUC IR No. 1-3.4.1 which show small commercial and general service customers separately and also corrects number of customers.

22.0 Reference: [Cost of Service Analysis Exhibit B-1, Appendix 8-1, Section 4.4.3, pp. 17–18 Customer allocation factors](#)

On page 18 of Appendix 8-1, InterGroup states that “[m]ost of the utilities reviewed use a customer weighting of 1.0 for residential and 3.0 for commercial customers.”

22.1 Please confirm, or otherwise explain, that InterGroup used a customer weighting of 1.0 for residential and 3.0 for commercial customers.

RESPONSE: Confirmed.

22.2 Please indicate which ones of the utilities reviewed used such a weighting and provide the weighting used by the other utilities who used a different weighting.

RESPONSE: The following summarizes information available for the utilities in the question. Yukon utilities did not use weighting factor in the 2009 Phase II GRA.

- Newfoundland and Labrador Hydro in its 2019 test year cost of service study used a weighting factor of 1 for residential customers, a weighting factor of 4.77 for general service customers with demand below 100 kW; a weighting factor of 8.42 for larger general service customers.
- Effective weighting factor used for commercial over residential is 2.8 for Fortis BC [Customers Meters & Services weighting factor for residential at \$115 compared to \$318 for commercial class = 2.8].

In its 2015 Rate Design Application BC Hydro noted [Appendix C2-B, page 20 - https://www.bcuc.com/Documents/Proceedings/2015/DOC_44664_B-1-BCH-2015-Rate-Design-Appl.pdf] that it “developed a weighted metering allocator by mapping rate classes to different types of metering and estimating the total installation cost (material, labor, vehicle, testing time).” The table provided by BC Hydro shows a weighting factor for residential at 1, small general service at 2, medium and large general services at 6.

22.2.1 Please discuss the pros and cons of these different weighting and why InterGroup chose a 1 to 3 weighting.

RESPONSE: There is no uniform weighting factor as illustrated in response to the BCUC IR 1-22.2 and also it is impossible to develop a precise weighting factor. The weighting factor of 1 for residential and 3 for commercial is widely used for small utilities without any detailed analysis of costs. It is reasonable for Nelson Hydro to use a weighting factor of 1 for residential and 3 for commercial considering it is close to the factor used by Fortis BC.

23.0 Reference: [Cost of Service Analysis Exhibit B-1, Appendix 8-1, Section 4.5, pp. 18–19; Appendix 5-1, PDF p. 235 FBC 2017 COSA and Rate Design Application, Exhibit B-1, p. 54](#)

COSA outcomes

On page 18 of Appendix 8-1, InterGroup states:

Table 10 below provides 100% COSA rates based on cost of service analysis. The COSA results for Urban service area also include Capital Reserve Transfers.

Table 10: COSA Results

Rural Service Area

	2019 COS Allocation with 9.25% ROE	2019 Actual Revenues	Variance	RCC Ratio
	\$000	\$000	\$000	%
Residential - Rural	\$8,056	\$6,476	(\$1,580)	80.4%
Commercial - Rural	\$996	\$1,083	\$88	108.8%
Total Rural	\$9,051	\$7,559	(\$1,492)	

Urban Service Area

	2019 COS Allocation with 9.25% ROE plus \$2.877 million Capital Reserve Transfer	2019 Actual Revenues	Variance	RCC Ratio
	\$000	\$000	\$000	%
Residential - Urban	\$5,817	\$5,196	(\$621)	89.3%
Commercial - Urban	\$5,199	\$5,796	\$597	111.5%
Total Urban	\$11,016	\$10,992	(\$24)	

On page 54 of the FBC 2017 COSA and Rate Design Application, FBC states:

Since the expected revenues derived from billing components and forecast load differ slightly from the approved revenues from FBC's 2017 Annual Review, an adjustment is made on a prorated basis to ensure that total allocated revenue divided by total allocated costs is equal to unity. The resulting R/C ratios help inform the need for revenue rebalancing. Revenue rebalancing is the method by which the utility shifts revenue responsibility from one customer group to another. [Emphasis added]

- 23.1 Please explain why, in Nelson Hydro's case, the total allocated revenues (2019 actual revenues) divided by the total allocated costs does not equal to unity.

RESPONSE: This is due to lower than proposed actual ROE for 2019 as illustrated in Table 4 of the 2019 COSA. At the proposed ROE at 9.25% ROE amount would be at \$3.429 million, however, as per Table 4 the actual ROE is \$1.912 million or 5.2%. This is shortfall of \$1.517 million.

The tables provided in response to the BCUC IR #3.5 show the Rural service area COSA shortfall at \$1.496 million [including \$0.004 million streetlight] and Urban service area COSA shortfall at

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\$0.020 million rounded – total COSA shortfall at \$1.517 million which is the same shortfall as per above.

- 23.2 For each customer class shown in the above table, please discuss how sensitive the COSA RCC ratios are to each of the assumptions Nelson Hydro made throughout the COSA regarding the classification and allocation factors.

RESPONSE: Please see responses to the BCUC IRs 1-16.4, 1-21.3, 1-21.5 and 1-21.6.

On page 19 of Appendix 8-1, InterGroup states that “[t]he impact from Streetlight class is not significant considering very small size of the class and also RCC at 99.6% which indicates the class revenues are close to cost to serve of this class.”

On PDF page 235 of its Application, the previous 2017 COSA results indicate an RCC ratio for Streetlight customers at 75.60%, which Nelson Hydro characterized as low compared to a 90% to 110% range of reasonableness.

- 23.3 Please explain why the RCC ratio for Streetlight customers went from 75.6% in the 2017 COSA to 99.6% in the 2019 COSA.

RESPONSE: The RCC ratio of 75.6% in the 2017 COSA was calculated based on cost at \$0.133 million and revenue at \$0.101 million. After the 2017 COSA was prepared Nelson Hydro noticed that some of the streetlight revenues had been reported under the commercial class. Notably, the 2017 COSA was a preliminary version that was provided to the Commission for information (i.e. not filed for approval). The 2019 COSA used a more refined methodology with additional information and data.

In addition to the above, the 2019 COSA used load factor at 47% as explained in response to BCOAPO IR No. 1-29.1. The streetlight class is small and the impact to the other customer class RCC ratios are insignificant.

- 23.4 Please clarify why the RCC ratio for Streetlight customers is not provided for both the Urban and Rural service areas.

RESPONSE: The streetlight revenues are insignificant. Please see response to the BCUC IR 1-3.4.1 that shows RCC ratios for both Urban and Rural streetlights.

C. RATE DESIGN

- 24.0 **Reference:** Rate Design
Exhibit B-1, Section 9.1, p. 61
Current rate structure

On page 61 of the Application, Nelson Hydro states that “[t]he current rates for residential customers are at the same level for Urban and Rural, while rates for commercial customers in the Rural area are slightly higher than the rates for Urban area (about 3% higher) and streetlight rates for Rural area are higher by about 10%.”

- 24.1 Please confirm, or otherwise explain, that rates for both “small commercial” and “commercial

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service” in the Rural area are higher than rates for their counterparts in the Urban area.

RESPONSE: Confirmed.

24.2 [Have Nelson Hydro’s rates for commercial and streetlight customers always been higher for the Rural and Urban areas?](#)

RESPONSE: Yes, based on the available records, Nelson Hydro has always maintained a rate differential (i.e. a higher rate for the Rural commercial and Rural streetlight customers) in order to compensate for the higher cost of servicing these customers in the Rural area.

Additionally, there was a rate differential between Urban and Rural residential from the time these customers were first served in 1922 until 1995 when a Council chose to raise Urban residential rates to generate more capital to fund infrastructure renewal. Thus, the Urban and Rural rates were set at equal amounts but represented different factors: Urban residential rates reflected a lower cost of operations and an increase to fund capital; Rural residential rates continued to recognize their higher cost of operations.

24.2.1 [If not, please discuss the circumstances that prompted Nelson Hydro to increase the Rural rates above the Urban rates for these two classes of customers and indicate whether the rate increases were supported by a COSA analysis. Please provide the reference to the BCUC orders and decisions that approved such rate differentials.](#)

RESPONSE: Not applicable. See also response to IR 24.2.

24.2.2 [If yes, please discuss the rationale for setting them up in this fashion historically and indicate whether this rate difference was supported by a COSA analysis. Please provide the reference to the BCUC orders and decisions that approved such rate differentials for Rural commercial and streetlight customers.](#)

RESPONSE: The rationale for applying a higher rate to the Rural commercial and Rural streetlight customers is that servicing these customers is more expensive than their Urban counterparts. These rate differentials were not supported in the past by a COSA analysis, but rather just by an inherent acknowledgement that servicing these customers is more expensive due to the compact size of the Urban area as opposed to the expanse and of the Rural area and the need for additional equipment to service this larger area in addition to the vegetation management requirements of this area. This dynamic has been explicitly recognized by the Commission in previous decisions (See Order G-119-17, Appendix A, p. 11). Additionally, a rate differential for these customers was approved in 1982 per Commission Order G-49-82 and has continued to this day.

25.0 Reference: [Rate Design Exhibit A2-1, December 10, 2020 Nelson Hydro Open House Presentation, p. 13 and p. 16](#)
[Historical difference between Rural and Urban residential rates](#)

[On page 13 of Nelson Hydro’s December 10, 2020 presentation, Nelson Hydro states that “\[s\]ervicing the Rural area is more expensive due to a number of factors \(e.g., covers a larger area, more vegetation\) and that \[c\]urrently the Rural residential rates are equal to Urban residential, but historically there was a differential.”](#)

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On page 16, Nelson Hydro also states: “Historical rate differential until 1995.”

- 25.1 Please elaborate on the circumstances that prompted Nelson Hydro to equalize the Rural and Urban residential rates in 1995. Was the elimination of the rate differential based on a COSA?

RESPONSE: No, the raising of Urban residential rates to the same rate as Rural residential rates in 1995 was not based on a COSA. Raising the Urban rates was within Council’s authority to do so as it only impacted Urban customers. By way of additional background, the initial rate differential between the Urban and Rural ratepayers was negotiated with Rural ratepayers, starting in 1922, when the City of Nelson first began providing electrical service outside the City. The differential was set to allow the utility to recover the higher costs of servicing these customers while also providing a return on the Rural assets needed to serve these customers.

As the Rural area grew, further rate negotiation took place with new Rural customers being served. As shown in Appendix 3-11 to the COSA & RDA, the utility had a wide variety of rates up until approximately 1950 when rates in the Rural areas were consolidated to establish one rate for the Northshore and one for the Southshore (the two Rural sub-service areas that still exist today). In the Commission’s 1982 Order G-49-82 (available at <https://www.ordersdecisions.bcuc.com/bcuc/decisions/en/item/111764/index.do>), the Commission equalized the rates for the two Rural sub-service areas. Consistent with the Commission’s jurisdiction this rate was not applied to the City’s Urban service area. As detailed in the COSA & RDA Section 3.4.2, the Commission continuously applied a “multiplier to Urban rates to determine Rural rates to recognize this cost difference.

The specific circumstances are described below in response to BCUC IR 1-25.1.2

- 25.1.1 If yes, please clarify why Nelson Hydro determined at that time that it was not more expensive to service the Rural area.

RESPONSE: Not applicable as Council increased Urban rates to raise additional capital. Council increasing Urban residential rates to fund capital in no way changed the fact that it was more expensive to service the Rural area. It has always been more expensive for Nelson Hydro to service the Rural service area and both City Council and the Commission alike have consistently recognized this during the 100 years of servicing these customers. Servicing the Rural service area is more expensive because of the area is larger geographically, is less dense, requires more poles and lines, requires significantly more vegetation management, and incurs more repair costs as a result of storms. Additionally, as customer growth has occurred, primarily in the Rural service area, Nelson Hydro has been forced to purchase higher cost purchase power to service the additional load.

- 25.1.2 If not, on what basis did Nelson Hydro determine that the rate differential should be eliminated?

RESPONSE: As set out in Section 3.4.2 of the COSA & RDA, Urban residential rates were increased to match Rural residential rates in 1995 in order to raise additional capital in order to fund the repair of infrastructure. The City staff report and letter to the Commission (dated April 18, 1995) that is attached to the Application as Appendix 3-10 confirms this and is the best documentary evidence available. The letter to the Commission explained that “the reason for the increase [i.e. that

resulted in equal rates] is to provide badly needed funding for replacing the aging infrastructure for the utility. . .”. As also noted in the City staff report, this was to be for a temporary period but it appears that due to the continued requirement to renew the capital assets of Nelson Hydro these higher Urban residential rates were left in place.

As set out above, the raising of Urban residential rates was not based on any determination that the cost of servicing the Urban area and the Rural area were equal as this has never been the case.

26.0 Reference: [Rate Design Exhibit B-1, Section 9.1, Table 9-1, p. 61](#)
[Current rate structure](#)

Table 9-1 Nelson Hydro Rural Rates Effective April 1, 2019¹⁶¹

	Unit	Residential	Small Commercial	Commercial Service	Streetlight
Basic charge	\$/pay period	16.22	38.32	38.32	
All kWh	cents/kW.h	10.51	12.34		
First 15,000	cents/kW.h			11.06	
Over 15,000	cents/kW.h			11.06	
Demand charge					
First 20 kW	\$/kW	0.00			
Each additional kW	\$/kW	7.37			
Demand charge (over 25 kVA)	\$/kVA			8.11	
Lamp Size					
150 Watts	\$/month				25.13
250 Watts	\$/month				31.45

26.1 [Based on the 2019 COSA, please discuss Nelson Hydro’s cost structure in terms of fixed versus variable costs, for each of the four classes of customers shown in Table 9-1.](#)

RESPONSE: Please see BCUC IR 3.4 in regard to the Commercial class being a single class, with multiple differing rate schedules, and a discussion of the Commercial rate schedules which includes the above noted Small Commercial and Commercial Service rates as well as Flat Service rates and Municipal Use rates.

Utilities generally try to recover fixed costs through basic customers charges and/or demand charges to the extent possible, though few fully achieve this matching. The 2019 COSA shows that about 64% of the costs allocated to the residential class and 60% of the costs allocated to the commercial class should ideally be recovered through demand and customer charges if this matching were to be achieved, and the remaining 36% and 40%, respectively, through energy rates. Note that in addition to the fact that such matching is rarely achieved, and other rate design criteria act to balance this priority against others (like efficiency and improved price signals).

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The Urban and Rural customers will have similar cost structure, though it may vary slightly due to variances in usage characteristics, as the same load factors are used [i.e., 2019 COSA uses the same load factors for Urban and Rural residential classes; the same load factors for Urban and Rural commercial classes]. Please see response to BCUC IR No. 1-26.2 that shows share of fixed and variables rate revenues based on 2019 actual revenues.

26.1.1 For each of those customer classes, please discuss whether the proportion of revenues recovered from the fixed charge and from the variable charge is appropriate in relation to Nelson Hydro’s cost structure.

RESPONSE: The basic charges for residential customers in a majority, if not all, utilities in Canada do not recover the fixed costs in the cost structure of the utility. The same is true for Nelson Hydro. The recovery percentage of fixed costs for commercial class is higher than the residential class as reviewed in response to the BCUC IR #26.2, however, similar to the residential class, the commercial class does not recover fixed costs.

There is large gap between the fixed cost elements of Nelson Hydro's cost structure and the fixed rates, however, aiming for a higher percentage recovery would have significant bill impacts on low usage customers and also would remove conservation incentives. As part of a future rate application, Nelson Hydro will review if it is more appropriate to increase customer charges to bring them more in line with Fortis BC.

26.2 For each of the three customer classes shown in Table 9-1 to have a Basic Charge, please indicate what percentage of the fixed COSA charges is collected through the Basic Charge. Please provide the supporting calculations.

RESPONSE: Please see BCUC IR 3.4 in regard to the Commercial class being a single class, with multiple differing rate schedules, and a discussion of the Commercial rate schedules which includes the above noted Small Commercial and Commercial Service rates as well as Flat Service rates and Municipal Use rates.

Please see table below that shows the share of fixed and variables rate revenues based on 2019 actual revenues for each class. The fixed rate revenues for commercial groupings include the basic charge as well as demand revenues, where applicable. Urban Small Commercial revenues include Municipal Use accounts [which pay an energy charge only].

	Fixed	Variable
Rural Residential	6.4%	93.6%
Rural Small Commercial	11.5%	88.5%
Rural Large Commercial/General Service	19.5%	80.5%
Urban Residential	9.6%	90.4%
Urban Small Commercial	8.0%	92.0%
Urban Large Commercial/General Service	14.2%	85.8%

Please also see response to the BCUC IR 1-3.2 and BCUC IR 1-28.2.

26.3 For the Streetlight customer class, please discuss the rationale for having a rate that is 100%

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fixed for the respective lamp size.

RESPONSE: It is more economical for both Nelson Hydro and customers to fix the rates rather than installing a meter at every light or group of lights as requested by the customer. The rate is derived from 1.5% of the standardized installed cost of the fixture plus 2.77 cents per watt of the rating of the lamp and ballast (see Hydro Services Bylaw No. 3196, 2012, Schedule B, COSA & RDA Appendix 4-1). The rate covers the cost of power, installation and maintenance of the lamp. To Nelson Hydro’s knowledge none of the utilities install metering for streetlights to measure and charge based on energy usage.

27.0 Reference: [Rate Design Exhibit B-1, Section 8.3, p. 59](#)
[Cost of service analysis outcomes](#)

On page 59, Nelson Hydro states that “There is no uniform range of reasonableness and, for this Application, Nelson Hydro proposed a range of reasonableness of 95% to 105%, but in the longer term is targeting 100% cost recovery.”

27.1 In light of Nelson Hydro’s proposals to bring the Rural residential customer class from an 80.4% RCC to a 95% RCC over three years and to leave the Rural commercial customer class unchanged with an RCC of 108.8%, please discuss over what timeframe would Nelson Hydro plan to bring those RCCs to 100%, if at all.

RESPONSE: If and when such adjustments will be made will depend on the outcome of the COSA & RDA along with further review by the utility. Ultimately, these adjustments would most likely be requested as part of a future annual rate application.

Notably, during the analysis of rate impact on individual customers for the purposes of this COSA & RDA, Nelson Hydro has identified that there are very high use Rural residential customers (10 – 25x higher than a typical Rural residential customer) indicating that they are likely engaged in commercial operations and may need to be reclassified upon confirmation of their commercial operations which may impact the Rural commercial RCC result. It is anticipated that this work will be completed in 2021. At that time the RCC for Rural commercial customers will be reviewed and if it is considered appropriate the 2022 rate application could include proposed adjustment to Rural commercial classes. As noted in the COSA this is a small customer class and the Rural area as a whole has a significant revenue requirement shortfall. Also, by proposing that Rural residential be brought up to 95% COSA means as a whole the Rural part of the utility, even after full COSA phase in, would be providing a ROE of 6.15%, significantly below the ROE applied for of 9.25%.

Please see also Response to IR 1-34.6.

28.0 Reference: [Rate Design Exhibit B-1, Section 9.3, pp. 62, 65 & 68; Nelson Hydro’s 2021 General Rate Increase Application, Exhibit B-1, p. 1](#)
[Proposed rate increases for Rural residential customers](#)

On page 65, Nelson Hydro states, in note 1b) below Figure 9-1, that “[t]he “September 2021” bills assume 5.7% increase in Rural residential rates effective September 1, 2021 as part of phase-in rate

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increases [5.7%/year over three years] to bring Rural residential class revenue-to-cost-coverage ratio within the range of reasonableness [at least 95% cost coverage]. The “September 2022” and “September 2023” bills assume further 5.7%/year increases.

On page 68, Nelson Hydro states that “Nelson Hydro is proposing that this rate adjustment be phased-in over a three-year period to avoid larger bill impacts to the customers which would result in an annual average rate increase of 5.72% [applied to both fixed and variable rates] for total compounded rate increase of 18.17% over three years as shown in Table 9-3 below.”

28.1 Please discuss why Nelson Hydro does not propose changing the rate design of the Rural residential rate, i.e. the average rate increase of 5.7% is applied to both fixed and variable rates.

RESPONSE: Nelson Hydro has traditionally applied rate increases to both the fixed and variable rates as it is simple to implement and easy for ratepayers to understand. The variable rate has the greatest dollar-value impact and is the primary influence in rate adjustment. It is acknowledged that the fixed rate does not fully recover all of Nelson hydro’s fixed costs so not increasing the basic charge at the same time would only widen this gap. See also the response to IRs 1-26.1.1 and 1-28.1.1.

28.1.1 Please discuss why the current rate design, i.e. the split between the fixed and variable components of the residential rate, is consistent with Bonbright principles.

RESPONSE: The proposal is consistent with the Bonbright principles because the Bonbright principles are to be read as a group, reflecting balancing of multiple criteria. This includes things such as rate and bill stability and understandability, not just price signals. To address any mismatch between fixed cost recovery and fixed rates, Nelson Hydro would need to materially increase the customer charge which would compound the impact on small customers. In addition, no utility in Canada has brought fixed charges up to the level of fixed costs as a percentage of costs, and such an approach would undermine other Bonbright principles such as conservation signals (by lowering the energy price which is the best conservation signal).

Please see the response to BCUC IR 1-26.2 which shows share of fixed portion of revenues from Rural residential customers is less compared to the other customer classes. Nelson Hydro is proposing to apply the rate increases to both the fixed and variable portion of Rural residential rates.

There is no undue discrimination in this proposal considering the class fixed cost recovery would still be lower compared to the other customer classes and it will send price signals that encourage efficient use and discourage inefficient use. In a future rate application, Nelson Hydro will review if it is more appropriate to increase customer charges to bring them more inline with Fortis BC. This option was not considered in this Application.

28.2 Once the 5.7% rate increase has been applied to the Rural residential rate, please indicate what percentage of the fixed COSA charges is collected through the Basic Charge. Please provide the supporting calculations.

RESPONSE: The ratio will not change. Please see table below that shows ratio after proposed rate design adjustments. Please note that these are estimates [in 2019 the change was applied effective April 1, 2019, however, for the purposed of the table the rate was used for all 2019; 2023 estimate also

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uses 2019 customer and sales numbers].

A	Basic charge, \$/pay period	16.22	
B	All kWh, cents/kW.h	10.51	
C	# of Customers	4,203	
D	Sales, MW.h	57,522	
	2019 Estimate	\$000	%
E=A*C*6	Basic charge revenues	\$409	6.3%
F=B/100*D	Energy revenues	\$6,046	93.7%
		<u>\$6,455</u>	100.0%
	2023 Estimate [18.17% increase]	\$000	%
G=A*1.1817*C*6	Basic charge revenues	\$483	6.3%
H=B*1.1817/100*D	Energy revenues	\$7,144	93.7%
		<u>\$7,627</u>	100.0%

On page 62, in footnote 163, Nelson Hydro states that “these rate adjustments will apply on top of any future rate adjustments based on annual rate applications.”

In its application for a 2021 general rate increase, Nelson Hydro requests BCUC approval for a general rate increase of 2.3% for the Rural service area for the calendar year (a 3.32% increase effective April 1, 2021).

28.3 Please confirm, or otherwise explain, that Nelson Hydro proposes to increase the Rural residential rates twice per year for 2021 (on April 1 and September 1, 2021) and for the following two years.

RESPONSE: The General Rate Increase Application has proposed an increase for all Nelson Hydro customers effective April 1st 2021. No determination has been made if a rate increase will be required in 2022 and 2023 or on what dates a general rate increase might become effective for those years if required. Fortis BC is currently forecasting a 3.5% rate increase to the wholesale price Nelson Hydro would be required to pay for its purchased power effective January 1st 2022 and 2023. (source: FortisBC Annual Review for 2020 and 2021 Rates, Project No. 1599119, BCMEU IR 1-1.7, available at https://www.bcuc.com/Documents/Proceedings/2020/DOC_59339_B-3-FBC-IR1-Response-to-BCMEU.pdf) As this represents approximately 50% of Nelson Hydro’s operating costs, it is anticipated that Nelson Hydro will need to consider a rate increase for those years. The actual Fortis BC increase, the BCUC ruling on the utility’s 2021 GRA and COSA-RDA, and other external factors will all be considered in making this determination when the time comes. The COSA-RDA application proposes a rate increase on September 1, 2021, 2022 and 2023.

28.3.1 Please discuss the pros and cons of implementing the rebalancing rate increase and the general rate increase at two distinct dates in the calendar year, rather than at once.

RESPONSE: Implementation of the COSA rate increase and the general rate increase at different times in the year mitigates rate impact in the calendar year by allowing customers to have time to make energy reduction improvements and plan for the impacts of each increase. Nelson Hydro has a number of customers on annual equalization billing and these can be adjusted to smooth the rate increase impact. A September 1 implementation of the COSA increases results in a large financial

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cost to the City over the implementation periods (\$3,000,000) but, as noted above, has a significant mitigating impact on customers. For example, in 2021, the timing of the two increases turns a 9.04% (3.32% & 5.72%) increase into a 4.20% annual increase which is below the FortisBC 2021 increase of 4.36%. Splitting the increase also allows Nelson Hydro to assess the effects of the increases on its revenues in time to make decisions around general rate increases for the following year. Simultaneous implementation of the increases would reduce staff time to notify customers, answer their questions and make the rate adjustments to customers bills, and if the COSA increases were moved to the beginning of the year would result in Nelson Hydro achieving its full revenue requirement sooner.

28.4 For 2021, please calculate the cumulative effect of the rebalancing rate increase and the general rate increase for Rural residential customers.

RESPONSE: The annualized bill impact from proposed rate changes [assuming 3.32% general rate increase effective April 1, 2021 and 5.72% COSA/Rate Design rate adjustment effective September 1, 2021] would be about 4% as shown in table below.

	2020	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21			
Basic charge, \$/pay period	16.22	16.22	16.22	16.22	16.76	16.76	16.76	16.76	16.76	16.76	17.72	17.72	17.72			
All kWh, cents/kW.h	10.51	10.51	10.51	10.51	10.86	10.86	10.86	10.86	10.86	10.86	11.48	11.48	11.48			
Consumption levels:	A	B	C	D	E	F	G	H	I	J	K	L	M	N=A*12	O=Sum(B:M)	P=O/N-1
500	\$60.7	\$60.7	\$60.7	\$60.7	\$62.7	\$62.7	\$62.7	\$62.7	\$62.7	\$62.7	\$66.3	\$66.3	\$66.3	\$727.9	\$756.8	4.0%
750	\$86.9	\$86.9	\$86.9	\$86.9	\$89.8	\$89.8	\$89.8	\$89.8	\$89.8	\$89.8	\$95.0	\$95.0	\$95.0	\$1,043.2	\$1,084.7	4.0%
1000	\$113.2	\$113.2	\$113.2	\$113.2	\$117.0	\$117.0	\$117.0	\$117.0	\$117.0	\$117.0	\$123.7	\$123.7	\$123.7	\$1,358.5	\$1,412.5	4.0%
1150	\$129.0	\$129.0	\$129.0	\$129.0	\$133.3	\$133.3	\$133.3	\$133.3	\$133.3	\$133.3	\$140.9	\$140.9	\$140.9	\$1,547.7	\$1,609.2	4.0%
1300	\$144.7	\$144.7	\$144.7	\$144.7	\$149.6	\$149.6	\$149.6	\$149.6	\$149.6	\$149.6	\$158.1	\$158.1	\$158.1	\$1,736.9	\$1,805.9	4.0%
1450	\$160.5	\$160.5	\$160.5	\$160.5	\$165.9	\$165.9	\$165.9	\$165.9	\$165.9	\$165.9	\$175.3	\$175.3	\$175.3	\$1,926.1	\$2,002.6	4.0%
2000	\$218.3	\$218.3	\$218.3	\$218.3	\$225.6	\$225.6	\$225.6	\$225.6	\$225.6	\$225.6	\$238.5	\$238.5	\$238.5	\$2,619.7	\$2,723.8	4.0%
3000	\$323.4	\$323.4	\$323.4	\$323.4	\$334.2	\$334.2	\$334.2	\$334.2	\$334.2	\$334.2	\$353.3	\$353.3	\$353.3	\$3,880.9	\$4,035.1	4.0%
7000	\$743.8	\$743.8	\$743.8	\$743.8	\$768.6	\$768.6	\$768.6	\$768.6	\$768.6	\$768.6	\$812.5	\$812.5	\$812.5	\$8,925.7	\$9,280.3	4.0%

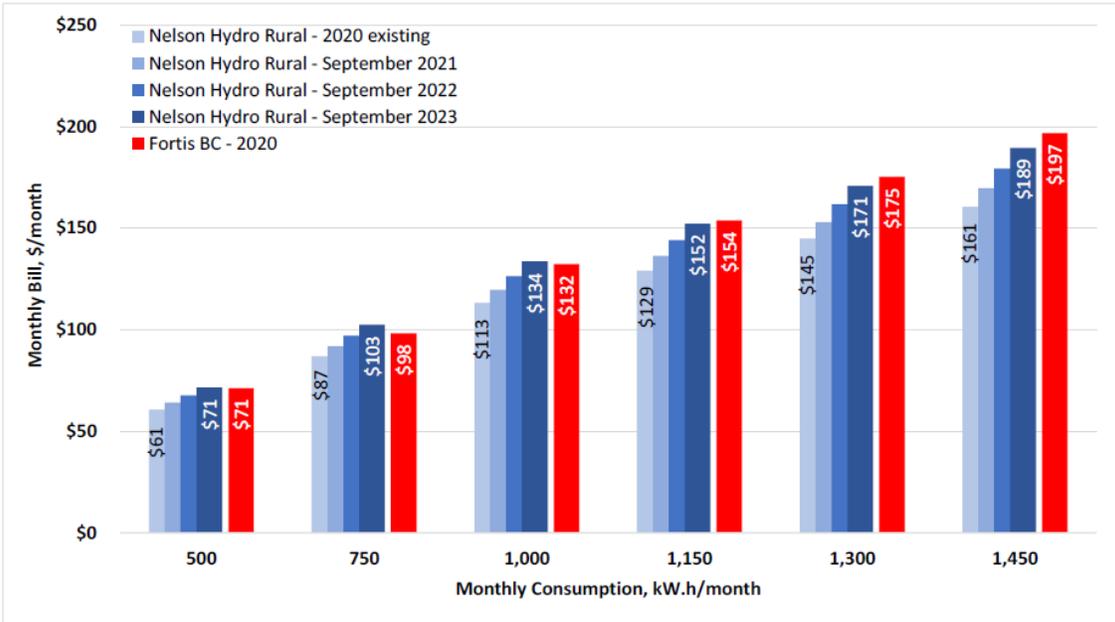
28.5 Please discuss whether Nelson Hydro views an annual rate increase of 10% or more as rate shock.

RESPONSE: There is no universal definition for rate shock, however, many conventional definitions of rate shock suggest caution when increases exceed approximately 15% in a year (though that depends on the relative levels of inflation, the typical stability experienced by customers, and other factors). For example, Newfoundland and Labrador Board of Commissioners of Public Utilities noted that Labrador Industrial Transmission rate increase of 18% raises concerns in relation to rate shock [page 6, <http://www.pub.nf.ca/orders/order2018/pu/PU7-2018.pdf>].

In its proposal Nelson Hydro took necessary steps to avoid rate shock, including a phase-in of rate changes as well as a cap on RCC ratio at this time at 95%. With the phasing proposed, the rate increases for customers average over monthly consumption KWh of 500/1000/1150/1450/2250 are 4.35% (\$16.08/mo.) - 2021; 6.80% (\$26.19 mo.) – 2022; 5.72% (\$23.51 mo.) and 3.63% (\$15.67 mo.) – 2024.

29.0 Reference: Rate Design
Exhibit B-1, Section 9.3, Figure 9-1, p. 65
Bill impact of the proposed rate increases for Rural residential customers

Figure 9-1: Comparison of Residential Bills: Nelson Hydro Rural v. FortisBC



29.1 Please discuss what level of monthly consumption would describe a high-usage Rural residential customer in the Rural service area.

RESPONSE: Nelson Hydro would describe a high use Rural residential customer as those that are in the top 25% of power consumption. Based on 2019 actuals, this would mean 1063 of Nelson Hydro’s 4,252 Rural residential customers would be high consumption customers. The annual consumption of these customers ranges from a low of 17,000 kWh annually or an average of 1,416 kWh per month to a high of 255,500 kWh or an average of 21,292 kWh per month. In 2019, 25 Rural residential customers consumed over 100,000 kWh during that year.

In preparation of the COSA, Nelson Hydro has identified some very high use Rural residential customers (i.e., 10-25 times higher consumption than a typical Rural residential customer) and it seems likely that at least part of their consumption is for commercial purposes. Nelson Hydro is investigating this and such customers will be reclassified if this is the case.

29.2 Please complete the following table, and use the response from the previous question on high-usage level:

		Monthly Consumption (kWh)					
		500	1,000	1,150	1,450	2,250	High usage
Monthly bills (\$)	As of 09/01/21						
	% increase YoY						
	As of 09/01/22						
	% increase YoY						

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	As of 09/01/23						
	% increase YoY						

RESPONSE: Please see below for the completed table. This assumes that the information is based on the beginning of each calendar year.

Monthly consumption	1st COSA 5.72% Sep1/21- Aug 31/22	1st COSA % Increase Actual consumption	2nd COSA 5.72% Sep1/22- Aug 31/23	2nd COSA % Increase Actual consumption	3rd COSA 5.72% Sep1/23- Aug 31/24	3rd COSA % Increase Actual consumption
500	\$ 59.24	8.05%	\$ 45.49	5.72%	\$ 48.10	5.72%
1000	\$ 75.50	8.06%	\$ 57.90	5.72%	\$ 61.21	5.72%
1150	\$ 83.49	7.81%	\$ 65.95	5.72%	\$ 69.72	5.72%
1450	\$ 109.93	8.30%	\$ 82.07	5.72%	\$ 86.76	5.72%
2250	\$ 162.67	8.02%	\$ 125.33	5.72%	\$ 132.50	5.72%
8476	\$ 573.19	7.68%	\$ 459.67	5.72%	\$ 485.96	5.72%

29.3 For the year 2021, please calculate the bill impact in dollar and percentage relative to the previous year for the consumption levels shown in the table above.

RESPONSE: Please see Appendix 1-29.3 for this information.

29.4 Please discuss whether Nelson Hydro uses a bill impact threshold of no more than 10% bill impact on the most adversely impacted customer, or any other bill impact threshold, as a limiting factor of its rate design models.

RESPONSE: Please see response to IR 1-28.5. Nelson Hydro takes appropriate steps to limit bill impact but does not formally use a threshold figure. Notably, for the COSA & RDA proposals (independent of any other potential increases), with the phasing proposed, the rate increases for customers with average monthly consumption kWh of 500/1000/1150/1450/2250 are 4.35% - 2021; 6.80% - 2022; 5.72% - 2023 and 3.63% - 2024.

30.0 Reference: [Rate Design Exhibit B-1, Section 9.2, p. 61](#)
[Rate design based on accepted principles](#)

On page 61, Nelson Hydro states that its rate design proposals are guided by accepted rate design principles as identified by Dr. Bonbright in *Principles of Public Utility Rates*.

30.1 Please discuss whether Nelson Hydro has considered introducing a residential inclining block (RIB) rate to incent customers to conserve energy and promote an efficient use of energy, in line with Principle 3? If so, please provide a summary of those discussions.

RESPONSE: Nelson Hydro does not believe a residential inclining block rate is appropriate without additional consultation and engagement with its customers. BC Hydro and FortisBC use a two-step rate structure, where the rate paid for electricity consumption above BC Hydro - 1350 kWh bi-monthly and FortisBC - 1,600 kWh are higher than the rate paid for consumption below the threshold, to encourage energy conservation. Nelson Hydro does not have this inclining rate structure, as many of its Rural customers rely on electricity as their primary heating source and they have limited

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alternatives. Over 50% of Nelson Hydro customers would be impacted by these higher rates if Nelson Hydro adopted an inclining rate structure. For example, at consumption of approximately 950 kWh/month, a Nelson Hydro and BC Hydro customer will have a similar monthly utility bill. However, a typical household will consume more than that, leading to a higher rate paid with BC Hydro than Nelson Hydro. Nelson Hydro is open to looking at inclining rates when consumption levels exceed a standard consumption level of home that has completed reasonable energy upgrades. As noted in IR 1-27.1 and IR 1-29.1, based on review of annual consumption, Nelson Hydro believes that some of these customers should, at least in part, be reclassified as commercial customers.

30.2 [Please discuss whether the proposed rate increase for the Rural residential customers is consistent with Principle 7 related to revenue stability.](#)

RESPONSE: Yes. The Bonbright principles related to revenue stability is about ensuring the utility revenues (and cash flow) are stable from year to year. The changes to Rural rates are relatively small in the context of Nelson Hydro’s revenue and therefore the change will not lead to any material increase in revenue stability for the utility.

For the customers, Nelson Hydro believes its proposal, with phased-in changes year-over-year, is also attentive to rate stability concerns.

31.0 Reference: [Rate Design Exhibit B-1, Section 9.3, Figure 9-3, pp. 66–67 Rate benchmarks](#)

On pages 66 to 67, Nelson Hydro states:

Another relevant comparable is to examine the rates of the other municipally-owned utilities in British Columbia (i.e. Grand Forks, New Westminster, Penticton, and Summerland). These utilities serve only their Urban areas which are significantly more compact than Nelson Hydro’s Rural service area, which is much more widespread. Furthermore, these utilities rely entirely on power purchases from FortisBC to service their load demands and are not able to moderate rates with the benefit of any surplus generated power.

Table 9-3 shows that Nelson Hydro’s current residential Rural bills at 1,150 kWh/month are lower than those of the other municipally-owned electric utility rates serving their more compact Urban areas. [...]

Nelson Hydro’s Urban rates should not be used as a comparative or benchmark rate in setting the Rural rates. As set out in Section 4.3, respectfully, the Commission does not regulate the Urban residential customer class and as a result it is not an appropriate comparable.

31.1 [Please confirm, or otherwise explain, that the other four municipally-owned electric utilities against which Nelson Hydro compares its rates are not regulated by the BCUC.](#)

RESPONSE: Confirmed.

31.1.1 [If confirmed, please clarify why the residential rates of these four municipally-owned](#)

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electric utilities can be used for the purpose of rate benchmarking but not the Nelson Hydro’s Urban residential rate.

RESPONSE: The comparison is in no way meant to imply that these other municipal electrical utility rates should be used for rate design. The issue Nelson Hydro notes, for comparison, is the relative rate levels and general competitiveness concerns. Nelson Hydro submits that if its proposal had led to Nelson Rural customers facing rates well above other local communities, in a manner that is not fully explained by the customer density and other cost factors, the BCUC may find that this is a concern. Instead, even under Nelson’s proposal, the Rural rates remain highly competitive and advantageous compared to these other areas. This, in Nelson’s view, is a factor in support of the proposal.

They are however appropriate for general benchmarking on a cost of service basis, as these other municipal electric utilities, “rely entirely on power purchases from FortisBC to service their load demands and are not able to moderate rates with the benefit of any surplus generated power”. See COSA & RDA, p. 66. The City’s urban customers have the benefit of the generation but also fund capital reserves, therefore the cost structure is quite different than the rural part of the utility. Nelson Hydro, with the completion of the COSA and with the adoption of PSAB has the financial information to accurately allocate costs between Urban and Rural classes so it is no longer necessary to use the Urban rate as the base and apply a “multiplier” to the Urban rate to calculate the rural rate. This was historically a rough, but cost-effective procedure to establish Rural rates. See also the response to IR 1-25.1.

31.2 Considering the differences between Nelson Hydro and the other four municipally-owned electric utilities, such as more compact geographical service area and 100% reliance on power purchases from FBC, please clarify why Nelson Hydro views these utilities are relevant comparable benchmarks?

RESPONSE: Please see response to the BCUC IR 1-31.1.1.

31.3 Please revise Figure 9-3 by adding a bar showing Nelson Hydro’s Urban residential bill at 1,150 kWh/month once Nelson Hydro has adjusted the Urban residential rate to recover that customer class’s cost of service.

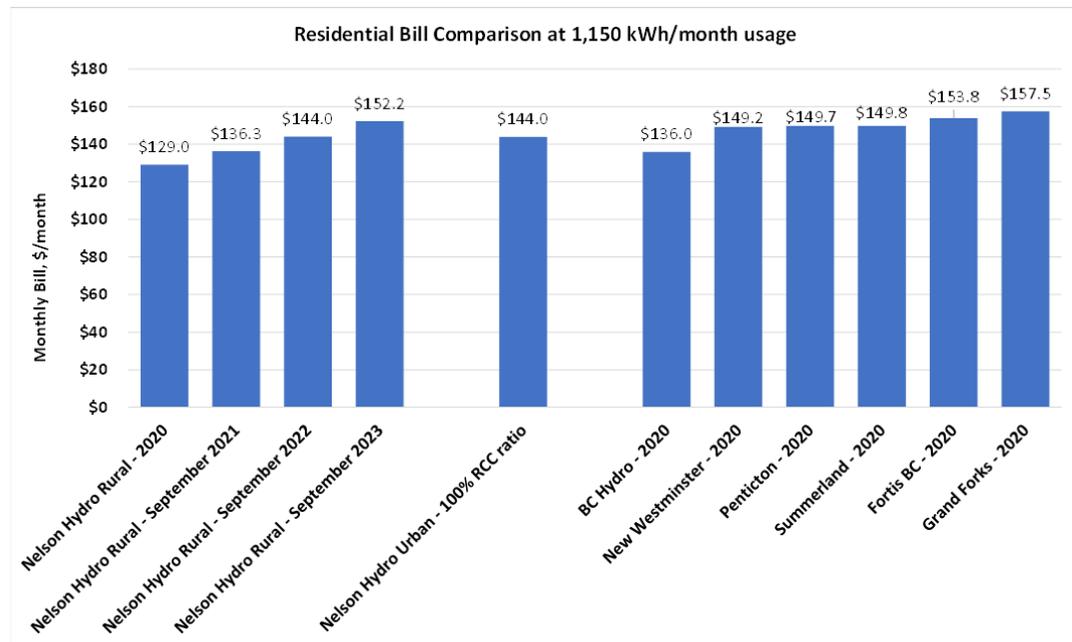
RESPONSE: No rate adjustments are proposed for Urban residential as part of the COSA & RDA.

Further, As indicated on page 67 of the COSA & RDA, Nelson Hydro’s Urban rates should not be used as a comparative or benchmark rate in setting the Rural rates. There are many reasons for this, including:

- The Urban rates are determined by the City of Nelson Council. The City Council may target 100% RCC ratio for Urban customers, however, no rate adjustment is proposed for Urban residential customers in this Application.
- The City citizens/taxpayers as the ultimate owners of the City assets have been and continue to bear the risk related to the assets of Nelson Hydro, therefore, Nelson Generation Rate Policy (Appendix 7-2) allocates first priority Nelson Hydro hydraulic generation to Urban residents.
- Rural area must support more investment in wires. For example, the Urban service area customers share about 60% of total sales with about 68 km distribution lines compared to Rural

service area with more than 230 km distribution lines sharing about 40% of total sales. This was also acknowledged by the BCUC Order G-119-17, Appendix A, page 11 where the Panel noted: “[t]he relative compact size of the municipal area as opposed to the relative expanse of the non-municipal area and the need for additional equipment to service this larger area would seem to support this assertion. The Panel accepts that the existing revenue to cost ratios likely favour non-municipal customers and if rate re-balancing were to occur, the rates charged to non-municipal customers would likely increase compared to municipal customers.”

Nelson Hydro reiterates again that Nelson Hydro’s Urban rates should not be used as a comparative or benchmark rate in setting the Rural rates, however, to be responsive to the question providing the copy of Figure 9-2 with Urban residential bills for 1,150 kWh/month usage assuming 100% RCC ratio [2019 COSA shows Urban residential should be increased about 12% for 100% RCC ratio]:



32.0 Reference: Rate Design
Exhibit B-1, Section 9.3, p. 67; Appendix 8-1, Table 3, p. 5
Capital reserves

On page 67 of the Application, Nelson Hydro states that:

[t]he Urban rates are also not an appropriate comparable because the Urban customers not only pay their measured costs, plus an ROE/dividend, they also contribute to Capital Reserves for replacement of assets. Rural customers do not have these additional cost drivers as part of their rates. Thus, while the City of Nelson cannot avoid putting aside Capital Reserves due to municipal finance rules, it is the Rural customers who are relieved of the responsibility to pay for these reserves. [Emphasis added]

On page 5 of Appendix 8-1, InterGroup in Table 3 provides the mid-year balance of capital assets and

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rate base for 2019.

- 32.1 Please clarify whether the assets for which the Urban customers contribute to capital reserves for their replacement are those generation and transmission/distribution assets listed in Table 3 of Appendix 8-1. If not, please clarify, with reference to the assets listed in Table 3, which ones are those that the Urban customers pay to replace.

RESPONSE: Effectively all of Nelson Hydro’s capital program must be paid for from cash generated from rates, and from capital reserves. This is true regardless as to whether the assets are Common or are in the Urban or Rural areas, and whether they are generation or transmission or any other function. There is simply no alternative in most cases to funding assets with utility-generated cash.

Based on the ROE approach, Rural customers are in effect relieved of the responsibility to also fund the capital reserves. The approach to rate setting for Rural customers instead assumes that equity (largely) can be used to finance the capital investments, and that Rural customers must pay a return on that equity investment. It is a model derived from primarily private sector or provincial Crown-owned utilities that presumes an ability to raise capital on financial markets or to borrow substantial sums (or both), and as such does not fit well with Nelson Hydro’s required financial model. Nonetheless, it is understood to be a well-accepted utility rate-setting approach and Nelson Hydro proposes to implement this approach to permit rate changes to increase the fairness in the Rural rates.

- 32.1.1 Please clarify whether the assets that are subject to the Capital Reserves paid for by the Urban customers are also used and useful for the Rural customers. If not, why not.

RESPONSE: The Capital Reserves paid for by the Urban customers provides funding for asset renewal for both the Rural and Urban side of the utility.

Capital reserves are not a true expense but a means for local governments, that lack access to capital that private corporation have, to generate funds to fund capital renewal. Best practices in rate setting for local governments are for rates to recover operating costs and generate funds to replace capital assets as they come to the end of their life. This is permitted per the Community Charter (Division 4 – Reserve Funds and specifically S. 188 – Establishment of reserve funds and S. 189 – Use of money in reserve funds). Important provision in these sections are that a reserve funds must be implemented by bylaw and for a specific purpose and that money in reserve funds can only be used for purposes for which the fund was established. This is a practice for all of the City’s utilities (i.e., water, sanitary sewer and electrical) and is the standard for the other BC Municipal Electrical Utilities as well. As noted in Section 4.4.2.3 of the COSA & RDA, Urban customers are both customers and owners through Nelson Hydro being a municipal utility. It is therefore appropriate and best practices to use Urban rates to fund capital reserves.

- 32.1.1.1 If so, please explain why the Rural customers are relieved of the responsibility to pay for these capital reserves.

RESPONSE: As stated above, the ROE approach used in the COSA takes the approach that the Rural customer pays a return on the equity investment in the utility, rather than contribute directly to a capital reserve. As noted in the COSA & RDA Section 4.4.2.3, under a regulatory cost of service model capital reserve funding is not an expense that is appropriate for Rural customers (i.e. Rural

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customers are not owners and thus they cannot be expected to fund the capital reserve and pay a return on equity and amortization on these same capital assets).

33.0 Reference: Rate Design
Exhibit B-1, Section 4.3.1, pp. 35–36; Section 9.3, p. 67; BCUC Report to the Government of BC on the Impact of BC Hydro and FortisBC’s Residential Inclining Block Rates (RIB Report),⁴ p. 3
Postage stamp rate principle

On page 67, Nelson Hydro states that “[t]he postage stamp principle, as discussed in Section 4.3.1, does not apply to Nelson Hydro’s Urban and Rural customer classes and accordingly the postage stamp principle cannot not be relied upon to reject the proposed Rural rate change and resulting rate differential.”

On page 35, Nelson Hydro states that “[n]otably, the postage stamp principle does not apply across the service area of different utilities”.

33.1 Please discuss whether the Urban and Rural service areas should be viewed as two different utilities for the purpose of setting rates. If so, why? And how?

RESPONSE: No. Nelson Hydro was established as a municipal utility to serve the residents and businesses of the City of Nelson. It agreed to serve customers in the Rural area starting nearly 100 years ago, which was before there was a regulator for non-municipal ratepayers. As a result, Nelson Hydro is one utility, with two different service areas. These two service areas have different underlying cost structures, and are regulated differently. For this reason, it is appropriate to recognize that cost and rate levels are not the same in the two different service areas. As noted in in the COSA & RDA, the municipal nature of the utility along with its unique history and legislation result in a dynamic and framework that is vastly different than that of investor owned utilities.

On page 36, Nelson Hydro states “... the Commission, in regulating the Rural portion of the City’s electric utility, has consistently recognized that the cost to serve customers in the Rural area is higher than in the City, and at no point did the Commission equalize rates between the Urban and Rural ratepayers.”

33.2 Please provide all relevant excerpts from prior BCUC decisions where the BCUC recognized that the cost to serve customers in the Rural area is higher than in the City.

RESPONSE: In the Commission’s 2017 Order G-119-17 (https://www.bcuc.com/Documents/Proceedings/2017/DOC_49757_G-119-17_Nelson-Hydro_2017-Rate-Application_Decision.pdf), it stated in Appendix A (p. 11) that:

“While the actual results are still outstanding, Nelson Hydro offers that a utility cost analysis has been performed in the past and non-municipal zones have consistently been ‘below 100% revenue: cost coverage, while urban [municipal] zones are above 100%.’ It goes on to state that this is not surprising as much of the highest cost components are related to the non-municipal service with little or no rate differential reflecting this higher cost. **The relative compact size of the municipal area as opposed to the relative expense of the non-municipal area and the need**

⁴ BCUC Report to the Government of BC on the Impact of BC Hydro and FortisBC’s Residential Inclining Block Rates, dated March 28, 2017, [DOC_49001_03-28-2017_BCUC-RIB-Rate-Report.pdf](https://www.bcuc.com/Documents/Proceedings/2017/DOC_49001_03-28-2017_BCUC-RIB-Rate-Report.pdf)

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for additional equipment to service this larger area would seem to support this assertion. The Panel accepts that the existing revenue to cost ratios likely favor non-municipal customers and if rate-rebalancing were to occur, the rates charged to non-municipal customers would likely increase compared to municipal customers.” (emphasis added).

Beyond this excerpt, there does not appear to be any explicit discussion on this topic in any Commission decisions. To clarify, Nelson Hydro’s statement (“the Commission, in regulating the Rural portion of the City’s electric utility, has consistently recognized that the cost to service customers in the Rural area is higher than in the City. . .”) was in reference to the Commission’s historical approvals (1981 through 1994) accepting that the utility was charging a higher rate to all of its Rural ratepayers (see the COSA & RDA, Sections 3.4.1 through 3.4.2). Unfortunately, the Commission Orders from this time period generally do not appear to contain detailed reasoning or “Reasons for Decision” accompanying the Orders. However, the only logical inference is that the rate differential was accepted on the basis that it is more expensive to serve the Rural area, in particular because the Orders from 1981 through 1994 reference the rate differential approved in 1982 (Order G-49-82) pursuant to the information that Nelson Hydro put forth in its 1981 Application for Exemption where it clearly explained that it sought a differential between Urban and Rural rates to “compensate for the higher cost of service to the rural area” given that the Rural consumers are more dispersed” among other factors (see COSA & RDA, Appendix 3-9, p. 7). The Commission’s Order found that the rate differential, based on the information presented from the City was “just and reasonable” (see Decision dated July 9, 1982, p. 4, *available at <https://www.ordersdecisions.bcuc.com/bcuc/decisions/en/item/111764/index.do>*).

On page 3 of the RIB Report, the BCUC states:

R/C ratios can also be used to evaluate whether intra-class cross-subsidization occurs. In this context, it is important to keep in mind that residential electricity rates in BC are set on a “postage stamp” basis, whereby all customers in the BC Hydro territory pay the same amount regardless of their location, as do FortisBC customers (though BC Hydro and FortisBC customers have different rates). It is understood that costs to serve specific residential customers vary depending on many factors, including but not limited to location within the province, population density, and housing type. Hence, postage stamp rates inherently accept a degree of cross-subsidization between different residential customers.

33.3 Please discuss why Nelson Hydro does not view postage stamp rates, which inherently accept a degree of cross-subsidization between different residential customers of BC Hydro and FortisBC as applicable to Nelson Hydro’s residential customers.

RESPONSE: Nelson Hydro does not view postage stamp rates as applicable to Nelson Hydro’s Urban ratepayers (residential, commercial, or streetlight) for several reasons.

First, the postage stamp rate is not applicable to the Urban ratepayer because the Urban service area is not regulated by the BCUC. It is undisputed that Nelson Hydro’s Urban service area is not regulated by the Commission pursuant to the Utilities Commission Act. This has been repeatedly recognized by the Commission (see Order G-274-19, Order G-124-18, Order G-119-17 among others). Given its status as exempt from regulation, the Urban service area cannot be held to the postage stamp standard. Respectfully, applying the postage stamp standard to an area that is not regulated by the Commission is in effect regulation of that area. This contravenes the UCA, the

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legislation from which the Commission draws its jurisdiction and regulatory power.

Related to this legislative reality, postage stamp rates are not appropriate where the Rural areas should be charged just and reasonable rates based on costs, but the Urban areas face rates based on any and all considerations that the local government desires to apply – the only way to arrive at postage stamp rates is to effectively constrain the local government to have to set in-city rates at the same level needed to reflect the Rural area costs, which has the net effect of stymieing the very broad powers and discretion granted Council under the relevant municipal government legislation.

Notably, and as discussed in Section 4.3.1 of the COSA & RDA, the Commission recognized this fundamental limitation on the postage stamp principle in 1982 when it approved a Rural rate that resulted in a rate differential with the Urban service area, but required that the rates in the two Rural sub-service area be identical. Here, the Commission recognized that the postage stamp principle could and should be applied within the areas which it regulated, but that it could not extend the application of this principle to the Urban service area. This was a correct application of the principle in 1982, and remains so today.

Second, the postage stamp principle even in regulated areas is not appropriate in all circumstances. For example, BC Hydro does not have postage stamp rates universally throughout the province where cost structures merit different treatment or customers face different factual circumstances. Even if the Urban ratepayers were subject to regulation (which they are not) the postage stamp principle would not apply because the Urban and Rural ratepayers face different circumstances with regard to the allocation of generated power as described in the City's Generation Rates Policy (Appendix 7-2 of the COSA & RDA).

Specifically, the historical context creates a distinction between the two customer classes where the postage stamp principle cannot be reasonably applied to the Urban service area. Many years ago, City Council understood that being a customer of private utilities and not securing its own generation would subject its residents to an unfavorable dynamic. As a result, the City developed its own utility with generation capacity to lock in this value for City customers and taxpayers. This is fundamentally different from a private utility where there is a clear separation between investors and customers, where investors receive a regulated return on their net equity and customers receive the underlying value of the assets.

The City of Nelson acquired its generation to benefit its citizens (as owners/customers). As the customer and taxpayer are ultimately one and the same, making a return on its assets within the municipality does not create any value as it is merely a decision on whether taxes or rates fund services. If the return is higher then less taxes are required, if it is lower more taxes are required, but either way it is drawn from the same source: City residents. No value is created from the return on assets within the municipal boundaries. This is not the case for customers outside the City's boundaries where the only way to earn a return on the capital investment is through rates, the City cannot tax these property owners.

City Council did not acquire water rights and develop generation to service Rural customers, nor did Rural customers pay for these assets. When the City agreed to serve Rural customers, it took care not to pass on the underlying value of its generation to Rural customers. Council did not sell ownership into the utility or a right to generation, they simply agreed to provide service for a rate

that would recover its costs and earn a return. Even from a legislative perspective the City would have been barred from passing value onto non-residents as it would intrinsically remove value from City residents. To expand, providing Rural residents with anything but surplus generation or purchased power effectively transfers the value of generation from residents to non-residents. In exchange the City at most receives a regulated return on the Rural customers’ share of the generating asset which is substantially less than the value of the generation. Accordingly, this outcome is inconsistent with the Community Charter’s requirement that the benefit of the assets be for City residents.

**34.0 Reference: Rate Design
Exhibit B-1, Section 9.4, Table 9-2, p. 68
Rate rebalancing**

On page 68, Nelson Hydro states:

Table 9-2 below shows that Rural residential rates should be increased by 18.2% to get RCC ratios of at least 95%.

Table 9-2: RCC ratios and Required Rate Adjustment

2019 Actual Revenues	COSA Revenues	Revenues surplus/ (shortfall)	RCC Ratio	Revenues surplus/ (shortfall) with 95%-105% RCC	Required rate increase	RCC Ratio after Rate Change	Revenues surplus/ (shortfall) after rate change
\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000

Based on 2019 Actual ROE adjusted at 9.25% proposed by Nelson Hydro

Residential - Rural	\$6,476	\$8,056	(\$1,580)	80.4%	(\$1,177)	18.2%	95.0%	(\$403)
Commercial - Rural	\$1,083	\$996	\$88	108.8%	\$38	NA	NA	\$38
Total Rural					(\$1,139)			(\$365)

No rate adjustments are proposed for Rural commercial as class revenues are very small and total Rural service area still shows revenue shortfall of \$0.365 million even after residential rate increases, even though no Capital Reserves are being funded by the Rural area. [Emphasis added]

34.1 Please explain why Nelson Hydro is not recovering its 2019 revenue requirement through rates that were approved on a cost of service basis.

RESPONSE: Nelson Hydro will not recover its full revenue requirement based on the rates on Table 9-2 because, even after the proposed increases, Rural Residential customers will be underpaying their full costs.

Notably, prior to the 2019 COSA, Nelson Hydro had never completed a finalized COSA study to determine what its actual revenue requirements are to recover its costs including amortization expense and earn a regulated return on its net equity. Since amortization is a non-cash expense it was able to fund the current level of divided payment through this non-cash item. As described in the COSA & RDA, Section 4.4.2.2, prior to the implementation of PSAB the City used a less sophisticated accounting methodology that did not allow the City to accurately establish a rate base and cost of service (COS) model. The City never filed a true cost of service revenue requirement and its rate applications were based on a municipal accounting approach (i.e. it included actual operating costs, recorded to Urban and Rural where directly tracked but no other

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allocations to Rural versus Urban were made at that time). Other key revenue requirement components of a proper COS, including amortization expense recovery and return on equity, were either not recovered at all or were being partially recovered. This shortfall has only been accurately identified with the completion of the 2019 COSA.

Even with the full implementation of the COSA rate increases the utility will not fully recover its Rural cost of service because Council has approved filing it with a 95% revenue requirement target.

34.1.1 In doing so, please clarify if the revenue shortfall shown in the Table above is a result of a change in methodology from the previous rate application where Nelson Hydro included a dividend and transfer to capital reserve as part of the cost of service which Nelson Hydro proposes to replace with a rate base/rate of return method.

RESPONSE: No. The shortfall is not due to previously applying a dividend/capital reserve methodology. The shortfall is because the Rural Residential rates are too low for the costs they impose on the system. This was true under either the dividend/capital reserve or ROE approach.

34.2 Please discuss the appropriateness of proposing changes to the cost of capital at the same time as undertaking a COSA.

RESPONSE: The changes proposed to the COSA are all part of achieving an appropriate measure of the costs to serve the Rural area. This is to bring the 2019 revenue requirement up to 95% full recovery on a COS approach and moves Nelson Hydro closer to being aligned with other regulated utilities. It does not account for the higher costs of service that have occurred since 2019, including a 5.36% rate increase to its wholesale power purchases from FortisBC as well as wage and other inflationary increases since 2019. Nelson Hydro requires a way to recover its costs and earn a fair return on its investment. The 2019 COSA brings the Rural side of the utility to a traditional COSA revenue requirement model. This will allow the Commission to regulate the Rural side of the utility in a manner consistent with other regulated utilities and will create clarity, that like FortisBC, Rural customers are customers only, not owners, like their Urban counterparts. The Rural residential class is not even covering their directly measured costs before applying any return as illustrated in Table 4 of the 2019 COSA Report. Nelson Hydro has proposed an approach to begin to address this issue.

34.2.1 Please discuss whether the simultaneous change in cost of capital would prevent Nelson Hydro to isolate the COSA outcomes to determine whether each customer class pays its equitable share of the cost of service.

RESPONSE: Please see the response to the BCUC IR 1-34.2. Part of the COSA outcomes are to ensure the utility is earning a fair return on its equity to allow the utility to continue to attract capital to invest in infrastructure renewal. As identified in response to IR 1-8.2 of the GRI Application (*available at: https://www.bcuc.com/Documents/Proceedings/2021/DOC_61134_B-3-Nelson-Hydro-response-to-BCUC-IR-No1.pdf*), the City has earned less than 1% on its new capital investments since 2016. This is clearly not sustainable.

34.3 Please clarify how Nelson Hydro proposes to cover the revenue shortfall during the phase-in and even after the proposed rate increases are completed.

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RESPONSE: The City, as the owner of the utility, is not receiving a return on its net equity or recovering its amortization expense on rural assets. This impacts the utility’s ability to invest in infrastructure renewal in the Rural area as the City cannot make expenditures that do not provide “community benefit” per S. 7 of the Community Charter. It is not consistent with the Community Charter for the City to use capital reserves or to borrow to make these investments if the City cannot recover the amortization expense or incur the risk without making an appropriate return. The shortfall during the phase-in will result in a lower return on equity to the City of Nelson as the owner of the assets. City Council approved the filing of the COSA & RDA with the phase-in of rates and is prepared to accept this lower return in the short-term.

34.3.1 If Nelson Hydro absorbs the revenue shortfall, would that effectively reduce the ROE? If so, please indicate by how much the ROE would be reduced in 2021, 2022 and 2023?

RESPONSE: As illustrated in Table 4 of the 2019 COSA Report the Rural customers, due to low Rural residential rates, are not even covering their directly measured costs before applying any return. Without the proposed rate adjustments, the shortfall will continue to increase. Based on high level estimates the Rural ROE shortfall would be approximately \$1.6 - \$1.8 million/year for 2021-2023 years [this assumes 2.3% general rate increase in 2021, 2.50% in each 2022 and 2023].

34.4 Please recalculate the required rate increase for the Rural residential customers to achieve an RCC ratio of 100%. If a 100% RCC Ratio is the target and it is to be phased-in over three, four or five years, what would be the annual rate increase for each scenario?

RESPONSE: With 100% RCC ratio the required rate adjustments would be about 7.55%/year over a three-year period; 5.6%/year over a four-year period; 4.5%/year over a five-year period.

34.5 Please discuss what alternatives could be implemented to smooth rate increases other than expanding the timelines (e.g., changing the fixed/variable rate structure, etc.)

RESPONSE: The issue noted in the response to the BCUC IR 1-34.4 is revenue shortfall. There is no means to close this gap other than via rate increases. A change to the structure might change who it impacts (e.g., only raise rates to residential customers using over 1,000 kW.h a month will raise large customers’ average bills more than small customers’) but there is no way to avoid the need to generate more revenue.

34.6 Please calculate the required rate decrease for the Rural commercial customers to achieve an RCC ratio of 105% and of 100%. Please show the supporting calculations and specify a time period for such rate change(s).

RESPONSE: The potential for a decrease to commercial customers is very modest, and if imposed will be reversed in a relatively short time with new incremental or inflationary rate increases. A decrease followed by an increase is generally not considered good ratemaking practice, which should properly target stable rates where possible. As illustrated in Table 9-2 [provided in preamble to IR 1-34], the required adjustment amount for Rural commercial class is only about \$0.038 million which is 3.5% rate decrease [or \$0.088 million/8.1% rate decrease with 100% RCC ratio]. If implemented over 3 years, like the residential proposal, this change would likely be small once matched against normal increases that Nelson Hydro may require.

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34.6.1 [Would Nelson Hydro propose to phase-in this rate decrease? Why or why not.](#)

RESPONSE: Please see response to the BCUC IR 1-34.6. As mentioned in Response to IR 1-29.1, Nelson Hydro is reviewing its Rural residential customers who appear to potentially be misclassified and may actually be operating commercially. When this reclassification work is completed the utility will decide on a proposal for the Rural commercial rates. Ultimately, at this time, the over-recovery is very small and helps offset the significant under recovery from Rural residential customers.

34.6.2 [If the Rural commercial rate was decreased to achieve an RCC ratio of 105%, please recalculate the revenue surplus generated from the Rural commercial rate class after the rate change.](#)

RESPONSE: \$0.038 million as noted in response to the BCUC IR 1-34.6.

35.0 Reference: [RATE DESIGN Exhibit B-1, Section 9.5, p. 69 Alternatives to not achieving acceptable rate design](#)

On page 69 of the Application, Nelson Hydro states:

If Nelson Hydro is unsuccessful in achieving an acceptable rate design for the Rural residential service area in order to adequately recover the cost to service those ratepayers, there is no business case to continue servicing that area – especially given that such service is currently being provided to the detriment of the City’s Urban ratepayers. As detailed in Section 4, the City is currently operating within a dynamic that is unfavorable to its own residents and taxpayers and, as such, is inconsistent with the requirements of the *Community Charter*. Accordingly, if Nelson Hydro cannot achieve an acceptable rate design in the Rural service area it will vigorously explore all of its options and alternatives with regard to the Rural portion of the utility, which could include divestment (i.e. sale) of the Rural portion of the utility, among other options.

The City of Nelson would be open to discussing some of these options in more detail with the Commission on a confidential basis if requested, due to the potentially commercially sensitive nature of the information.

35.1 [Considering Nelson Hydro’s objective to adequately recover the cost to service the Rural customers, please clarify why the rate adjustments proposed in Table 9-2 do not aim to recover 100% of the cost of service for the Rural service area.](#)

RESPONSE: A COSA includes a number of assumptions that do not allow the revenue requirement to be determined to a level of precision where there is not a plus and minus level of accuracy. Because of this and the relatively large rate catch up required, City Council, at this time, has agreed to target the bottom end of this range of reasonableness as a way to mitigate the rate impact on Rural residential customers. City Council has not set a timeline to recover 100% of the cost of service, at this time, which in large part will depend on the outcome of the COSA & RDA. If the rate design proposals in the COSA & RDA are approved as filed, options will be explored, including the possibility of additional borrowing for Rural capital infrastructure projects, reviewing whether to adjust rates for the fixed cost component and implementing inclining block rates. Nelson Hydro

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is also committed to working with all of its customers to reduce energy usage and in turn reduce power purchase costs which lessens the impact of rate increases on customers.

35.2 [Please clarify and elaborate why service to Rural customers is “currently being provided to the detriment of the City’s Urban ratepayers.”](#)

RESPONSE: City Council established the municipal electric utility over 120 years ago. Council made this decision because it believed that electricity was as important to the City’s prosperity as other utilities it established such as water. It did not do this to earn a return on its assets, like an investor owned utility, but rather did so to ensure it controlled this vital resource, much in the same way as it established a secure supply of water for its water utility. The City and its previous Councils did not establish the electric utility to serve customers outside municipal boundaries, it only did so when petitioned to do so by Rural customers, and it only did so under an understanding that the City would recover its costs and make a return on these new assets required to serve these customers. It was able to supply these customers with its own generation as it had surplus generation at that time and the load requirement for the Rural customers was significantly less.

Urban customers are both customers and owners, unlike Rural customers who are strictly customers. This means where there are revenue requirement shortfalls, either in direct cost recovery, under recover of amortization expense or not earning a regulated return on their net equity, this ultimately is to the detriment of the Urban ratepayer/owner. Any outcome that transfers any value, in particular generation, from Urban customers/owners to Rural customers would transfer value to Rural residents to the detriment of Urban customers. This would also be contrary to the legislation of local governments and the long regulatory framework that has been established between the City of Nelson and the BCUC.

35.3 [Please clarify what Nelson Hydro means by achieving “an acceptable rate design in the Rural service area.” What are these “acceptable rate design” outcomes other than the proposed rate adjustments for the Rural residential customer class?](#)

RESPONSE: An acceptable rate design in the Rural service area is one that allows the utility to recover its costs of servicing the Rural service area per the submitted COSA and earn a fair return (proposed at 9.25%).

Beyond this, any acceptable rate design for the Rural service area should do the following:

- respect the regulatory authority of the City Council with regard to Urban customers and the Commission’s authority for ensuring fair and reasonable rates for Rural customers and that the utility is sustainable⁵;
- acknowledge that fair and reasonable rates would not include a transfer of value from the owner of the assets to the Rural customers (e.g. Rural access to Nelson Hydro generation or the imposition of a postage stamp rate that would in effect do the same thing) and that City citizens/taxpayers as the ultimate owners of the City assets can decide how to fund the capital projects, as they have done and continue to bear the risk related to these assets;

⁵ This is consistent with the Community Charter, Section 2 which provides that “The Citizens of British Columbia are best served when, in their relationship, municipalities and the Provincial government: (a) acknowledge and respect the jurisdiction of each. . .”

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- recognizes that Rural ratepayers are in a different taxation jurisdiction which the City has no authority over;
- recognizes the uniqueness of a municipal utility and the legislation it operates under, including its broad powers and that Nelson Hydro is exempt from the Utilities Commission Act for Nelson Hydro’s operations within municipal boundaries. As an example, Council has the authority to set Urban rates to meet certain policy goals within the City which may not be in alignment with standard regulatory design;
- recognize that, as a municipal utility, Nelson Hydro’s possesses restricted ability to raise capital and not limit Council’s flexibility to use its limited tools of fees, taxation and debt to raise sustaining capital within its legislative constraints;
- recognizes a true cost of service model for Rural customers which creates clarity and certainty in rate setting for Nelson Hydro and these customers. It doesn’t restrict Council’s broad powers in managing the Urban side of the utility thereby facilitating the adoption of municipal best practices (such as capital reserves);
- is consistent with the outcomes of the COSA that has been submitted.

35.3.1 [Please clarify whether achieving “an acceptable rate design” also include the approval of the proposed 9.25% ROE and/or the approval of the proposed policies.](#)

RESPONSE: Yes, an acceptable rate design includes approval of the proposed ROE at 9.25% and the proposed three-year phase in of Rural residential rates.

Acceptance of the Policies is not directly related to an acceptable rate design but would provide the utility with the assurances that its financial operations are acceptable to the Commission. See also Response to IR 36-4 regarding acceptance of the Policies.

35.4 [Please elaborate on the option of divesting the Rural portion of the utility.](#)

RESPONSE: At this time Nelson Hydro has not explored divestment with potentially interested parties. Doing so in a material fashion would require staff time and costs in the form of consulting fees. The City of Nelson will do so when/if this becomes necessary. Having said that, the City is aware that the City of Kelowna and others have divested of utility assets. At a minimum, it would be anticipated that any purchaser of the City’s Rural assets would expect a necessary commercial investment return from Rural rates plus potentially new dividend/capital reserve approach if they (like the City) were constrained in borrowing for future capital spending (which would raise Rural rates even more).

35.5 [Please provide a brief description of each of the other options that Nelson Hydro may consider if Nelson Hydro cannot achieve an acceptable rate design in the Rural service area.](#)

RESPONSE: Nelson Hydro has not yet thoroughly explored its other options. Given the uniqueness of the utility Nelson Hydro anticipates that if/when it explores these options it will need to retain industry professionals to advise on specific options in this regard.

D. POLICIES FOR APPROVAL

36.0 Reference: [OTHER POLICIES FOR APPROVAL Exhibit B-1, Section 7.1, p. 50](#)

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Cost Allocation Methodology Policy

On page 50, Nelson Hydro states:

The following policies are now presented to the Commission for approval...

Nelson Hydro allocates its costs and expenses amongst its service areas and customer classes in a way that reflects how each service area and customer class uses the utility's services. These allocations are used to calculate rates for the service areas (with Rural rates being subject to Commission approval)... Notably, the methodology put forward by this policy is not identical to the allocations in the COSA as presented in Section 8. However, the resulting allocated costs are very similar. For the purposes of efficiency, and to keep regulatory costs to a minimum, Nelson Hydro proposes to use the Cost Allocation Methodology for budgeting purposes and to serve as a guide for future rate applications. *[Emphasis Added]*

36.1 Please explain why the allocations in the Cost Allocation Methodology Policy are not identical to the allocations presented in the COSA.

RESPONSE: Please see the response to BCUC IR 1-12.10 that describes how the allocation methods described in Appendix 7-1 were used in the COSA.

The Cost Allocation Methodology in Appendix 7-1 was developed by Nelson Hydro as a simple approach to allocate costs between service areas to keep regulatory costs to a minimum. It is not intended to identify the cost to serve each customer class. For example, the Cost Allocation Methodology does not functionalize, classify or allocate the rate base; under the Cost Allocation Methodology some costs that cannot be directly attributable to one of the service areas are directly allocated to Urban and Rural using allocation ratios [e.g., number of customers, energy usage].

In short, the Appendix 7-1 cost allocation methodology is a simplified and mostly internal tool to give estimates of overall costs by geographic area, but is not detailed enough to run full COSA results.

36.2 Please provide examples of how the cost allocation methodology will be carried out in practice.

RESPONSE: Please see response to IR 1-36.4. Given this response, Nelson Hydro does not believe it appropriate to provide examples at this time.

36.3 Please provide examples of the differences between the costs allocated per the cost allocation methodology and the costs presented in the COSA.

RESPONSE: Please see response to IR 1-36.4. Given this response, Nelson Hydro does not believe it appropriate to provide examples at this time.

36.4 Given that Nelson Hydro is requesting approval of the COSA, please explain the purpose of the BCUC approving the Cost Allocation Methodology policy and why it is requested.

RESPONSE: The City is making every effort to cooperate with the Commission in good faith to ensure it can avoid future costly regulatory processes, as the City is a small utility, with an even smaller portion

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of the utility under Commission regulation, the Rural portion. The City has endeavoured to be transparent with the Commission and Rural ratepayers and given that all the policies it has submitted as part of the COSA & RDA impact Rural ratepayers, it was thought that receiving acceptance from the Commission would be a prudent course of action.

Having said that, upon further reflection, implementing and applying the Policies submitted are ultimately dependent on whether the COSA Report is approved as presented in this Proceeding. Accordingly, if the Commission deems it appropriate, Nelson Hydro would be amenable to seeking acceptance of the Policies, revised as required, following the outcome of this Proceeding.

**37.0 Reference: OTHER POLICIES FOR APPROVAL
Exhibit B-1, Section 7.2, pp. 52, 50–56
Generation Rates Policy**

On page 52, Nelson Hydro states:

Meanwhile, a municipally-owned utility is established to serve the needs of its residents, who are both ratepayers and shareholders. City Council, in essence, acts as a board of directors. The return the City receives does not go out as cash payments to its residents and they cannot sell their “shares”. Rather, this return provides services to the community.

On page 55, Nelson Hydro states:

the electrical utility is fully capable of accurately accounting for how it allocates generated power versus purchased power... Through metering and load forecasting studies, the City can accurately identify how power purchase costs can be fairly allocated between customers.

On pages 55 to 56, Nelson Hydro states:

Stated another way, Nelson Hydro purchases power from FortisBC primarily to serve the Rural service area, and this is why it is just and reasonable to allocate the power purchases to the Rural service area. If Nelson Hydro were not serving the Rural service area it would only make power purchases from FortisBC when its own generated power is not sufficient to serve the Urban service area. Thus, the proposed allocations for generated and purchased power are justified and reasonable because Nelson Hydro would not make the power purchases that it makes but for the fact that it services the Rural service area, and it is able to calculate precisely the amount of power purchases that are needed to service the Rural service area.

37.1 Please clarify how Nelson Hydro’s ratepayers are shareholders of Nelson Hydro. Please include whether this statement is only in reference to Urban or Rural ratepayers or both.

RESPONSE: The statement that Nelson Hydro’s resident ratepayers are shareholders is a reference to Urban ratepayers only. Residents of the “municipality” is a reference to those living within the City of Nelson – which includes all the Urban ratepayers. To be clear, it does not include Rural ratepayers.

Viewing City residents as the shareholders of Nelson Hydro is an analogy that is meant to be helpful for those that may be more familiar with how private utilities operate. It makes sense to analogize City residents as the shareholders of all City assets (such as Nelson Hydro) because City resident property owners are those that pay taxes to the City – much like how a private enterprise

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would raise money from shareholders by issuing shares. Meanwhile Rural ratepayers are customers of the utility – not shareholders.

It appears based on comments submitted in this Proceeding that some Rural ratepayers believe they pay taxes to the City of Nelson. This is incorrect. The City of Nelson does not have taxing authority, nor does it receive tax payments in any capacity from Rural residents. Rather, Rural residents pay taxes to the Regional District of Central Kootenay (RDCK) – a separate and independent local government body. Notably, the City does participate in certain RDCK services as a participant meaning that the City pays into some shared services administered by the RDCK. However, the City’s financial contribution to these shared services is exclusively funded from its Urban ratepayers. Rural ratepayers also contribute to some of these shared services through their taxes – which are collected by the RDCK. For the purposes of a fair adjudication of this Application it is critical to understand that the City of Nelson does not receive and is not entitled to receive tax payments from the Rural ratepayers or any other Rural residents.

- 37.2 [Given there is only one distribution grid, please explain how this generation allocation can be determined and how power purchases can be fairly allocated between customers. Please include evidence such as the metering and load forecasting studies that can substantiate this.](#)

RESPONSE: Please see the response to BCUC IR 1-12.2.

- 37.3 [Given that Nelson Hydro is requesting approval of the COSA, please explain the purpose of the BCUC approving the Generation Rates policy and why it is requested.](#)

RESPONSE: Please see response to BCUC IR 1-36.4.

- 37.4 [If policy approval is required, please explain whether the Urban ratepayers ever exceeded generated power and purchased power. How is Nelson Hydro able to track this?](#)

RESPONSE: Please see response to BCUC IR 1-36.4 regarding Policy acceptance.

With regard to tracking power, Nelson Urban load routinely exceeds the generation limits of the Bonnington Power Plant requiring the purchase of power from Fortis BC. This is outlined in Table 6 of the COSA (November 2020) provided in Appendix 8-1 of the application. Table 6 shows 29.2% of purchased power is allocated to Nelson Hydro’s urban customers. The basis for this allocation is the feeder loading study (see response to IR 1-12.1) and can be tracked using feeder loading.

[On page 56 of the Application, Nelson Hydro states:](#)

[Finally, it is worth noting that a significant number of Rural customers are served directly from FortisBC’s transmission lines on the Northshore through the City’s Coffee Creek substation. Therefore, for these customers, the purchased energy is not “pooled and indistinguishable once it enters that distribution system.” Currently, Nelson Hydro can also supply these customers through the City’s transmission lines in the event of loss of supply from FortisBC. It would also be possible to interconnect to the FortisBC transmission at the Granite Point substation which serves Southshore customers to achieve the same result – namely the ability to ensure that the purchased power is kept segregated from the utility’s own generated power. However, there](#)

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are reliability advantages to serving Rural and Urban customers under the current configurations and multiple supply points that otherwise would be lost if the Commission required Nelson Hydro to separate connection points to physically track electrons between purchases from FortisBC and the City’s self generation.

37.5 Please provide how many Rural customers are served directly from FBC transmission lines from the Coffee Creek substation.

RESPONSE: The number of Rural customers on the Coffee Creek (Eastern) side of the utility’s normally open points at Redfish and Harrop/Procter Road is 1,295.

37.6 Please provide how many Rural customers can be connected with the Granite Point Substation and the costs associated of this, such as any additional infrastructure that may be required from Nelson Hydro and FBC and the length of time the transition would require.

RESPONSE: Granite Terminal is currently not capable of servicing customers directly as it is a Transmission Switching Station (60 kV) (i.e. transmission voltage only). In order to serve Rural customers, the terminal station would need to be redeveloped with 60 kV / 25 kV transformation, switching capability (Circuit Breakers & Disconnect Switches), Protection and Control/Metering and to increase the station area/footprint to allow for adequate space. It is estimated that this work would require 2 years and cost approximately \$5 million. If this work were to be completed, the number of Rural customers that could be connected with the Substation is those Rural customers in the South Shore sub-service area, which totals approximately 1,300 customers.

38.0 Reference: **OTHER POLICIES FOR APPROVAL**
Exhibit B-1, Section 7.3, pp. 56; Appendix 7-3, pp. 2–3
Debt (Non-Municipal) Policy

On page 56, Nelson Hydro states:

The Debt (Non-municipal) Policy addresses the amount of debt financing that Nelson Hydro may undertake in relation to the Rural portion of the utility and also sets out the procedure used to determine the level of debt financing that is appropriate. The policy reflects direction that has been provided to Nelson Hydro by the Commission and reflects the municipal legislation applicable to the utility.

Appendix 7-3 provides the following noted procedural steps in arriving at the Nelson Hydro’s debt to equity range:

1. A 10 year capital renewal plan is developed for all proposed City asset additions, including those for Nelson Hydro...

5. The 5 year financial bylaw and the electrical utility rate bylaws are presented to Council for first three readings...

8. Operating and capital renewal plans are provided to the BCUC as required. It should be noted that the process to approve long-term borrowing will require the BCUC to approve these capital projects and funding through borrowing at least a year in advance of the project delivery...

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14. Staff receives approval from the BCUC and Council on the following options:

- a. Defer the capital projects to a future year
- b. Fund through short-term borrowing
- c. Fund through equity

38.1 Please discuss whether Nelson Hydro would file an application under section 45 of the *Utilities Commission Act* (UCA) for any future capital projects.

RESPONSE: Yes, if applicable, Nelson Hydro would file an application for a Certificate of Public Convenience and Necessity for future capital projects as required pursuant to section 45 of the UCA and Commission Order G-20-15.

38.1.1 Please clarify whether an application would be filed when the capital project relates to expand the plant (in the urban area) versus extending transmission lines outside municipal boundaries (in the rural area).

RESPONSE: Nelson Hydro would file an application as required pursuant to Section 45 of the UCA. Certain capital projects that are within the Urban area and do not impact service in the Rural area may not require a CPCN. If and when Nelson Hydro is unsure of whether a CPCN is required, it would seek legal counsel and/or inquire with the Commission.

38.2 Please explain the purpose of the BCUC approving the Debt (Non-municipal) policy and why it is requested.

RESPONSE: Please see response to BCUC IR-36.4.

38.2.1 Please explain how the Debt (non-municipal) policy relates to section 59 to 61 of the UCA.

RESPONSE: The Debt (non-municipal) Policy relates to the utility’s debt to equity ratio, which in turn relates to the manner in which the utility’s return on equity is calculated, which impacts rate setting. Accordingly, the Debt (non-municipal) Policy is related to Section 59(5)(a) & (b) and Section 60(a) of the UCA as it relates to setting of fair and reasonable rates and a fair return for the utility.

Although this relation may be somewhat tangential to sections 59 to 61 of the UCA, the Policy was developed in the spirit of transparency and to assist in the setting of fair and just rates.

38.2.2 Please clarify whether Nelson Hydro will seek approval under section 50 of the UCA when it requires to raise debt.

RESPONSE: Section 50(8) of the UCA specifically provides that “a municipality is not a utility for the purposes of this section.” Debt required by Nelson Hydro would be borrowed by the City of Nelson and accordingly Section 50 of the UCA does not apply to any borrowing by the City of Nelson (which is how debt would be raised for Nelson Hydro).

As set out in the Debt (non-municipal) Policy (Paragraph 11), if long-term borrowing is required to fund capital projects, the City is required to obtain electoral approval or go through an alternative approval process as set out in Section 180 of the Community Charter.

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38.3 If policy approval is required, please explain if the procedural steps listed in the policy is currently in process and if so, at what step. Please include whether a five-year financial bylaw has been completed.

RESPONSE: Please see Response to IR 1-36-4 with regard to policy approval. With regard to the procedural steps, Council has approved the Nelson Hydro budget for 2021 and adopted the Nelson Hydro (Urban) rates bylaw. The Five-Year Financial Plan bylaw for 2021-2024 has not been adopted at this time.

38.4 If policy approval is required, please explain whether there is any capital spending expected for the rural area for the next five years and how does Nelson Hydro expect to fund these projects.

RESPONSE: Please see Response to IR 36-4 with regard to policy approval. With regard to anticipated capital spending please see GRI Application, Response to BCUC IR 1-9.2.1 (available at https://www.bcuc.com/Documents/Proceedings/2021/DOC_61134_B-3-Nelson-Hydro-response-to-BCUC-IR-No1.pdf). Funding will be drawn from the capital reserve fund or if necessary through long term borrowing.

**39.0 Reference: OTHER POLICIES FOR APPROVAL
Exhibit B-1, Section 4.4.2.2, p. 38: Section 4.4.2.3, p. 40: Section 7.4, p. 56
Deferral Account (Non-Municipal) Policy**

On page 38, Nelson Hydro states:

With the implementation of PSAB, municipalities like the City of Nelson were forced to adopt more sophisticated accounting methods. As a result, the City now has the capability to implement a true cost of service model for Nelson Hydro in a cost-effective manner that can be used to accurately calculate the Rural rate to reflect the higher cost of service associated with that service area.

On page 40, Nelson Hydro states:

In adopting a standard cost of service approach for the Rural part of the utility, using rates to fund capital expenditures is not appropriate as regulated ratepayers pay a return on equity to recognize that the shareholder (i.e. the City) has funded those capital assets. It would also put unnecessary rate pressure on Rural rates. The use of a deferral account is the appropriate tool to hold any variance in operating income and surpluses less any deficits for the Rural portion of the utility.

On page 56, Nelson Hydro states:

The Deferral Accounts (Non-municipal) Policy seeks to formalize the use of deferral accounts to account for the difference between budgeted expenditures and revenues and actuals in the Rural service area...This is an alternative to the use of capital reserves – which, ..., are not appropriate for the Rural portion of the utility, as the City would be making a return on assets paid for by rural ratepayers who are not also shareholders.

39.1 Please explain the purpose of the BCUC approving the Deferral Account (Non-municipal) policy

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and why it is requested.

RESPONSE: Please see response to BCUC IR 1-36.4.

39.2 Please confirm, or explain otherwise, that the Public Sector Accounting Board (PSAB) allows Nelson Hydro to account for deferral accounts.

RESPONSE: For the purposes of preparing annual audited consolidated financial statements for the City of Nelson, deferral accounts would not be incorporated in those statements under PSAB standards. However, for specific reporting for Nelson Hydro and rate setting purposes, a modified reporting structure that includes the use of deferral accounts could be utilized.

39.3 Please explain whether the expenditures that are requested for deferral account treatment are controllable or uncontrollable from management’s perspective.

RESPONSE: Please see response to BCUC IR 1-36.4. Given this response, Nelson Hydro does not believe it appropriate to provide the requested details at this time.

39.4 Please clarify whether Nelson Hydro is requesting approval of a specific deferral account. If so, please specify the details of each deferral account proposed including an explanation of which expenses Nelson Hydro is seeking deferral account treatment for.

RESPONSE: Please see response to BCUC IR 1-36.4. Given this response, Nelson Hydro does not believe it appropriate to provide the requested details at this time.

39.4.1 Please provide the amortization period Nelson Hydro would use to recover amounts within the deferral account.

RESPONSE: Please see response to BCUC IR 1-36.4. Given this response, Nelson Hydro does not believe it appropriate to provide the requested details at this time.

39.4.2 Please explain whether Nelson Hydro would seek to recover carrying costs on these deferral accounts and what interest rate would be used to calculate such costs.

RESPONSE: Please see response to BCUC IR 1-36.4. Given this response, Nelson Hydro does not believe it appropriate to provide the requested details at this time.

39.5 If policy approval is required or a specific deferral account is requested, please explain how Nelson Hydro plans to recover/refund amounts included in the deferral accounts. Please discuss whether a general rate increase/decrease or rate rider would be used.

RESPONSE: Please see response to BCUC IR 1-36.4. Given this response, Nelson Hydro does not believe it appropriate to provide the requested details at this time.

E. COST OF CAPITAL

40.0 Reference: Annual Return Exhibit B-1, Section 6.2, p. 48; Appendix 6-1, p. 6; BCUC Generic Cost of Capital (GCO) Proceeding (Stage 1) Decision and Order G-75-13 dated May 10, 2013, pp. 96, 100

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Credit Rating

On page 48, Nelson Hydro states:

Assessment of Nelson Hydro’s Credit Rating. Nelson Hydro is not a stand-alone entity; rather, it is a department of the City of Nelson. As such, Nelson Hydro does not have, and would not be able to access, a third-party credit rating. The Report explains that Nelson Hydro has very little business or financial risk and further notes that “Nelson Hydro has an exceptionally strong capital structure (debt:equity ratio), effectively no currency or interest rate risk, has strong financial policies and oversight, has excellent liquidity (little interest obligations, good dividend paying ability) and strong management and governance (including transparently elected representatives of the shareholder).” The Report concludes that although Nelson Hydro cannot be rated by an independent ratings agency, it would qualify for an excellent credit rating and its risk profile is “likely to be very good to excellent.”¹⁴⁵

In footnote 145, Nelson Hydro states:

Notably if Nelson Hydro were a standalone utility the risk profile would likely be significantly diminished.

Pages 96 and 100 of the 2013 GCOC Stage 1 Decision explains the Stand-Alone Principle stipulates that the determination of a small size utility’s ROE and capital structure must be considered on an individual and independent basis. If the small utility is owned by a larger parent company, this relationship should have no impact on cost of capital determinations.

40.1 Please clarify whether Nelson Hydro is owned by the City of Nelson or is a department of the City of Nelson.

RESPONSE: “Nelson Hydro” is a department of the City of Nelson. All of the assets of the utility are owned by the City of Nelson.

40.2 Please explain the credit rating that Nelson Hydro would have if it was as a standalone utility and not a part of the City of Nelson.

RESPONSE: As noted in the InterGroup report “Nelson Hydro Appropriate Level of ROE” (Appendix 6-1 to the COSA & RDA), in Section 2.0, it is expected that Nelson Hydro would have an excellent standalone credit rating at the present time (in relation to its size) because it has basically no debt and has very favourable credit characteristics (including the fact that its owner is also the body that sets most of its power rates). For Nelson Hydro to default on debt, it would not only need to run into financial difficulty, which would be relatively unlikely given the service it provides and the fact it has almost no debt, but it would also have to have the Nelson City Council reject raising rates and instead let the utility fail financially. The scenario is complicated and hard to fathom, and that is part of why the standalone principle is difficult to apply in this situation.

More importantly, however, the standalone principle in respect of BCUC regulation would likely apply not to the entire Nelson Hydro entity, but only to the portion regulated by the BCUC (the Rural area). The report notes that the Rural area would in fact have “little to no financial integrity” as it operates at a substantial net loss annually compared to a normal utility revenue requirement. This is why the present application is seeking to address the financial integrity of the Rural

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operations.

- 40.3 Please explain whether is it reasonable to assess Nelson Hydro as a part of the City of Nelson or if it would be more appropriate for Nelson Hydro’s risk profile to only reflect it as a standalone utility in the context of this Application.

RESPONSE: It is not important to make this determination as Nelson Hydro is not proposing a return on equity based on any special risk premium. Nelson Hydro is proposing to adopt the lowest risk premium used by the BCUC (0.5%) for operations of similar size and scale, namely FortisBC Energy (Whistler) Inc. and PMG (NE)-FSJ-DC. Any lower, and Nelson Hydro would be treated equivalent to FortisBC (0.4%) which is clearly of no comparability, given FortisBC is an order of magnitude larger than Nelson Hydro with significant added benefits of load diversity, etc.

- 40.4 Please discuss whether the City of Nelson could be considered the “parent company” of Nelson Hydro.

RESPONSE: Please see the response to the BCUC IR 1-40.3.

- 40.5 Please compare the rating of “very good to excellent” to the ratings of a credit agency such as Moody’s, S&P or DBRS.

RESPONSE: Nelson Hydro does not have the ability to complete the full ratings exercise performed by any of the major credit ratings agencies, which consider both factual information as well as company-specific trends, industry-trends and more subjective matters of market confidence.

- 40.5.1 With the same scale, please indicate what Nelson Hydro means by “significantly diminished.”

RESPONSE: Nelson does not have the ability to complete a full ratings assessment. The concept that a truly standalone Nelson Hydro would have a rating that is “significantly diminished” noted in footnote 145 is that if the operations were truly spun-off as their own utility, and acquired a typical utility capital structure (e.g., 60% debt:40% equity) this would significantly increase the leverage, cash flow pressures and liquidity compared to its current condition. It would also remove the accommodating characteristics of having the shareholder being the party that also sets most rates. These factors would reduce the creditworthiness of Nelson Hydro.

Page 6 of Appendix 6-1, InterGroup states:

Financial Risk: The primary consideration in financial risk analysis is cash-flow-to-leverage. As Nelson Hydro uses almost no debt, the utility has an excellent financial risk profile... The only major financial risk faced by the Corporation out of the traditional metrics relates to capital investment (there is little risk tied to working capital). The capital investment pattern over 2011 to 2022 (forecast) can vary from \$1.3 million below the mean (mean is \$2.8 million) to \$1.4 million above. This range of capital spending is within the capital reserve annual transfers each year and is largely managed without recourse to debt, and is therefore not considered a material risk to the finances of the utility...The credit rating assessments also consider modifiers which Nelson Hydro considers to be strongly positive, with the exception of diversification or products (most revenues come from electricity sales). In particular, Nelson Hydro has an

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exceptionally strong capital structure (debt: equity ratio), effectively no currency or interest rate risk, has strong financial policies and oversight, has excellent liquidity (little interest obligations, good dividend paying ability) and strong management and governance (including transparently elected representatives of the shareholder).

- 40.6 Please provide the financial metrics that InterGroup used to assess the credit rating and risk profile of Nelson Hydro.

RESPONSE: The only metric cited in the preamble is “cash-flow-to-leverage”. The leverage for Nelson Hydro operations alone is \$5.467 million (per Appendix 8-1 of the COSA & RDA). Based on the full Nelson Hydro financial statements for 2019, the cash flow from electricity rates is \$18.7 million, less cash operating costs of \$12.5 million leaves an operating cash surplus of \$6.2 million. Mean capital spending from 2011-2022 (forecast) is \$2.8 million, meaning positive annual cash flow of around \$3.4 million (before dividends and capital reserve transfers). As a ratio to \$5.467 million in debt, this is a favourable cash-flow-to-leverage ratio for a utility.

The debt-to-equity ratio is based solely on the utility metrics. Please see response to the BCUC IR # 41.5 which provides equity ratios for 2015-2019 actual years.

- 40.7 Please clarify whether these metrics were calculated only on Nelson Hydro’s financial statements or on the City of Nelson’s financial statements.

RESPONSE: The metrics in the response to the BCUC IR 1-40.6 are calculated only based on Nelson Hydro’s finances.

- 40.7.1 If metrics were calculated on the City of Nelson’s financial statements, please provide the metrics on based Nelson Hydro’s financial statements only.

RESPONSE: Please see response to the BCUC IR 1-40.7.

On page 6 of Appendix 6-1, InterGroup states:

Nelson Hydro is a department of the City of Nelson and has no opportunity to attract capital from any party other than the City. The City has an obligation and expectation of maintaining a reliable and safe utility and commits capital to fulfill this requirement. As a result, the cost of capital is not the key criteria in “attracting” capital.

- 40.8 Please discuss whether it is possible to assess Nelson Hydro’s ability to attract capital if it was a standalone utility for the Rural area.

RESPONSE: As a standalone utility for the rural area, with the current rates, Nelson Hydro would not be earning any return and would be barely able to cover costs. Even with basically no debt, unless rates were raised there would likely be no lender willing to lend to this standalone operation as there would be little prospect of being paid back.

- 41.0 **Reference:** Annual Return Exhibit B-1, Appendix 6-1, p. 8; Appendix 6-2, p. 1; Nelson Hydro 2017 Rate Application Order G-119-17 with Reasons for Decision, dated August 8, 2017, pp. 8–9

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Capital Structure

On pages 8 to 9 of Order G-119-17, the BCUC states:

The selection of an appropriate deemed capital structure is for the most part a function of the assessed stand-alone business risks of an operation and the financial metrics (allowing for access to capital markets) which result from them. In BC, there has been a longstanding reliance on deemed capital structure. The Commission typically reviews the individual risks of a benchmark utility (currently FEI is the benchmark utility), assesses any change from previous reviews and deems what it considers to be an appropriate capital structure. Other utilities are then measured against this benchmark and differences in risk are reflected in the capital structure, the ROE or both.

On page 8 of Appendix 6-1, InterGroup states:

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. It is reasonable for Nelson Hydro use the existing debt to equity ratio considering the uniqueness of Nelson Hydro as municipality owned utility. *[Emphasis Added]*

On page 1 of Appendix 6-2, Nelson Hydro states:

...the City of Nelson adopts the recommended after tax rate of return of 9.25% as its rate of return to calculate rate of return for the Rural portion of Nelson Hydro.

Council reserves the right to apply to the BCUC to modify the rate of return in the future if it believes the conditions justifying a different rate of return are present.

41.1 Please explain what “properly financed” means and what criteria this is based on.

RESPONSE: The term was meant to reflect that it is actually financed in this manner, and that there are basically no alternative ways that the City could finance the utility.

41.2 Please provide Nelson Hydro’s actual capital structure.

RESPONSE: Please see the response to the BCUC IR 1-41.5.

41.3 Please clarify why “there is little reason to utilize an alternative deemed structure.”

RESPONSE: Due to its status as a department of a municipality, debt borrowing for Nelson Hydro is limited. This was also highlighted in the BCUC Order G-119-17, Appendix A, page 9 (https://www.bcuc.com/Documents/Proceedings/2017/DOC_49757_G-119-17_Nelson-Hydro_2017-Rate-Application_Decision.pdf) the BCUC noted the following:

As stated by Nelson Hydro, an important difference between private and public entities relates to legislative requirements on a municipality incurring debt. As outlined in the Municipal Liabilities Regulation, there are limits to the amount of liabilities or borrowing that a municipality is able to incur. Put simply, a municipality is unable to incur a new liability if the cost of servicing the

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aggregate liabilities of the municipality for the year exceeds 25 percent of the annual revenue calculation of the municipality for the previous year. Thus, due to legislative requirements Nelson Hydro would have limited ability to meet a deemed debt level similar to other utilities. In the Panel’s view, imposing a deemed debt to equity ratio on Nelson Hydro which is similar to other regulated utilities when such a capital structure cannot be achieved would have the potential to unfairly restrict the utility from earning a fair return on its assets. Therefore, the Panel concludes that the application of a debt to equity ratio in accordance with what actually exists is a more fair and reasonable approach than that of reliance on a deemed capital structure.

41.4 [Please discuss implications if the BCUC were to establish a deemed capital structure for Nelson Hydro. Please explain how a deemed capital structure would work given Nelson Hydro’s Urban and Rural lines of business.](#)

RESPONSE: If the BCUC were to use a deemed capital structure for Nelson Hydro’s Rural operations, the premise would be that despite the fact that Nelson Hydro has invested more than 85% of the capital in the form of equity because only less than 15% debt was used, they should or could have found more debt up to something like 50-60% (based on other typical deemed capital structure examples), and as such should not be compensated with an equity return on the 35-45% of rate base that is actually financed by equity. This would be unfair and prejudicial to Nelson Hydro since there is simply no way it could raise that 35-45% of capital from new debt – the Municipal legal and practical restrictions that apply would not allow this to occur.

41.4.1 [If Nelson Hydro is to have a deemed capital structure, what would Nelson Hydro propose? Please justify.](#)

RESPONSE: Please see the response to the BCUC IR 1-41.4.

41.5 [Please provide Nelson Hydro’s return for the past five years with an 85% equity thickness and a 9.25% allowed return on equity. Please compare this return to the dividend payments for the same period.](#)

RESPONSE: This value can only be calculated readily for Nelson Hydro as a whole, not constrained to the Rural portion.

Please see table below that shows estimated ROE at 9.25% compared to dividend amounts for 2017-2021 years [2020 is preliminary and 2021 estimate]. The equity thickness is based on actual/forecast debt amounts. Plant in service for 2021 is estimated based on capital budgets.

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\$000	2017	2018	2019	2020 Preliminary	2021 Illustrative
Total Plant in Service, Year-end	52,048	54,131	58,871	61,786	64,699
Accumulated Amortization	14,251	15,187	16,036	17,220	18,525
Net Book Value, Year-end	37,797	38,945	42,835	44,566	46,175
Mid-year balance	37,120	38,371	40,890	43,701	45,371
Estimated Working Capital Requirements	1,627	1,610	1,643	1,657	1,682
Total Mid-Year Rate Base	38,746	39,981	42,532	45,357	47,053
Mid-Year Debt	6,096	5,788	5,467	5,178	4,926
Equity	32,650	34,193	37,065	40,179	42,127
Return on Equity at 9.25%	3,020	3,163	3,429	3,717	3,897
Dividend	2,700	2,754	2,836	2,836	2,886
Dividend compared to ROE estimate	-320	-409	-593	-881	-1,011
Equity ratio	84.3%	85.5%	87.1%	88.6%	89.5%

42.0 Reference: [Annual Return Exhibit B-1, Section 2.3, p. 7; Appendix 6-1, p. 9; Appendix 7-3, p. 2; Appendix 8-1, p. 6 Nelson Hydro 2021 General Rate Increase Application, Exhibit B-1, Section 5.3.1, p. 13 and Section 6.1, p. 18 Dividend and Return on Equity \(ROE\)](#)

On page 7 of the Application, Nelson Hydro states that it seeks BCUC approval of the following:

- Proposed return on equity for the Rural service area at 9.25% to be used for future rate applications as detailed in Section 6 of the Application.

On page 13 of the Nelson Hydro 2021 General Rate Increase Application, Nelson Hydro states:

For 2021, this Application includes a proposed dividend at \$2.885 million which is about 1.7 percent higher than the approved dividend amount for 2019 at \$2.836 million (an annual average increase of 0.87 percent from 2019 to 2021)

On page 2 of Appendix 7-3, Nelson Hydro states:

The utility is properly financed by a capital structure roughly 85% equity and 15% debt.

42.1 [In order to allow Nelson Hydro a reasonable opportunity to earn a fair return on its invested capital, please provide the pros and cons of using the existing dividend approach versus an allowed ROE and deemed capital structure approach.](#)

RESPONSE: In actual practice, the management of Nelson Hydro’s capital must be done on the basis of municipal financing accounting procedures. The only question that is at issue is the approach used to apply a cost rate to the capital used to finance the Rural portion of the rate base, for the purposes of setting rates. For reference, this rate base is approximately \$15 million (values from Table 4 of Appendix 8-1 of the COSA & RDA).

The question appears to prescribe two approaches, neither of which reflect Nelson Hydro’s

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application:

- 1) Use of the existing dividend approach (without mentioning or noting that the existing approach as applied in the Urban utility, requires not just a dividend but also the funding of capital reserves).
- 2) Use a ROE approach with a deemed capital structure.

Nelson Hydro is proposing use of a ROE approach with an actual capital structure. The proposed approach applies a cost rate of 4.1% to the proportion financed by debt (\$2.049 million, or 13.6%) and the lowest reasonable fair return on equity (9.25% return - which is effectively a 6.15% return at a 95% RCC) (see Response to BCUC IR 1-40.3) to the remaining \$12.978 million in rate base. The pros of this approach are that it is consistent with the findings in the BCUC Decision G-119-17 that “Therefore, the Panel concludes that the application of a debt to equity ratio in accordance with what actually exists is a more fair and reasonable approach than that of reliance on a deemed capital structure.” Regulatory consistency and certainty are valuable principles for regulated utilities and Nelson Hydro sees no reason for the BCUC to go back on this determination. Another pro is that the approach provides Nelson Hydro with a fair return on its actual investment in the Rural utility. It reduces rate pressure on Rural ratepayers, as it is the City or Urban customer that funds capital. This eliminates any confusion amongst Rural customers that they are owners or have ownership rights in any City electric utility assets; they are treated the same as if they were FortisBC customers. A con is that the approach puts pressure on Urban rates to generate cash to finance capital investment and replacement (in the form of reserves). This model is only sustainable, by virtue, of Nelson Hydro being able to continue to supply its low-cost generation to Urban customers, which keep rates reasonable. If this changed, this model would not be sustainable and the City would have to look at alternatives, such as divesting of its Rural assets and customers.

As to the two options prescribed in the question, an approach based on deemed capital structure noted as #2 in the above question (presuming the capital structure “deemed” is materially different than the actual which is approximately 13%:87% for 2019) results in the costs calculated not matching the costs Nelson Hydro actually incurs, and is required to incur, to finance the utility. See the response to BCUC IR 1-41.4. Nelson Hydro can see no apparent pros to this approach.

As to the use of the dividend approach (#1 above), this approach can only be applied with a proper capital reserve transfer. A pro would be that it may on paper seem more equitable and may appease some rural residents. Preliminary analysis indicates that approach would result in the same rate increase required under a true COS model, so Rural customer acceptance of this approach may not be any higher. The main con, is it creates confusion between the owner of the assets and Rural customers. It also creates a situation where Rural customers, who are not owners, paying for capital and then the City earning a return on these assets funded by those same customers. This could be considered unfair. An additional con is that there are fewer benchmarks for the BCUC to use to assess reasonableness, as other regulated utilities do not generally use this approach. If this approach resulted in value being passed from City ratepayer/taxpayers to Rural customers this would not be consistent with the Community Charter. In conclusion, since this approach results in similar rate increases and is inconsistent with normal regulated approaches it is not recommended.

42.1.1 [Please discuss any other alternative methods that may provide a reasonable opportunity for Nelson Hydro to earn a fair return on its invested capital.](#)

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RESPONSE: Please see response to the BCUC IR 1-42.1.

42.2 [Please clarify what Nelson Hydro mean by the “\[p\]roposed return on equity for the Rural service area at 9.25% to be used for future rate applications.”](#)

RESPONSE: Nelson Hydro has proposed that a figure of 9.25% be the utility’s approved rate of return (return on equity). If the Commission approves this figure to be used in future rate applications, Nelson Hydro would use this figure in calculating its annual return from the Rural service area. Having this approval in place for future applications would lead to a more efficient review of Nelson Hydro’s annual rate applications. As stated in the COSA & RDA, Nelson Hydro would apply to modify this figure if the conditions warrant it at a future time.

42.2.1 [Since the 5.72% proposed rate adjustments for September 1 of each year in 2021, 2022, and 2023 include the 9.25% ROE \(if approved\), please confirm that any revenue requirements application that covers a test period until August 31, 2024 would not include any returns in the rate change calculations. If not confirmed, please explain.](#)

RESPONSE: The return on equity being targeted over the noted period is 9.25%. Nelson Hydro will not achieve this return on the Rural assets until the year when the full phase-in is complete (and even then, only if complementary adjustments are also done for changes to annual cost levels). Over the period Nelson Hydro will significantly under-earn this return since the increases are being phased in. Only by calendar year 2024 will Nelson have a chance to earn a full fair return – at that time refinements to the ROE to reflect updated capital markets may be merited.

[On page 6 of Appendix 8-1, InterGroup provides the following effective ROE calculation for 2019:](#)

Table 4: Effective ROE for 2019 (\$000)¹⁴

	Urban	Rural	Total
Net Book Value	25,565	14,325	40,890
Working Capital	940	703	1,643
Mid-Year Rate Base	26,505	15,027	42,532
Mid-Year Long-term Debt	3,418	2,049	5,467
Equity Portion of Rate Base	23,087	12,978	37,065
Rate Revenues	11,089	7,592	18,681
O&M Expenses - direct allocation	936	1,218	2,154
<i>share</i>	43%	57%	
Fortis BC Power Purchase Costs	2,225	4,411	6,636
<i>share</i>	34%	66%	
City of Nelson Purchases [265 cfs]	658	0	658
	100%	0%	
Nelson Hydro Purchases [surplus energy]	-396	396	0
O&M Expenses - share of common	1,743	1,265	3,009
<i>share</i>	58%	42%	
Amortization Expenses	789	421	1,211
<i>share</i>	65%	35%	
Interest Expense	140	84	225
Total Expenses	6,096	7,796	13,892
Capital Reserve Transfer	2,877	0	2,877
ROE after Capital Reserve Transfer	2,115	-204	1,912
ROE % after Capital Reserve Transfer	9.2%	-1.6%	5.2%

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- 42.3 Please clarify whether Nelson Hydro is proposing that the Urban service area will pay a dividend and the Rural service area will have an allowed return on equity, or is Nelson Hydro proposing that only an allowed return on equity is provided for the whole utility and a dividend will no longer be paid.

RESPONSE: Nelson Hydro is proposing that the Rural areas have rates set based on a ROE approach, so as to eventually earn a fair return on equity (after the phase-in).

The Urban areas will have their rates set by Council using whatever method Council considers appropriate. At the present time, that approach has focused on the level needed to responsibly fund the utility, pay for capital reinvestment, build up appropriate capital reserves, and to pay a nominal return to the shareholder. Table 4 is not used to set Urban rates – but it does show that the shareholder is able to earn approximately \$2.1 million from Urban operations based on these 2019 numbers, which is equivalent to an approximately 9.2% ROE (outside of capital reserve transfers).

- 42.4 Given the utility is financed by a capital structure of 85% equity and 15% debt, please explain why the equity portion of rate base is approximately 87% of mid-year rate base.

RESPONSE: The equity ratio is based on actual debt balances. Please see response to the BCUC IR 1-41.5 which provides equity ratios for 2015-2019 actual years. Please see also the response to the BCUC IR 1-41.3.

- 42.5 Please explain why ROE was calculated after the Capital Reserve Transfer.

RESPONSE: The Capital Reserve Transfer is a required commitment to be funded out of utility rates, to provide cash for capital reinvestment and renewal. Nelson Hydro has restricted borrowing capacity to make those investments, and so has no other source of cash to keep the utility operating. As such, this is not any form of cash delivered to the owner as a return. The owner's return only arises after the reserves are funded. This is the reason the return is calculated in the noted manner. The Community Charter specifically allows municipalities to develop reserves and use these to fund capital. This the standard way the municipalities fund capital renewal in all of their utilities; the approach included in the COSA for the Urban side of the utility is consistent with this.

- 43.0 **Reference:** [Annual Return Exhibit B-1, Section 6.2, p. 49; Appendix 6-1, pp. 8–9, 11–12; BCUC Generic Cost of Capital Proceeding \(Stage 2\) Decision and Order G-47-14 dated March 25, 2014, p. 124 Risk Premium](#)

On pages 8 and 9 of Appendix 6-1, InterGroup states:

It is difficult to use the BCUC's GCOC Stage 2 risk premium awards as a proxy for Nelson Hydro. During the review of Nelson Hydro's 2017 Rate Application the BCUC used Fortis BC as a proxy...

Table 3.8 included on page 121 of the BCUC GCOC Stage 2 decision shows that Nelson Hydro in size is closer to PNG (N.E.) -FSJ/DC with \$49 million rate base and 18 thousand customers and FortisBC Energy (Whistler) Inc. with \$42 million rate base and 3 thousand customers. The BCUC approved risk premium of 75 basis points for FortisBC Energy (Whistler) Inc. and 50 basis points

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for PNG (N.E.) - FSJ/DC...

On page 124 of the Stage 2 Generic Cost of Capital (GCOC) Decision and Order G-41-14, the BCUC determined that the common equity ratio for the Stream B TES Utilities should be set at 42.5% and that the equity risk premium should be either 75 or 100 basis points, depending on the specific project concerned.

43.1 Please discuss whether Nelson Hydro explored comparisons to thermal energy systems' default return on equity and capital structure discussed in BCUC GCOC Stage 2.

RESPONSE: No. But Nelson Hydro notes these utilities have higher risk premiums, so had a valid comparison been done, it is possible Nelson Hydro would be seeking a higher ROE today. This is not what is contained in the Nelson Hydro proposals.

Pages 11 to 12 of Appendix 6-1 provide the following risk matrix:

Risk Matrix included in GCOC Stage 1 Review²⁸

Risk Factor	Fortis Energy Inc. – Benchmark Utility	Nelson Hydro
Capital Structure [debt/equity ratio]	60/40	15/85
Equity Risk Premium	N/A	0.50%-0.75%
Technology Risk/system performance risk associated with chosen technology	Natural Gas: proven technology	Electricity: proven technology
Fuel Risk cost and availability	Natural Gas: Low-medium	Electricity: Low-medium, due to hydro asset ownership on which Nelson bears own
Customer Base (e.g., diversity, certainty, growing, declining)	Established and diverse customer base, but slow growth	Established, however, residential and commercial only, slow growth
Default risk of customers	Minimal	Minimal [higher in rural area]
Property Development Risk	Medium to high: there are competing energy options	Low in Urban area; medium to high in Rural area
Developer/customer connection risk	Medium to high: due to building stock changes and competitive energy sources	Low in Urban area; medium to high in Rural area
Load Forecast Uncertainty	Minimal in the short-term, as mature utility with deferral account; somewhat higher in long-term	Minimal
Utility Size	Large and mature utility	Small
Initial construction cost risk	Depends on the nature of individual project	Depends on the nature of individual project

Future construction cost risk	Depends on the nature of individual project	Depends on the nature of individual project. Potentially high for hydro assets over the long term.
Operating cost risk	Minimal as revenue requirement application to recover costs	Minimal
Public Acceptance risk	Medium as natural gas is an established and widely used technology, but public perceives it as less than clean	Minimal [mostly supplied by hydraulic generation owned by the City of Nelson plus power purchases]
Fixed/Variable rate design	15% fixed/85% variable	7% fixed/93% variable
Levelized approach to rates	No	No
Financial risk	Low-medium: appropriate standalone financial structure for capital markets	Low [as part of City of Nelson]
Competitive challenges	Competitive with electricity and competition from alternative energy providers	Low
Provincial climate change and energy policies	Encourage reduction in fossil fuels usage to reduce GHG emissions and lower energy use	Low [mostly supplied by hydraulic generation owned by the City of Nelson plus power purchases]
Regulatory uncertainty	Low to medium: uncertainty exists for service offerings within the natural gas class of service	Low to medium [Rural service area]
Business development risk	Minimal	Low to medium [Rural service area with wildfire risk & storm damage risk]

On page 49 of the Application, Nelson Hydro states:

InterGroup’s analysis concluded that an appropriate after-tax return on equity for the nonmunicipal portion of Nelson Hydro would be between 9.25% and 9.50%. This is based on the Commission approved 8.75% benchmark return on equity and the basis point analysis as described above (i.e. a risk premium between 50 basis points and 75 basis points).

On page 8 of Appendix 6-1, InterGroup states: “Nelson Hydro does not pay income tax.”

43.2 Please clarify whether Nelson Hydro is requesting a 9.25% allowed ROE as a fixed value, or an allowed ROE based on a risk premium of 50 bps above the benchmark which is currently set at 8.75%.

RESPONSE: Due to the phase-in nature of the proposal which will take 3 years if approved as proposed, Nelson Hydro is seeking confirmation of a ROE target of 9.25%. This is set out in Appendix 6-2 of the COSA & RDA. As noted in that policy, should conditions change in future Nelson Hydro may apply for approval of a different ROE at that time.

43.3 Please explain whether the BCUC should assess Nelson Hydro’s risk factors based on the utility as a whole (i.e. both Rural and Urban), or assess risks factors only from the Rural business perspective?

RESPONSE: In Nelson Hydro’s view, the lowest risk situation is viewing the utility as a whole, and even in this configuration the proposed 0.5% premium is merited. As a clear point of reference, note that FortisBC, which is an order of magnitude larger and therefore of much lower scale risk (as well as many other factors that make it’s risk lower than Nelson Hydro), still earns a risk premium of 0.4%.

The table indicates Nelson Hydro’s risk profile as an entire utility, not just the rural portion.

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Were an assessment done of just the rural portion, the risk premium would be expected to be well above 0.5%, due to the small scale, the fact that the Rural does not have the same reliance on the stable cost provided by hydro generation, added regulatory uncertainty (external regulator), and less load diversity.

43.3.1 If Nelson Hydro views that the BCUC should assess risk factors that only pertain to Nelson Hydro’s Rural side of business, please identify the risk factors that can be clearly split between Urban and Rural service and provide an assessment. For those risk factors that cannot be split, how would Nelson Hydro assess them?

RESPONSE: Please see response to the BCUC IR 1-43.3.

43.3.2 If Nelson Hydro views that the BCUC should assess risk factors based on the utility as a whole, please confirm that the risk matrix provided above reflects such an assessment. If not confirmed, please provide additional information.

RESPONSE: Confirmed. Factors are specified in cases where the facts diverge between Urban and Rural.

43.4 Please explain how Nelson Hydro concluded and quantified that the proposed 9.25% allowed ROE or 50 bps risk premium above the benchmark is fair and reasonable based on the above risk factors.

RESPONSE: Please see Appendix 6-1 of the COSA & RDA. In short, Nelson Hydro is most similar to FortisBC Energy (Whistler) Inc. and PNG (N.E.) – FSJ/DE (though in fact many factors would indicate Nelson Hydro is riskier than these utilities). The BCUC approved risk premiums of 75 basis points for FortisBC Energy (Whistler) Inc. and 50 basis points for PNG (N.E.) - FSJ/DC.

43.5 Given that Nelson Hydro does not pay income tax, please explain from a risk perspective, whether Nelson Hydro have a competitive advantage over the benchmark.

RESPONSE: No. The setting of a revenue requirement that includes income tax leads to less risk for the shareholder than one that does not include income tax. This is because, as an example, if load drops so as to reduce revenues by \$100, in the case of Nelson Hydro, this \$100 goes straight to the utility revenue as a net adverse variance. In the case of a taxable utility, only part of the \$100 becomes a negative effect on the utility, while a portion becomes a negative effect on the taxes to be paid.

43.6 On January 18, 2021, the BCUC issued a notice initiating a Generic Cost of Capital (GCOC) proceeding⁶. Please discuss the pros and cons of separating out the Cost of Capital component in this Application pending the GCOC review.

RESPONSE: Nelson Hydro does not view that setting rates for 4,500 Rural customers, where the current rates are patently below cost, is a matter that requires more delay or more regulatory process. If the BCUC sees fit to include Nelson Hydro in the GCOC review, Nelson Hydro would request that the overwhelming evidence that a risk premium of at least 50% is merited be taken into consideration in this current proceeding so that rates can be set in a timely way – whatever GCOC conclusions

⁶ BCUC Generic Cost of Capital proceeding, <https://www.bcuc.com/ApplicationView.aspx?ApplicationId=849>

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arise at a later date can affect future applications.

43.6.1 If the BCUC in this proceeding determines that the Cost of Capital component should be separated out, please explain and quantify whether this would have an impact on the proposed rate adjustment for the Rural residential class of customers.

RESPONSE: Nelson Hydro would propose to accept the current 9.25% ROE and the same rate proposals would be sought today. It is at most in the latter stages of the phase-in that small adjustments may be needed.

44.0 Reference: [Annual Return Exhibit B-1, Appendix 6-1, p. 8; Appendix 6-2, p. 1, section 9.2, pp. 61–62 Nelson Hydro 2021 General Rate Increase Application, p. 18 Return on Equity](#)

On page 1 of Appendix 6-2, Nelson Hydro states:

the City of Nelson adopts the recommended after-tax rate of return of 9.25% as its rate of return to calculate rate of return for the Rural portion of Nelson Hydro.

On page 8 of Appendix 6-1, Intergroup states:

The BCUC approved benchmark ROE is 8.75% after-tax, which means that rates for the benchmark utility include 11.99% return on equity. This is consistent with the filing from Fortis BC Energy Inc., the GCOC benchmark utility, that 8.75% benchmark ROE is after-tax ROE that translates to 11.99% before tax ROE. Nelson Hydro does not pay income tax, and the benefits of this status support and enhance the ability to operate municipal services. In the electricity market in the region, customers pay rates that include income tax. Nelson Hydro rural customers should be treated no different. As a result, the low-risk benchmark ROE for Nelson Hydro could be 11.99%. [Emphasis added]

In the Nelson Hydro 2021 General Rate Increase Application, Table 6-1 on page 18 provides the Nelson Hydro 2021 Budget Forecast as follows:

Table 6-1: Nelson Hydro 2021 Budget Forecast

<u>2021 Budget Forecast</u>			
Operating Expenses			
Power Purchases (with 0% increase in Fortis rates)	(a)	6,711,933	
Operating Expenses		5,514,200	
Debt Servicing		459,614	
		<u>12,685,747</u>	
Transfers			
Dividend		2,885,600	
Water License Reserve		693,835	
Capital Reserve		3,254,278	
		<u>6,833,713</u>	
Less: Other revenue		(712,100)	
Revenue required from rates	(b)	18,807,360	
2021 Revenue forecast (with 0% increase)	(c)	18,670,000	
Increase required	(b)-(c)	137,360	0.74%
Effect of 4.36% increase in power purchase costs	(a) x 4.36%	292,640	1.57%
Annual increase required		430,000	2.30%
Rate increase required as of April 1, 2021			3.32%

- 44.1 Using a similar table format as above, please demonstrate how the proposed 9.25% ROE will be reflected in future general rate change applications. Please include two illustrative examples for the 2021 General Rate Increase application and the 2019 Rural Rate Application. Please include in the calculation, the rate base that the equity portion is derived from. If applicable, clearly show any difference in treatment between Rural and Urban customers.

RESPONSE: Please see response to BCUC IR 1-41.5 which shows calculation of rate base and return on equity for the last five-year actuals as well as estimates for 2020 and 2021. Under the rate base/return model, the dividend will be replaced with ROE and amortization expense will be added. The capital reserve transfer will be reflected for Urban customer class.

- 44.2 Please clarify whether Nelson Hydro is seeking approval of an allowed ROE of 9.25% or an allowed ROE of 12.67%⁷ going forward to be applied in future rate applications. What is the appropriate allowed ROE for the BCUC to approve for Nelson Hydro – allowed ROE after tax or before tax? Please explain why.

RESPONSE: 9.25%. Please also see the response to the BCUC IR 1-44.4.

⁷ Calculation: $9.25\% / (1 - 0.27) = 12.67\%$, where the corporate income tax rate is 27%.

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On page 61 of the Application, Nelson Hydro noted the Bonbright Principle, including:

- Principle 1: Recovering the Cost of Service; the aggregate of all customer rates and revenues must be sufficient to recover the utility’s total cost of service

44.3 Please discuss whether Nelson Hydro views that a tax paying entity such as FortisBC Energy Inc. (FEI) would satisfy Bonbright’s Principle 1 in that FEI has to recover sufficient revenue, including any income taxes paid, to recover the utility’s cost of service.

RESPONSE: Yes. Income taxes, where relevant, are a component of the costs faced by a utility to provide service and therefore has to be recovered from the ratepayers. Please see response to the BCUC IR No. 1-44.4 that clarifies the statement in the preamble. Please also see response to the BCUC IR No. 1-43.5 that discusses the differences in revenue risks.

44.4 Regarding the underlined statement by InterGroup in Appendix 6-1, please explain why “Nelson Hydro rural customers should be treated no different” which appears to suggest that Rural customers should pay electricity rates as if Nelson Hydro pays income tax. How would InterGroup’s statement meet Bonbright’s Principle 1 in that Nelson Hydro may be provided the opportunity to collect excess revenue in relation to recover the utility’s cost of service?

RESPONSE: The statement reflects a principle that assesses whether ratepayers should benefit when the utility that serves them is non-taxable. This issue has been the subject of debates in BC for some time, as well as in other provinces. For example, Special Direction No.8 to the BCUC (BC Reg 119/2000) required BC Hydro’s returns to include the pre-tax level earned by the most comparable investor-owned energy utility. The cited comment was simply reflecting this principle, while also noting that despite a view that Nelson Hydro ought be entitled to this approach, Nelson Hydro is not at the moment seeking rates reflecting this approach.

Bonbright’s principles are important, but are also internally contradictory and competing and require balance to fully implement. For example, at the moment Nelson Hydro’s Rural areas are not achieving principle #1, as cited, because they are substantially under-earning the Cost of Service. This is the issue that must be addressed as a priority to refinements like considering how to treat notional income tax.

F. OTHER MATTERS

45.0 Reference: **MULTI YEAR RATE PLAN (MRP)**
Exhibit B-1, Section 10, pp. 70–71; Appendix 3-9
BCUC Order G-49-82 dated July 9, 1982
2012 Report on the Inquiry into the Offering of Products and Services in Alternative Energy Solutions and Other New Initiatives (AES Inquiry)⁸
MRP Details and Exemptions

On page 70 of the Application, Nelson Hydro discusses the merits of multi-year rate applications, in response to the BCUC’s decision by Order G-274-19. Nelson Hydro provides the potential benefits (e.g. improve the regulatory process and benefit its customers) and issues (e.g. uncertain power purchase

⁸ The AES Inquiry Report: https://www.bcuc.com/Documents/Decisions/2012/DOC_33023_G-201-12_FEI-AES-Inquiry-Report_WEB.pdf

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costs and compatibility issues between Rural and Urban rate changes) to undertake a multi-year rate plan.

45.1 If Nelson Hydro is directed to provide a specific proposal to implement a multi-year rate plan, please discuss the following factors:

- Timing of the application
- Minimum or maximum test period length
- Review mechanisms, e.g. annual reviews
- Factors that would warrant a full rate application

RESPONSE:

Nelson Hydro understands that a multi-year rate plan could lead to a regulatory efficiency, however, in case of Nelson Hydro there are some concerns that must be addressed. For example, Nelson Hydro purchases a significant portion of its power from Fortis BC and that often times Nelson Hydro must seek rate changes based on the change in the cost of power purchases from this utility. In addition to this the budget for Nelson Hydro is approved by the City of Nelson Council and changes in the approved budget should be reflected in proposed rates. Due to size of the utility, delay of revenue collection for required increases may negatively impact utility' financial well being.

Therefore, Nelson Hydro has not examined the particulars regarding the timing or length of multi-year rate plan. It is possible some annual flow-through mechanism for rate changes driven by changes in costs of this type could help address this problem; however, Nelson Hydro is not in a position to assess if this could fully address the noted issues.

45.1.1 Please discuss the possibility of implementing streamlined applications, including, for example, automatic rate adjustment mechanism if the rate indicate is within a certain limit.

RESPONSE:

Please see the response to BCUC IR-45.1.

On page 71, Nelson Hydro states:

The utility has long recognized that as a small utility subject to both the UCA and municipal legislation, it faces a challenging regulatory environment which can incur significant costs that create rate pressure for its customers. The City sought to find a permanent solution to this matter in 1981 when it applied to be exempt from the UCA. Despite not receiving the exemption, a period of time did follow where the utility appeared to be subject to a form of “lightened” regulation from the Commission. For example, as described in Section 3, there were a number of years in the 1980s, 1990s and early 2000s where Nelson Hydro received rate approvals pursuant to very simple and streamlined rate increase requests.

45.2 Please provide the actual regulatory costs, including both Nelson Hydro’s costs related to regulatory activities and levies paid to the BCUC, on an annual basis since 2010.

RESPONSE:

The following table presents the actual historical expenses for Nelson Hydro on regulatory activities. The external costs represent the actual legal, advisory and BCUC levies paid. The internal costs incorporate staff time on preparing regulatory filings and responses to the utilities commission.

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Year	External costs (\$)	Internal costs (\$)	Total costs (\$)
2010	18,813	13,072	31,885
2011	17,928	13,365	31,293
2012	26,505	13,650	40,155
2013	30,406	13,980	44,386
2014	22,378	14,789	37,167
2015	19,028	15,835	34,863
2016	30,676	17,992	48,668
2017	27,339	20,665	48,004
2018	48,753	38,394	87,147
2019	68,247	72,349	140,595
2020	102,575	107,890	210,465

45.2.1 Please provide the forecast annual regulatory cost for the next five years. Explain the assumptions used for the calculation.

RESPONSE: The following table is a forecast of future regulatory activity costs, both external and internal. External costs are based on historical actuals for what might be considered a proxy for future level of activity, with inflationary increases. Internal costs are estimated through consultation with all staff involved as to their anticipated level of involvement in regulatory activities. It is assumed that Nelson Hydro will continue to be subjected to similar amounts of regulatory scrutiny as it is currently experiencing and will continue to file annual rate applications with the Commission. The 2021 costs are currently predicted to be higher given this COSA & RDA, an application that Nelson Hydro does not expect to file regularly.

Year	External costs (\$)	Internal costs (\$)	Total costs (\$)
2021	80,000	145,884	\$225,884
2022	61,400	66,055	127,455
2023	62,800	67,377	130,177
2024	64,200	68,724	132,924
2025	65,700	70,099	135,799

In Appendix 3-9, Nelson Hydro provides “City of Nelson 1981 Supplemental Submission to Commission in Application for Exemption.” By Order G-49-82 and the accompanying decision, the BCUC denied the Application for Exemption by the City of Nelson and commented on the Rural (i.e. North Shore and South Shore) and City rates system that existed at the time.

In the 2012 AES Inquiry Report, the BCUC outlined two key principles related to the role of regulation, specifically:⁹

- i. Where regulation is required use the least amount of regulation needed to protect the ratepayer; and
- ii. The benefits of regulation should outweigh the costs of regulation.

In the 2012 AES Inquiry Report, the BCUC also provided guidelines related to the above two key

⁹ The AES Inquiry Report, pp. 6–7.

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principles.

- 45.3 Please briefly explain the rationale for the City of Nelson to seek an exemption from the UCA in 1981. In the response, please specify which section(s) of the UCA the City of Nelson was seeking exemption for, and whether the City of Nelson proposed any conditions on which the exemptions would be granted.

RESPONSE: In the City’s 1981 Application for Exemption, it sought an exemption pursuant to Section 103(3) of the UCA for exemption from “Part 3” of the UCA. See Application, Appendix 3-9, p. 17. In 1981, Section 103(3) of the UCA stated as follows:

103. Application of Orders

(3) The Commission may exempt a person from the operation of an order, rule or regulation made under this Act other than under Part 3 for a time the commission consider advisable.

Notably the UCA has undergone a number of revisions since 1981. A copy of the UCA from 1981 is available at: <https://www.bclaws.gov.bc.ca/civix/document/id/91consol15/91consol15/80060>.

Part 3 of the UCA in 1981 was titled “Regulation of Public Utilities” and included, among other things, portions of the UCA that address rate setting and certificates of public convenience and necessity (see Sections 66 and 51 respectively). Accordingly, in 1981 Nelson Hydro had applied for an exemption from the most significant portions of the Commission’s regulatory authority.

As explained in the City’s 1981 Supplemental Submission (attached as Appendix 3-9 to the Application), the City was seeking exemption from regulation because the costs of regulation attributable to the Rural service area were “disproportionate to the revenue generated” in that area (see Appendix 3-9 of the Application, p. 18) and also that the Rural customers could be assured that they would receive fair and just rates pursuant to a number of conditions proposed in the City’s Application for Exemption. In that regard, the City proposed that the exemption from Part 3 of the UCA be granted under a set of conditions, as follows:

- “The City will undertake to set electricity rates to North Shore customers on the basis of the cost of purchased power from West Kootenay Power and Light plus the average cost of service and a rate of return comparable to the prime lending rate.”
- “City and Rural rates will be set so as to maintain the same historical relationship to one another.” (i.e. the maintenance of the historical rate differential).
- “The City will provide the BCUC annually with information showing rates, costs and revenues for the system as a whole, and will from time to time as tariffs change, provide copies of the pertinent by-laws.”
- The City will endeavor in its tariff structure, to follow BCUC practice and policies.”

See Application, Appendix 3-9, p. 17.

- 45.4 Please discuss what Nelson Hydro would view as “lightened” regulation by the BCUC. Recognizing the principles and guidelines set out in the AES Inquiry Report, please discuss the justification for such “lightened” regulation. Provide a risk assessment for Nelson Hydro and

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[Rural customers and discuss the risk mitigating measures.](#)

RESPONSE: Nelson Hydro’s “lightened” regulation references the type of regulatory scrutiny that was applied to Nelson Hydro from 1981 through 2016. As evidenced by Nelson Hydro’s Rate Applications and respective Commission Orders during that time (attached as Response to BCUC IRs Appendix 1-45.4 are two examples that include the 2009 Rate Application and Commission Order G-20-09 and 2014 Rate Application and Commission Order G-28-14), the utility provided the Commission with very high-level information regarding its proposed rate increases and revenue requirement and was not subjected to a rigorous review process involving information requests and arguments. This allowed the utility to meet its regulatory obligations without the engagement of technical consultants, regulatory lawyers, and also with very limited staff assignments.

This type of regulation is justified and consistent with the principles from the 2012 AES Inquiry Report. The regulatory scrutiny applied to Nelson Hydro in recent years seems to outweigh the benefit that regulation provides to Rural ratepayers – thus indicating that the amount of regulation has become burdensome.

This is because Nelson Hydro is a small municipally-owned utility and only a portion of it is subject to regulation. This unique dynamic has created a complex and unique regulatory situation. As a result, the regulatory costs in terms of external costs (i.e. legal and consultant fees) and internal costs (i.e. staff time) are significant given the need to explain and justify various practices that the Commission may not be entirely familiar with, such as the requirements of relevant municipal legislation. The recent cost of complying with Commission directives, like for example filing a COSA has exponentially grown to a degree that it will ultimately create additional rate pressure on ratepayers. The reality is that the utility does not maintain a regulatory department as other larger utilities might (and to do so would be very costly), but rather draws on existing staff to handle regulatory obligations. Furthermore, the utility’s complexity has generated a significant amount of attention from ratepayers and interveners alike – which further increases costs and draws resources away from the utility’s core function of providing reliable and safe electrical service at competitive rates.

These costs result in material rate pressure that must then be recovered by ratepayers. The cost of this type of regulatory scrutiny does not appear to be justified given that in the modern era Nelson Hydro’s Rural ratepayers have been treated fairly as evidenced by that fact Nelson Hydro’s Rural residential rates have remained very competitive with the province’s other utilities (i.e. Nelson Hydro’s Rural residential rates are more competitive than those of FortisBC and competitive with those of BC Hydro). Accordingly, it appears that the level of regulatory scrutiny being applied to Nelson Hydro is not entirely consistent with the principles laid out in the AES Inquiry Report.

If the Commission were to allow the utility to return to a lightened form of regulation with certain conditions there would be very little risk to the Rural customers. For example, as proposed in 1981 and again the current Application, the Commission could use the FortisBC rate as a benchmark rate for Nelson Hydro’s Rural rates while also requiring that certain information be provided on an annual basis. This would protect Rural ratepayers while relieving the utility of the large regulatory costs that it has incurred in recent years, thus reducing certain rate pressure.

45.5 [Please provide Nelson Hydro’s views in a scenario where “lightened” regulation may be granted](#)

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under the condition that Nelson Hydro must keep Rural residential customer rates and rate design identical to Urban customers. Please discuss the pros and cons.

RESPONSE: This would not be an acceptable outcome for Nelson Hydro and it would force the utility to move forward with exploring alternatives with regard to the Rural service area as explained in Section 9.5 of the Application. Although returning to a form of lightened regulation would be desirable, the utility cannot operate sustainably if Rural rates are required to be identical to Urban rates. The COSA evidences that the utility is not receiving an adequate ROE on its assets and is not recovering its O&M costs in the Rural area. While lightened regulation would reduce the utility’s regulatory costs, this reduction would not come close to off setting the deficit that the Rural residential rates are creating under the current scheme where Urban and Rural residential rates are identical. Finally, this dynamic is inconsistent with the City’s obligations to its residents as set out in Community Charter (See Section 4.4.2 of the COSA & RDA for full discussion on this point).

45.5.1 Please provide Nelson Hydro’s views for the same regulatory regime under the condition that Nelson Hydro must keep Rural residential, commercial, and streetlight rates and rate design identical to Urban customers. Please discuss the pros and cons.

RESPONSE: The response to IR Section 45.5 would also apply here. The pros and cons analysis is no different. The outcome would not be acceptable to the utility or ratepayers given that the utility would not be able to operate sustainably given the deficits it is incurring and the additional deficits it would incur if rates were equalized across all classes. Such a dynamic would also be inconsistent with guiding principles of rate design such as Principle 2 of the Bonbright Principles that provides that costs among customers should be fairly apportioned. The scenario presented by the Commission would result in a dynamic in which either the Urban ratepayers are overpaying and Rural ratepayers are paying their cost of service, or Urban ratepayers are paying their cost of service and Rural ratepayers are underpaying.

45.5.2 Please provide Nelson Hydro’s views for the same regulatory regime under the condition that Nelson Hydro’s Rural residential customer rates must not exceed FBC’s or BC Hydro’s residential rates. Please discuss the pros and cons, and how this could be achieved considering that the rate designs are different between Nelson Hydro, FBC, and BC Hydro.

RESPONSE: Nelson Hydro would be generally supportive of this type of regulatory regime. The lightened regulation would alleviate the utility of the significant time and cost that comes with the full regulatory review process it has been undergoing since 2017. Using the FBC or BC Hydro rates as a ceiling for Nelson Hydro Rural residential rates would offer protection to the Rural ratepayers while also allowing Nelson Hydro the flexibility it needs to differentiate Urban and Rural rates in a fair and just manner that allows for a fair allocation of costs and for the utility to achieve an acceptable level of financial sustainability. In that regard, FBC is likely a more appropriate benchmark rate given that it operates in a service area with similar weather challenges and they are Nelson Hydro’s wholesale power supplier.

Although the rate designs are different between Nelson Hydro and FBC and BC Hydro regarding an inclining block structure, Nelson Hydro believes that it would be appropriate to use its average consumption level as the consumption level from which the equivalent FBC or BC Hydro rate could be calculated.

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45.6 [The City of Nelson 1981 Supplemental Submission discussed the potential for municipal boundary extensions. Please discuss whether there were any changes to City of Nelson’s municipal boundaries since 1981, and any resulting impacts to Nelson Hydro.](#)

RESPONSE: Yes, there have been changes to the City of Nelson’s municipal boundaries since 1981. The map attached as Appendix 1-45.6 shows the timeline of boundary expansion (note expansions since 1981 include expansions in 1991, 1992, 1993, 2003 and 2007). The resulting impact to Nelson Hydro since 1981 has been to add a modest number of Urban ratepayers to its customer base (primarily from expansions in 1991 and 1993). Notably these expansions that resulted in Rural ratepayers becoming Urban ratepayers were at the request of the Rural taxpayers. By expanding the municipal boundary, these individuals became City of Nelson taxpayers and thus were able to enjoy City of Nelson services (water, sewer, Urban hydro rates) and in exchange they began paying taxes to the City of Nelson to support the provision of these and other City services.

In other words, the impact to the City from boundary expansion is generally to increase the City’s tax revenue while also increasing City expenses in the form of expanded service provision (i.e. roads, water, sewer etc.).

45.6.1 [Please discuss whether the City of Nelson has any plans to expand or reduce its municipal boundaries in the future. If so, how will these changes affect Nelson Hydro and its customers?](#)

RESPONSE: At this time the City of Nelson has no plans to expand or reduce its municipal boundaries.

**46.0 Reference: OTHER UTILITY SERVICES
City of Nelson webpage**

[Other than electrical services provided by Nelson Hydro, the City of Nelson’s utilities and services to residents include sewer, water, fibre optic and electrical services.¹⁰](#)

[The City of Nelson webpage for Electrical Services has additional information specific to Rural Residential Customers \(Outside City of Nelson\).¹¹](#)

46.1 [Please confirm if the City of Nelson provides sewer, water and fibre optic services, or any other services apart from electricity, to customers outside of the City of Nelson’s municipal boundaries.](#)

RESPONSE: The City of Nelson does not provide any services (i.e., sewer, water, fibre optic, or any other) apart from electricity to customers outside of the City’s municipal boundaries – with three isolated exceptions regarding residential water customers that are outside the City’s municipal boundary. These isolated situations are unique as described below. City policy is to not provide services (besides Hydro) to individuals outside of the City as doing so generally results in additional oversight and regulation that makes the provision of such services unsustainable.

The provision of water to one customer outside the City boundary is due to a historical error in

¹⁰ See Utilities/Services, retrieved from <https://www.nelson.ca/530/Utilities-Services>

¹¹ See Utilities/Services, retrieved from <https://www.nelson.ca/218/Electrical-Services-Nelson-Hydro>

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which the City began providing this service under the belief that the customer was within the City boundary. When it was later discovered that the customer was actually outside the City boundary, City Council resolved to continue providing the service to this customer out of the interest of fairness under a 10-year agreement. The provision of water to the other two customers is in light of an agreement reached given that the City's water supply is above that customers' property and the water lines trespass through their properties.

46.1.1 [If so, please explain the rate design for customers within and outside the City of Nelson's municipal boundaries. Do these customers pay different rates depending on the geographic locations?](#)

RESPONSE: As identified in Response to IR 1-46.1, the City has only three such customer as a result of a unique circumstances. These customers are all on metered water accounts which ensures that the cost of service is recovered based on consumption. City water services to City residents are not metered accounts.

Nelson Hydro – Cost of Service Analysis and Rate Design Application, Project No. 1599166	Submitted: March 15, 2021
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APPENDIX 1-2.1.1



2021 Nelson Hydro Rate Increase | Information for Rural Customers

January 26, 2021

To our Valued Nelson Hydro Rural Customers;

You may have recently received a notice from the B.C. Utilities Commission (BCUC) regarding two rate applications to increase Nelson Hydro rates. This notice is part of the formal process by BCUC to set new rates in the rural area.

General Rate Increase for 2021 (Application 1):

- Following Nelson Hydro's zero % increase in 2020 and facing rising power purchase costs due to FortisBC's 1% rate increase in 2020 and 4.36% increase in 2021, Nelson Hydro is proposing a 3.32% rate increase effective April 1, 2021.

Cost of Service Rate Increase (Application 2):

- Nelson Hydro has filed a **Cost of Service and Rate Design Application** with the BCUC supporting a request for approval to increase rural residential rates.
- The Cost of Service Analysis indicates current rates do not recover the full costs of serving the rural customers by approximately \$1.5 million per year.
- Rates are proposed to increase by 5.72% on September 1 in 2021, 2022 and 2023.

Increasing Rates Supports Increased Reliability:

- The proposed rate increase will allow Nelson Hydro to continue with its expanded vegetation management and capital infrastructure upgrade programs. These programs provide increased safety, reliability and allow Nelson Hydro to respond promptly to major storm events such as the one on January 13, 2021.

Rates for a Typical Rural Customer:

- A typical rural customer's Nelson Hydro bill is \$1,179 per year or \$98 per month. In 2023, if a typical customer continues to use the same amount of electricity, their bill would be \$1,393 or \$116 per month. By 2023, they would still pay less than \$4 per day for all of their electrical use, at a rate that will be at least 4% less than FortisBC.

Lower Your Bill by Lowering Energy Use:

- Save up to 30% on your hydro bill with our EcoSave program. By reducing your energy use, not only do you lower your electricity bill, but you reduce the amount of power Nelson Hydro needs to purchase and also reduce your impact on climate change. To learn more, visit the EcoSave Program at nelson.ca/ecosave.

Learn More:

- Visit nelson.ca/hydro to read more about the BCUC application, background materials, reports, and FAQs.

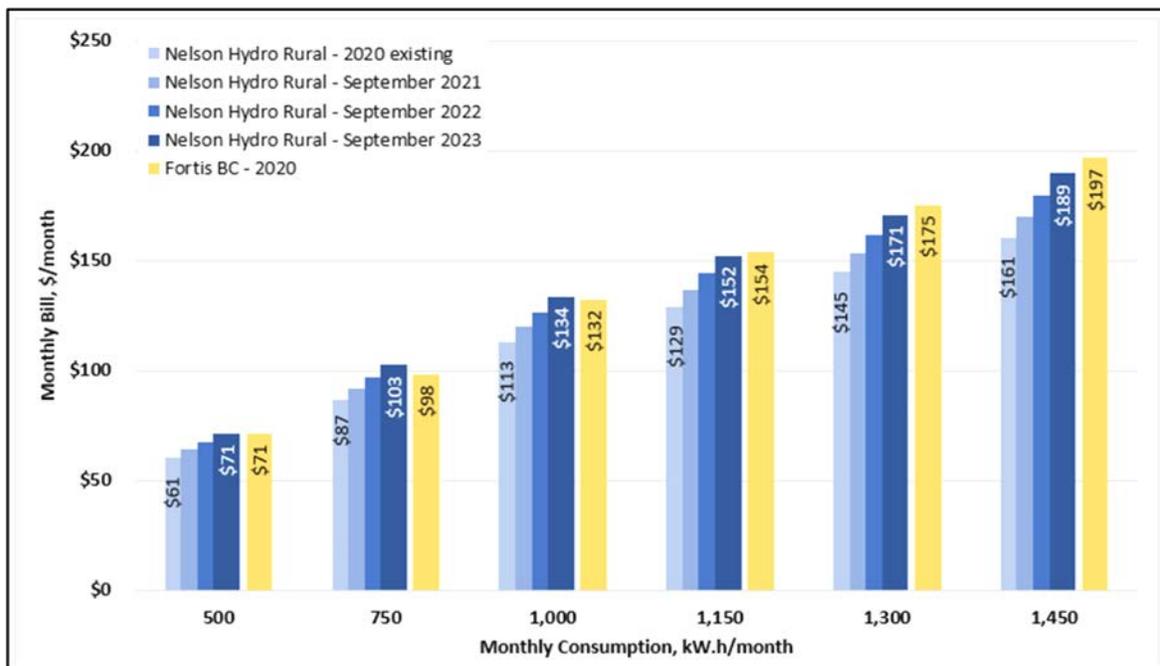
The staff at Nelson Hydro are proud to provide outstanding service for our neighbours. We recognize that rate increases of any magnitude impact all of our customers and that such impacts may be felt more during these challenging times. We are committed to working with you to help lower your energy use and minimize any rate increase impact while continuing to improve our system's safety and reliability. If you have questions, please reach out.

Sincerely,

Scott Spencer,
General Manager, Nelson Hydro

Honoured to serve our rural customers since 1922.

Proposed Rural Rate Change and Service: *By the Numbers*

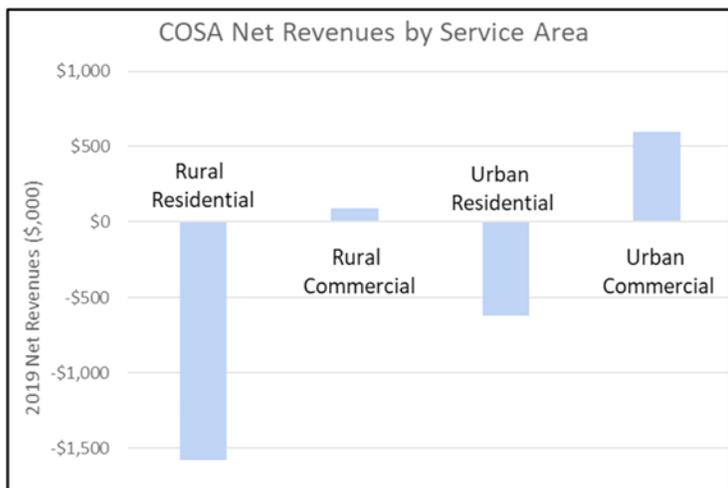


Did you know?

A typical rural residential customer pays \$3.23 per day for electricity.

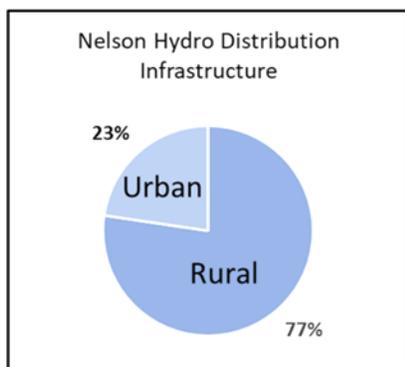
Rate increases to cover the revenue shortfall are being phased in over three years.

In 2023, the cost of electricity for that same customer will be \$3.82 per day.



The *Cost of Service Analysis* indicates current rates do not recover the full costs of serving the rural customers by approximately \$1.5 million per year.

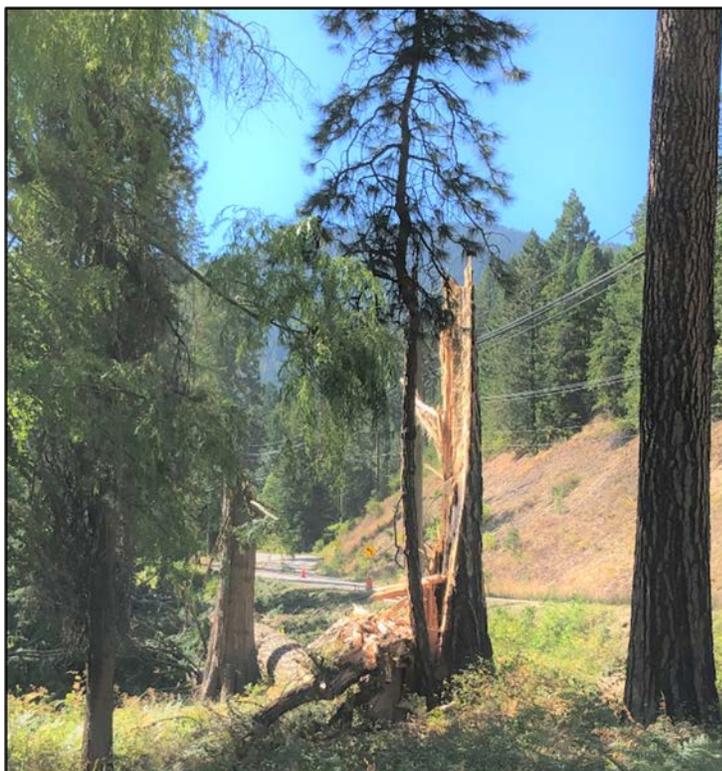
77% of Nelson Hydro's distribution infrastructure is used to service the rural areas (e.g. lines, poles, switches etc.).



VEGETATION MANAGEMENT

Over the past four years, Nelson Hydro has invested \$2.6 million in brushing and tree trimming, to improve our reliability.

86% of all vegetation management work completed during this four-year period was in the rural service area.



Do you want to learn more about the proposed rate increases? Contact Nelson Hydro at (250) 352-8254, visit nelson.ca/ruralhydro, or email our Deputy Corporate Officer at dco@nelson.ca.

Honoured to serve our rural customers since 1922.

Nelson Hydro – Cost of Service Analysis and Rate Design Application, Project No. 1599166	Submitted: March 15, 2021
Response to British Columbia Utilities Commission Information Request (IR) No. 1	Appendix 1-12.1

APPENDIX 1-12.1

	Sum of Gen to City (kW)	Sum of Gen to Rural (kW)
2015	74,735,904	6,790,486
1	6,754,907	48,800
2	6,003,416	135,137
3	6,394,645	357,822
4	5,875,408	626,821
5	6,144,975	1,113,096
6	6,019,584	1,811,940
7	6,072,860	682,534
8	6,076,360	759,114
9	5,986,592	619,946
10	6,356,758	445,435
11	6,428,003	189,842
12	6,622,397	0
2016	76,616,940	11,265,845
1	6,768,148	0
2	6,358,158	322
3	6,765,197	67,650
4	6,184,002	1,433,647
5	6,410,655	4,269,328
6	6,104,825	2,423,366
7	5,982,919	861,045
8	6,096,193	987,180
9	5,914,928	740,826
10	6,536,015	360,262
11	6,521,969	119,145
12	6,973,930	3,073
2017	77,737,410	13,147,894
1	6,903,583	0
2	6,231,777	0
3	7,062,737	171,719
4	7,687,599	2,451,349
5	6,934,864	3,864,362
6	6,299,976	3,518,004
7	4,806,103	1,641,629
8	5,756,165	719,255
9	5,964,283	664,005
10	6,773,114	91,532
11	6,642,526	26,040
12	6,674,684	0

	Sum of Gen to City (kW)	Sum of Gen to Rural (kW)
2018	77,026,319	9,555,399
1	6,809,051	3,548
2	6,194,795	386
3	6,968,779	23,775
4	6,376,365	182,756
5	6,339,687	2,910,105
6	6,082,746	3,492,954
7	6,104,067	971,431
8	6,003,296	826,814
9	5,940,809	773,989
10	6,578,114	309,999
11	6,635,630	55,887
12	6,992,979	3,753
2019	75,974,672	7,288,992
1	6,878,258	0
2	6,168,936	0
3	6,782,544	52,065
4	6,296,165	301,962
5	6,176,184	2,055,671
6	5,854,105	2,122,703
7	5,815,060	933,296
8	5,955,322	896,703
9	5,906,847	719,397
10	6,694,093	177,900
11	6,620,029	29,294
12	6,827,129	0

Sum of Gen to City (kW)	Sum of Gen to Rural (kW)
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Urban	Rural
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2015-19 average 76,418,249 9,609,723

88.9% 11.1%

	Max of Generation Total (kVA)	Max of Gen to City (kVA)	Max of Gen to Rural (kVA)	Max of Purchase to City (kVA)	Max of Purchase to Rural (kVA)
2015	9,339	9,339	-	9,331	16,917
1	9,277	9,277	-	6,780	16,917
2	6,253	6,253	-	8,182	13,410
3	9,193	9,193	-	4,778	15,373
4	8,911	8,911	-	2,805	12,498
5	9,281	9,281	-	2,226	9,897
6	3,445	3,445	-	8,479	6,133
7	5,336	5,336	-	4,540	7,246
8	2,307	2,307	-	7,548	6,781
9	8,998	8,998	-	2,772	9,058
10	9,105	9,105	-	2,438	8,327
11	9,322	9,322	-	9,331	15,081
12	9,339	9,339	-	8,981	16,762
2016	14,055	10,854	3,201	11,398	18,372
1	9,363	9,363	-	9,063	16,590
2	9,323	9,323	-	8,630	14,505
3	9,342	9,342	-	7,300	13,677
4	14,055	10,854	3,201	-	4,358
5	9,030	9,030	-	1,611	6,785
6	9,501	9,501	-	487	7,321
7	9,288	9,288	-	3,376	7,097
8	9,555	9,555	-	3,485	7,261
9	9,334	9,334	-	2,631	9,309
10	3,242	3,242	-	7,250	8,420
11	9,341	9,341	-	7,552	13,425
12	9,553	9,553	-	11,398	18,372
2017	12,389	12,389	-	17,724	19,776
1	9,593	9,593	-	12,546	19,776
2	9,450	9,450	-	10,046	17,680
3	9,326	9,326	-	7,339	14,580
4	9,961	9,961	-	4,398	11,257
5	12,389	12,389	-	452	9,434
6	8,759	8,759	-	1,968	7,017
7	-	-	-	12,889	7,111
8	-	-	-	13,299	6,832
9	2,022	2,022	-	7,945	6,314
10	9,279	9,279	-	7,834	8,354
11	9,262	9,262	-	7,799	14,172
12	-	-	-	17,724	14,080
Average 2015-2019	7,692	7,560	132	6,852	10,687

	Max of Generation Total (kVA)	Max of Gen to City (kVA)	Max of Gen to Rural (kVA)	Max of Purchase to City (kVA)	Max of Purchase to Rural (kVA)
2018	15,294	10,730	4,564	14,827	17,568
1	9,334	9,334	-	10,058	17,568
2	9,342	9,342	-	9,812	13,238
3	9,465	9,465	-	6,897	10,355
4	2,449	2,449	-	11,916	10,059
5	9,204	9,204	-	2,429	7,362
6	15,294	10,730	4,564	-	2,268
7	9,088	9,088	-	3,887	5,685
8	8,992	8,992	-	3,713	5,921
9	9,297	9,297	-	2,536	9,460
10	-	-	-	12,537	4,619
11	-	-	-	14,827	9,754
12	9,485	9,485	-	8,178	14,112
2019	9,517	9,517	-	14,801	15,603
1	9,517	9,517	-	8,446	14,106
2	9,343	9,343	-	9,969	15,603
3	9,360	9,360	-	8,975	15,384
4	9,088	9,088	-	4,070	7,625
5	9,260	9,260	-	2,834	8,641
6	5,327	5,327	-	3,338	6,130
7	-	-	-	10,558	5,658
9	9,198	9,198	-	3,805	9,155
10	9,317	9,317	-	7,047	12,050
11	9,432	9,432	-	7,739	13,450
12	274	274	-	14,801	11,114
Purchase Allocation					
	Urban	Rural			
	39.1%	60.9%			

Nelson Hydro – Cost of Service Analysis and Rate Design Application, Project No. 1599166	Submitted: March 15, 2021
Response to British Columbia Utilities Commission Information Request (IR) No. 1	Appendix 1-21.11

APPENDIX 1-21.11

Nelson Hydro - Urban

Based on 2019 Actuals

COST OF SERVICE

Total Unit Costs [Urban + Common] and Allocated Cost

		Residential	Small Commercial	General Service	Other Commercial/ Municipal/	Street Lighting
DEMAND - \$/kW		\$0.00	\$18.62	\$18.62	\$18.62	\$0.00
ENERGY - cents/kWh		8.19	3.27	3.27	3.27	14.09
CUSTOMER - \$/Cust/ bi-monthly		\$23.47	\$31.31	\$31.31	\$31.31	\$0.00
Basic Data:						
Annual kW		-	32,384	69,389	8,616	-
Annual kWh		44,779,250	13,553,767	29,041,785	3,606,249	658,284
Number of Customers		5,080	765	112	133	23
Revenue Check:						
Demand	\$2,055,916	\$0	\$603,124	\$1,292,319	\$160,473	\$0
Energy	\$5,271,131	\$3,668,808	\$442,840	\$948,877	\$117,826	\$92,781
Customer	\$905,110	\$715,373	\$143,712	\$21,040	\$24,985	\$0
Total before Capital Reserve	\$8,232,158	\$4,384,181	\$1,189,676	\$2,262,236	\$303,285	\$92,781
Capital Reserve Transfer	\$2,877,100	\$1,416,057	\$428,612	\$918,390	\$114,041	\$0
Total with Capital Reserve	\$11,109,258	\$5,800,238	\$1,618,287	\$3,180,627	\$417,325	\$92,781

Nelson Hydro - Rural

COST OF SERVICE

Total Unit Costs [Rural + Common] and Allocated Cost

		Residential	Small Commercial	General Service	Other Commercial/ Adjustments	Street Lighting
DEMAND - \$/kW		\$0.00	\$27.16	\$27.16	\$6.19	\$0.00
ENERGY - cents/kWh		12.42	5.25	5.25	0.47	16.45
CUSTOMER - \$/Cust/ bi-monthly		\$36.19	\$46.99	\$46.99	\$46.99	\$0.00
Basic Data:						
Annual kW		-	7,012	11,356	-	-
Annual kWh		57,521,589	2,934,631	4,752,927	-	225,716
Number of Customers		4,203	210	44	75	35
Revenue Check:						
Demand	\$498,868	\$0	\$190,437	\$308,431	\$0	\$0
Energy	\$7,584,641	\$7,143,783	\$154,116	\$249,606	\$0	\$37,136
Customer	\$1,005,293	\$912,529	\$59,211	\$12,406	\$21,147	\$0
Total	\$9,088,802	\$8,056,312	\$403,764	\$570,444	\$21,147	\$37,136

**Nelson Hydro - Urban
COST OF SERVICE
Allocation of Rate Base**

Based on 2019 Actuals

	Total Rate Base	Residential	Small Commercial	General Service	Other Commercial/ Municipal/A diustments	Street Lighting	Basis of Allocation
DEMAND RELATED							
Coincident Peak	\$1,803,858 100.0%	\$941,748 52.2%	\$248,588 13.8%	\$532,652 29.5%	\$66,142 3.7%	\$14,728 0.8%	CP
Noncoincident Peak	9,308,723 100.0%	\$4,719,741 50.7%	\$1,328,902 14.3%	\$2,847,450 30.6%	\$353,581 3.8%	\$59,050 0.6%	NCP
Total Demand	\$11,112,581	\$5,661,488	\$1,577,490	\$3,380,103	\$419,723	\$73,778	
ENERGY RELATED	\$7,194,133 100.0%	\$3,515,388 48.9%	\$1,064,037 14.8%	\$2,279,921 31.7%	\$283,108 3.9%	\$51,679 0.7%	E
CUSTOMER RELATED							
Actual	\$2,614,144 100.0%	\$2,172,395 83.1%	\$327,142 12.5%	\$47,895 1.8%	\$56,876 2.2%	\$9,836 0.4%	CUS-1
Weighted	828,808 100.0%	\$517,687 62.5%	\$233,876 28.2%	\$34,241 4.1%	\$40,661 4.9%	\$2,344 0.3%	CUS-2
Total Customer	\$3,442,952	\$2,690,082	\$561,018	\$82,136	\$97,537	\$12,180	
DIRECT ASSIGNMENT	\$175,849	\$0	\$0	\$0	\$0	\$175,849	DA
Total Rate Base	<u>\$21,925,516</u>	<u>\$11,866,959</u>	<u>\$3,202,545</u>	<u>\$5,742,160</u>	<u>\$800,367</u>	<u>\$313,485</u>	
Effective Rate of Return	8.589%	8.589%	8.589%	8.589%	8.589%	8.589%	
Return on rate base	\$1,883,186	\$1,019,255	\$275,067	\$493,195	\$68,744	\$26,925	

**Nelson Hydro - Urban
COST OF SERVICE
Allocation of Revenue Requirements**

Based on 2019 Actuals

	Total Net Rev. Req.	Residential	Small Commercial	General Service	General Service	Street Lighting	Basis of Allocation
DEMAND RELATED							
Coincident Peak	\$1,361,927 100.0%	\$711,027 52.2%	\$187,686 13.8%	\$402,157 29.5%	\$49,938 3.7%	\$11,120 0.8%	CP
Noncoincident Peak	557,099 100.0%	\$282,462 50.7%	\$79,531 14.3%	\$170,411 30.6%	\$21,161 3.8%	\$3,534 0.6%	NCP
Total Demand	\$1,919,026	\$993,489	\$267,217	\$572,568	\$71,098	\$14,654	
ENERGY RELATED	\$1,941,730 100.0%	\$948,820 48.9%	\$287,188 14.8%	\$615,361 31.7%	\$76,412 3.9%	\$13,948 0.7%	E
CUSTOMER RELATED							
Actual	\$197,459 100.0%	\$164,091 83.1%	\$24,711 12.5%	\$3,618 1.8%	\$4,296 2.2%	\$743 0.4%	CUS-1
Weighted	49,602 100.0%	\$30,982 62.5%	\$13,997 28.2%	\$2,049 4.1%	\$2,433 4.9%	\$140 0.3%	CUS-2
Total Customer	\$247,061	\$195,074	\$38,707	\$5,667	\$6,730	\$883	
DIRECT ASSIGNMENT	\$10,524	\$0	\$0	\$0	\$0	\$10,524	DA
Total before return	<u>\$4,118,341</u>	<u>\$2,137,382</u>	<u>\$593,113</u>	<u>\$1,193,596</u>	<u>\$154,240</u>	<u>\$40,009</u>	
Total Rev. Req.	<u>\$6,001,527</u>	<u>\$3,156,637</u>	<u>\$868,180</u>	<u>\$1,686,791</u>	<u>\$222,984</u>	<u>\$66,934</u>	

**Nelson Hydro - Urban
COST OF SERVICE
Average Unit Costs**

	Residential	Small Commercial	General Service	General Service	Street Lighting
DEMAND - \$/kW	\$0.00	\$12.44	\$12.44	\$12.44	\$0.00
ENERGY - cents/kWh	6.10	2.79	2.79	2.79	10.17
CUSTOMER - \$/Cust/ bi-monthly	\$13.98	\$18.93	\$18.93	\$18.93	\$0.00
Basic Data:					
Annual kW	-	32,384	69,389	8,616	-
Annual kWh	44,779,250	13,553,767	29,041,785	3,606,249	658,284
Number of Customers	5,080	765	112	133	23
Revenue Check:					
Demand	\$1,372,742	\$0	\$402,708	\$862,886	\$107,148
Energy	\$4,087,938	\$2,730,512	\$378,579	\$811,184	\$100,728
Customer	\$540,847	\$426,125	\$86,893	\$12,722	\$15,107
Total	\$6,001,527	\$3,156,637	\$868,180	\$1,686,791	\$222,984

**Nelson Hydro - Rural
COST OF SERVICE
Allocation of Rate Base**

Based on 2019 Actuals

	Total Rate Base	Residential	Small Commercial	General Service	Other Commercial/ Adjustments	Street Lighting	Basis of Allocation
DEMAND RELATED							
Coincident Peak	\$0 100.0%	\$0 89.2%	\$0 4.0%	\$0 6.4%	\$0 0.0%	\$0 0.4%	CP
Noncoincident Peak	9,200,175 100.0%	\$8,158,629 88.7%	\$387,196 4.2%	\$627,103 6.8%	\$0 0.0%	\$27,246 0.3%	NCP
Total Demand	\$9,200,175	\$8,158,629	\$387,196	\$627,103	\$0	\$27,246	
ENERGY RELATED	\$0 100.0%	\$0 87.9%	\$0 4.5%	\$0 7.3%	\$0 0.0%	\$0 0.3%	E
CUSTOMER RELATED							
Actual	\$2,813,326 100.0%	\$2,589,097 92.0%	\$129,362 4.6%	\$27,105 1.0%	\$46,201 1.6%	\$21,560 0.8%	CUS-1
Weighted	589,479 100.0%	\$474,178 80.4%	\$71,076 12.1%	\$14,892 2.5%	\$25,384 4.3%	\$3,949 0.7%	CUS-2
Total Customer	\$3,402,804	\$3,063,275	\$200,438	\$41,997	\$71,585	\$25,509	
DIRECT ASSIGNMENT	\$0	\$0	\$0	\$0	\$0	\$0	DA
Total Rate Base	<u>\$12,602,979</u>	<u>\$11,221,904</u>	<u>\$587,635</u>	<u>\$669,100</u>	<u>\$71,585</u>	<u>\$52,756</u>	
Effective Rate of Return	8.589%	8.589%	8.589%	8.589%	8.589%	8.589%	
Return on rate base	\$1,082,472	\$963,851	\$50,472	\$57,469	\$6,148	\$4,531	

**Nelson Hydro - Rural
COST OF SERVICE
Allocation of Revenue Requirements**

Based on 2019 Actuals

	Total Net Rev. Req.	Residential	Small Commercial	General Service	Other Commercial/	Street Lighting	Basis of Allocation
DEMAND RELATED							
Coincident Peak	\$1,650,345 100.0%	\$1,472,567 89.2%	\$65,518 4.0%	\$106,113 6.4%	\$0 0.0%	\$6,147 0.4%	CP
Noncoincident Peak	1,146,910 100.0%	\$1,017,069 88.7%	\$48,269 4.2%	\$78,176 6.8%	\$0 0.0%	\$3,397 0.3%	NCP
Total Demand	\$2,797,254	\$2,489,636	\$113,787	\$184,289	\$0	\$9,544	
ENERGY RELATED	\$3,126,163 100.0%	\$2,748,105 87.9%	\$140,203 4.5%	\$227,072 7.3%	\$0 0.0%	\$10,784 0.3%	E
CUSTOMER RELATED							
Actual	\$381,398 100.0%	\$350,999 92.0%	\$17,537 4.6%	\$3,675 1.0%	\$6,263 1.6%	\$2,923 0.8%	CUS-1
Weighted	73,485 100.0%	\$59,112 80.4%	\$8,860 12.1%	\$1,856 2.5%	\$3,164 4.3%	\$492 0.7%	CUS-2
Total Customer	\$454,883	\$410,111	\$26,398	\$5,531	\$9,428	\$3,415	
DIRECT ASSIGNMENT	\$0	\$0	\$0	\$0	\$0	\$0	DA
Total before return	<u>\$6,378,300</u>	<u>\$5,647,851</u>	<u>\$280,387</u>	<u>\$416,892</u>	<u>\$9,428</u>	<u>\$23,743</u>	
Total Rev. Req.	<u>\$7,460,772</u>	<u>\$6,611,702</u>	<u>\$330,859</u>	<u>\$474,361</u>	<u>\$15,576</u>	<u>\$28,274</u>	

**Nelson Hydro - Rural
COST OF SERVICE
Average Unit Costs**

	Residential	Small Commercial	General Service	Other Commercial/	Street Lighting
DEMAND - \$/kW	\$0.00	\$20.97	\$20.97	\$0.00	\$0.00
ENERGY - cents/kWh	10.32	4.78	4.78	0.00	12.53
CUSTOMER - \$/Cust/ bi-monthly	\$26.70	\$34.61	\$34.61	\$34.61	\$0.00
Basic Data:					
Annual kW	-	7,012	11,356	-	-
Annual kWh	57,521,589	2,934,631	4,752,927	-	225,716
Number of Customers	4,203	210	44	75	35
Revenue Check:					
Demand	\$385,194	\$0	\$147,043	\$238,151	\$0
Energy	\$6,334,034	\$5,938,486	\$140,203	\$227,072	\$28,274
Customer	\$741,544	\$673,216	\$43,614	\$9,138	\$0
Total	\$7,460,772	\$6,611,702	\$330,859	\$474,361	\$28,274

**Nelson Hydro - Common
COST OF SERVICE
Allocation of Rate Base**

Based on 2019 Actuals

	Total Rate Base	Residential	Small Commercial	General Service	Other Commercial/ Adjustments	Street Lighting	Basis of Allocation
DEMAND RELATED							
Coincident Peak	\$4,480,456 100.0%	\$3,050,860 68.1%	\$428,829 9.6%	\$878,931 19.6%	\$93,791 2.1%	\$28,046 0.6%	CP
Noncoincident Peak	2,271,152 100.0%	\$1,516,755 66.8%	\$227,408 10.0%	\$466,097 20.5%	\$49,737 2.2%	\$11,155 0.5%	NCP
Total Demand	\$6,751,608	\$4,567,614	\$656,237	\$1,345,028	\$143,529	\$39,200	
ENERGY RELATED	\$404,633 100.0%	\$263,534 65.1%	\$42,475 10.5%	\$87,057 21.5%	\$9,290 2.3%	\$2,277 0.6%	E
CUSTOMER RELATED							
Actual	\$777,110 100.0%	\$675,460 86.9%	\$70,944 9.1%	\$11,351 1.5%	\$15,135 1.9%	\$4,220 0.5%	CUS-1
Weighted	62,906 100.0%	\$43,716 69.5%	\$13,774 21.9%	\$2,204 3.5%	\$2,939 4.7%	\$273 0.4%	CUS-2
Total Customer	\$840,015	\$719,175	\$84,718	\$13,555	\$18,073	\$4,493	
DIRECT ASSIGNMENT	\$7,641	\$0	\$0	\$0	\$0	\$7,641	DA
Total Rate Base	\$8,003,898	\$5,550,323	\$783,431	\$1,445,640	\$170,892	\$53,612	
Effective Rate of Return	8.589%	8.589%	8.589%	8.589%	8.589%	8.589%	
Return on rate base	\$687,456	\$476,718	\$67,289	\$124,166	\$14,678	\$4,605	

**Nelson Hydro - Common
COST OF SERVICE
Allocation of Revenue Requirements**

Based on 2019 Actuals

	Total Net Rev. Req.	Residential	Small Commercial	General Service	Other Commercial/ Adjustments	Street Lighting	Basis of Allocation
DEMAND RELATED							
Coincident Peak	\$376,852 100.0%	\$256,608 68.1%	\$36,069 9.6%	\$73,927 19.6%	\$7,889 2.1%	\$2,359 0.6%	CP
Noncoincident Peak	1,511,816 100.0%	\$1,009,644 66.8%	\$151,377 10.0%	\$310,262 20.5%	\$33,108 2.2%	\$7,425 0.5%	NCP
Total Demand	\$1,888,668	\$1,266,252	\$187,446	\$384,189	\$40,997	\$9,784	
ENERGY RELATED	\$709,965 100.0%	\$462,393 65.1%	\$74,526 10.5%	\$152,750 21.5%	\$16,300 2.3%	\$3,996 0.6%	E
CUSTOMER RELATED							
Actual	\$448,791 100.0%	\$390,087 86.9%	\$40,971 9.1%	\$6,555 1.5%	\$8,741 1.9%	\$2,437 0.5%	CUS-1
Weighted	110,373 100.0%	\$76,703 69.5%	\$24,168 21.9%	\$3,867 3.5%	\$5,156 4.7%	\$479 0.4%	CUS-2
Total Customer	\$559,165	\$466,790	\$65,140	\$10,422	\$13,896	\$2,916	
DIRECT ASSIGNMENT	\$13,407	\$0	\$0	\$0	\$0	\$13,407	DA
Total before return	\$3,171,205	\$2,195,435	\$327,112	\$547,362	\$71,193	\$30,104	
Total Rev. Req.	\$3,858,661	\$2,672,153	\$394,401	\$671,528	\$85,871	\$34,708	

**Nelson Hydro - Common
COST OF SERVICE
Average Unit Costs**

	Residential	Small Commercial	General Service	Other Commercial/ Adjustments	Street Lighting
DEMAND - \$/kW	\$0.00	\$6.19	\$6.19	\$6.19	\$0.00
ENERGY - cents/kWh	2.10	0.47	0.47	0.47	3.93
CUSTOMER - \$/Cust/ bi-monthly	\$9.49	\$12.38	\$12.38	\$12.38	\$0.00
Basic Data:					
Annual kW	-	39,396	80,746	8,616	-
Annual kWh	102,300,839	16,488,398	33,794,712	3,606,249	884,000
Number of Customers	9,283	975	156	208	58
Revenue Check:					
Demand	\$796,849	\$0	\$243,810	\$499,714	\$53,325
Energy	\$2,433,801	\$2,143,593	\$78,175	\$160,227	\$17,098
Customer	\$628,011	\$528,560	\$72,416	\$11,587	\$15,449
Total	\$3,858,661	\$2,672,153	\$394,401	\$671,528	\$85,871

**Nelson Hydro
COST OF SERVICE
Load Data**

Hours in Year	8,760															
	Residential			Small Commercial			General Service			Other Commercial/Adjustments			Street Lighting			
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	
kWh Sales at the Meter	44,779,250	57,521,589	102,300,839	13,553,767	2,934,631	16,488,398	29,041,785	4,752,927	33,794,712	3,606,249	0	3,606,249	658,284	225,716	884,000	
Load Factor	40%	40%	40%	43%	43%	43%	43%	43%	43%	43%	43%	43%	47%	47%	47%	
Individ. Noncoincident Peak (NCP)(kW)	12,779	16,416	29,195	3,598	779	4,377	7,710	1,262	8,972	957	0	957	160	55	215	
System Coincidence Factor	80%	80%	80%	75%	75%	75%	75%	75%	75%	75%	75%	75%	100%	100%	100%	
Coincident Peak (CP) at Meter (kW)	10,224	13,133	23,356	2,699	584	3,283	5,782	946	6,729	718	0	718	160	55	215	
Allocation Factors																
Coincident Peak (CP)	52.21%	89.23%	68.09%	13.78%	3.97%	9.57%	29.53%	6.43%	19.62%	3.67%	0.00%	2.09%	0.82%	0.37%	0.63%	
Noncoincident Peak (NCP)	50.70%	88.68%	66.78%	14.28%	4.21%	10.01%	30.59%	6.82%	20.52%	3.80%	0.00%	2.19%	0.63%	0.30%	0.49%	
Energy	48.86%	87.91%	65.13%	14.79%	4.48%	10.50%	31.69%	7.26%	21.52%	3.94%	0.00%	2.30%	0.72%	0.34%	0.56%	
Number of customers	5,080	4,203	9,283	765	210	975	112	44	156	133	75	208	23	35	58	
Weighted Number of customers	5,080	4,203	9,283	2,295	630	2,925	336	132	468	399	225	624	23	35	58	
Number of customers (CUS -1)	83.10%	92.03%	86.92%	12.51%	4.60%	9.13%	1.83%	0.96%	1.46%	2.18%	1.64%	1.95%	0.38%	0.77%	0.54%	
Weighted Number of customers (CUS -2)	62.46%	80.44%	69.49%	28.22%	12.06%	21.90%	4.13%	2.53%	3.50%	4.91%	4.31%	4.67%	0.28%	0.67%	0.43%	

Nelson Hydro – Cost of Service Analysis and Rate Design Application, Project No. 1599166	Submitted: March 15, 2021
Response to British Columbia Utilities Commission Information Request (IR) No. 1	Appendix 1-29.3

APPENDIX 1-29.3

	Consumption	2020	2021	Bi-monthly	2022	Bi-monthly	2023	Bi-monthly	2024	Bi-monthly	
27/06/2019	283120	531 \$	72.03 \$	74.42 \$	2.39 \$	78.68 \$	4.26 \$	83.18 \$	4.50 \$	87.93 \$	4.76
29/04/2019	283120	861 \$	106.71 \$	108.48 \$	1.77 \$	116.59 \$	8.11 \$	123.26 \$	6.67 \$	130.31 \$	7.05
28/08/2019	283120	945 \$	115.54 \$	119.38 \$	3.84 \$	126.20 \$	6.83 \$	133.42 \$	7.22 \$	141.05 \$	7.63
28/10/2019	283120	1027 \$	124.16 \$	135.62 \$	11.46 \$	143.37 \$	7.76 \$	151.58 \$	8.20 \$	151.58 \$	-
30/12/2019	283120	1182 \$	140.45 \$	153.41 \$	12.96 \$	162.19 \$	8.78 \$	171.46 \$	9.28 \$	171.46 \$	-
27/02/2019	283120	1456 \$	169.25 \$	169.25 \$	- \$	184.87 \$	15.62 \$	195.44 \$	10.57 \$	206.62 \$	11.18
Totals		6,002 \$	728.13 \$	760.55 \$	32.42 \$	811.90 \$	51.35 \$	858.34 \$	46.44 \$	888.96 \$	30.62
Cummulative increase		500		4.45%	32.42	11.50%	83.77	17.88%	130.21	22.09%	160.83
Year to year increase	Monthly	500		4.45%	2.70	6.75%	4.28	5.72%	3.87	3.57%	2.55

	Consumption	2020	2021	Bi-monthly	2022	Bi-monthly	2023	Bi-monthly	2024	Bi-monthly	
28/08/2019	265240	1203 \$	97.28 \$	100.51 \$	3.23 \$	106.26 \$	5.75 \$	112.34 \$	6.08 \$	118.77 \$	6.43
27/06/2019	265240	1571 \$	123.66 \$	127.77 \$	4.11 \$	135.07 \$	7.31 \$	142.80 \$	7.73 \$	150.97 \$	8.17
28/10/2019	265240	2007 \$	154.91 \$	169.21 \$	14.30 \$	178.89 \$	9.68 \$	189.12 \$	10.23 \$	189.12 \$	-
29/04/2019	265240	2147 \$	164.94 \$	167.68 \$	2.74 \$	180.22 \$	12.53 \$	190.52 \$	10.31 \$	201.42 \$	10.90
27/02/2019	265240	2438 \$	185.80 \$	185.80 \$	- \$	202.95 \$	17.15 \$	214.56 \$	11.61 \$	226.83 \$	12.27
30/12/2019	265240	2637 \$	200.06 \$	218.53 \$	18.47 \$	231.03 \$	12.50 \$	244.24 \$	13.21 \$	244.24 \$	-
Totals		12,003 \$	926.66 \$	969.50 \$	42.84 \$	1,034.42 \$	64.92 \$	1,093.59 \$	59.17 \$	1,131.35 \$	37.76
Cummulative increase		1,000		4.62%	42.84	11.63%	107.76	18.01%	166.93	22.09%	204.69
Year to year increase	Monthly	1,000		4.62%	3.57	6.70%	5.41	5.72%	4.93	3.45%	3.15

	Consumption	2020	2021	Bi-monthly	2022	Bi-monthly	2023	Bi-monthly	2024	Bi-monthly	
21/08/2019	241120	2,002 \$	154.55 \$	159.68 \$	5.13 \$	168.82 \$	9.13 \$	178.47 \$	9.66 \$	188.68 \$	10.21
21/10/2019	241120	2,081 \$	160.21 \$	175.00 \$	14.79 \$	185.01 \$	10.01 \$	195.59 \$	10.58 \$	195.59 \$	-
24/06/2019	241120	2,211 \$	169.53 \$	175.16 \$	5.63 \$	185.18 \$	10.02 \$	195.77 \$	10.59 \$	206.97 \$	11.20
19/12/2019	241120	2,335 \$	178.42 \$	194.89 \$	16.47 \$	206.03 \$	11.15 \$	217.82 \$	11.79 \$	217.82 \$	-
23/04/2019	241120	2,556 \$	194.26 \$	197.48 \$	3.22 \$	212.24 \$	14.76 \$	224.38 \$	12.14 \$	237.22 \$	12.83
20/02/2019	241120	2,615 \$	198.49 \$	198.49 \$	- \$	216.81 \$	18.32 \$	229.21 \$	12.40 \$	242.32 \$	13.11
Totals		13,800 \$	1,055.46 \$	1,100.70 \$	45.24 \$	1,174.09 \$	73.39 \$	1,241.25 \$	67.16 \$	1,288.60 \$	47.35
Cummulative increase		1,150		4.29%	45.24	11.24%	118.63	17.60%	185.79	22.09%	233.14
Year to year increase	Monthly	1,150		4.29%	3.77	6.67%	6.12	5.72%	5.60	3.81%	3.95

	Consumption	2020	2021	Bi-monthly	2022	Bi-monthly	2023	Bi-monthly	2024	Bi-monthly	
27/06/2019	260760	853 \$	72.20 \$	74.60 \$	2.40 \$	78.86 \$	4.27 \$	83.37 \$	4.51 \$	88.14 \$	4.77
28/08/2019	260760	1,440 \$	114.27 \$	118.06 \$	3.79 \$	124.82 \$	6.75 \$	131.96 \$	7.14 \$	139.51 \$	7.55
28/10/2019	260760	2,804 \$	212.03 \$	231.60 \$	19.57 \$	244.85 \$	13.25 \$	258.86 \$	14.01 \$	258.86 \$	-
30/12/2019	260760	3,711 \$	277.04 \$	302.61 \$	25.57 \$	319.92 \$	17.31 \$	338.22 \$	18.30 \$	338.22 \$	-
29/04/2019	260760	3,727 \$	278.19 \$	282.81 \$	4.62 \$	303.94 \$	21.14 \$	321.33 \$	17.39 \$	339.71 \$	18.38
27/02/2019	260760	4,865 \$	359.75 \$	359.75 \$	- \$	392.96 \$	33.20 \$	415.43 \$	22.48 \$	439.20 \$	23.76
Totals		17,400 \$	1,313.48 \$	1,369.43 \$	55.95 \$	1,465.35 \$	95.92 \$	1,549.17 \$	83.82 \$	1,603.63 \$	54.46
Cummulative increase		1,450		4.26%	55.95	11.56%	151.87	17.94%	235.69	22.09%	290.15
Year to year increase	Monthly	1,450		4.26%	4.66	7.00%	7.99	5.72%	6.98	3.52%	4.54

	Consumption	2020	2021	Bi-monthly	2022	Bi-monthly	2023	Bi-monthly	2024	Bi-monthly	
13/08/2019	323848	2,087 \$	160.64 \$	165.98 \$	5.33 \$	175.47 \$	9.49 \$	185.51 \$	10.04 \$	196.12 \$	10.61 \$
17/06/2019	323848	4,111 \$	305.71 \$	315.86 \$	10.15 \$	333.93 \$	18.07 \$	353.03 \$	19.10 \$	373.22 \$	20.19 \$
16/10/2019	323848	4,246 \$	315.39 \$	344.50 \$	29.11 \$	364.20 \$	19.71 \$	385.03 \$	20.83 \$	385.03 \$	-
2019-10-12	323848	4,546 \$	336.89 \$	367.98 \$	31.09 \$	389.03 \$	21.05 \$	411.28 \$	22.25 \$	411.28 \$	-
16/04/2019	323848	5,541 \$	408.20 \$	414.98 \$	6.78 \$	446.00 \$	31.02 \$	471.51 \$	25.51 \$	498.48 \$	26.97 \$
13/02/2019	323848	6,528 \$	478.94 \$	478.94 \$	- \$	523.15 \$	44.21 \$	553.07 \$	29.92 \$	584.71 \$	31.64 \$
Totals		27,059 \$	2,005.77 \$	2,088.23 \$	82.46 \$	2,231.77 \$	143.54 \$	2,359.43 \$	127.66 \$	2,448.84 \$	89.41 \$
Cummulative increase		2,255	4.11%	82.46	11.27%	226.00	17.63%	353.66	22.09%	443.07	
Year to year increase	Monthly	2,255	4.11%	6.87	6.87%	11.96	5.72%	10.64	3.79%	7.45	

	Consumption	2020	2021	Bi-monthly	2022	Bi-monthly	2023	Bi-monthly	2024	Bi-monthly	
27/03/2019	290728	15167 \$	1,098.13 \$	1,134.59 \$	36.46 \$	1,199.48 \$	64.90 \$	1,268.09 \$	68.61 \$	1,340.63 \$	72.54 \$
29/01/2019	290728	15362 \$	1,112.10 \$	1,130.57 \$	18.46 \$	1,215.07 \$	84.51 \$	1,284.58 \$	69.50 \$	1,358.05 \$	73.48 \$
30/09/2019	290728	16170 \$	1,170.02 \$	1,208.86 \$	38.84 \$	1,278.01 \$	69.15 \$	1,351.11 \$	73.10 \$	1,428.39 \$	77.28 \$
29/07/2019	290728	16615 \$	1,201.91 \$	1,312.85 \$	110.94 \$	1,387.94 \$	75.09 \$	1,467.33 \$	79.39 \$	1,467.33 \$	-
27/11/2019	290728	18870 \$	1,363.53 \$	1,489.39 \$	125.85 \$	1,574.58 \$	85.19 \$	1,664.65 \$	90.07 \$	1,664.65 \$	-
27/05/2019	290728	19533 \$	1,411.05 \$	1,411.05 \$	- \$	1,541.29 \$	130.24 \$	1,629.45 \$	88.16 \$	1,722.66 \$	93.20 \$
Totals		101,717 \$	7,356.75 \$	7,687.30 \$	330.55 \$	8,196.38 \$	509.08 \$	8,665.21 \$	468.83 \$	8,981.71 \$	316.50 \$
Cummulative increase		8,476	4.49%	330.55	11.41%	839.63	17.79%	1,308.47	22.09%	1,624.97	
Year to year increase	Monthly	8,476	4.49%	27.55	6.62%	42.42	5.72%	39.07	3.65%	26.38	

Average based on these customers **1,271** **4.35%** **16.08** **6.80%** **26.19** **5.72%** **23.51** **3.63%** **15.67**

Nelson Hydro – Cost of Service Analysis and Rate Design Application, Project No. 1599166	Submitted: March 15, 2021
Response to British Columbia Utilities Commission Information Request (IR) No. 1	Appendix 1-45.4

APPENDIX 1-45.4



**The Corporation of the City of
Nelson**

Suite 101, 310 Ward Street, British Columbia V1L 4E8
Telephone : (250) 352-8204 Fax : (250) 352-2131

From the Office of the Manager of Legislative and Administrative Services
e-mail: jpostlethwaite@nelson.ca

February 10, 2009

Mr. Robert J. Pellatt
British Columbia Utilities Commission
Sixth Floor, 900 Howe Street
Box 250
Vancouver, B.C. V6Z 2N3

BCUC Log # 28477
RECEIVED

FEB 12 2009

Routing YS PLWN

Dear Mr. Pellatt:

Re: Certified Copy – Electrical Utility Amendment Bylaw No. 3129, 2009

Enclosed please find two certified copies of the City of Nelson's Electrical Utility Amendment Bylaw No. 3129, 2009. The bylaw amendment is to increase the rates charged by Nelson Hydro by 4% effective April 1, 2009.

Nelson Hydro has received an increase in hydro rates from Fortis BC Inc of 4.6% percent, effective January 1, 2009. It is expected that BC Hydro will apply to the Utilities Commission for a rate increase of 7% effective April, 2009. Such an increase in BC Hydro rates will have a further effect on energy purchase costs for Nelson Hydro of approximately 1.4%.

Thank you for your assistance. Please do not hesitate to contact us if you require any further information.

Yours truly,

Janet Postlethwaite
Manager of Legislative and Administrative Services
/jp

Encl.

THE CORPORATION OF THE CITY OF NELSON

BYLAW NO. 3129

**A BYLAW TO AMEND "THE CORPORATION OF THE CITY OF NELSON
ELECTRICAL UTILITY REGULATORY BYLAW NO. 2020, 1983"**

WHEREAS the City of Nelson has received an increase in hydro rates from Fortis BC Inc. of 4.6% percent, effective January 1st, 2009;

AND WHEREAS it is deemed desirable and expedient to amend "The Corporation of the City of Nelson Electrical Utility Regulatory Bylaw No. 2020, 1983" hereinafter referred to as "the said bylaw" to increase rates by four (4%) percent to recover the costs of the Fortis' rate increase and other expenses of the City of Nelson's hydro system;

NOW THEREFORE the Council of the Corporation of the City of Nelson, in open meeting assembled, enacts as follows:

1. Schedules A-1, A-3, B-1, B-4, C-1 C-4, E-1, F-1, F-2, G-3 and G-4 of "The Corporation of the City of Nelson Electrical Utility Regulatory Bylaw No. 2020, 1983" are hereby rescinded and Schedules A-1, A-3, B-1, B-4, C-1 C-4, E-1, F-1, F-2, G-3 and G-4 attached hereto and forming part of this Bylaw are hereby substituted therefore.
2. This Bylaw shall receive the approval of the British Columbia Utilities Commission prior to adoption.
3. This Bylaw may be cited as the "**Electrical Utility Amendment Bylaw No. 3129, 2009.**"
4. This Bylaw shall come into force and effect on April 1, 2009.

READ A FIRST TIME the 9th day of February, 2009.
 READ A SECOND TIME the 9th day of February, 2009.
 READ A THIRD TIME the 9th day of February, 2009.

RECEIVED the approval of the British Columbia Utilities Commission on the _____ day of _____, 2009.

FINALLY PASSED AND ADOPTED the _____ day of _____, 2009
 and Numbered 3129.

 Mayor

 Corporate Officer

CERTIFIED A TRUE AND CORRECT COPY
 OF THE "**Electrical Utility Amendment Bylaw
 No. 3129, 2009**"

[Handwritten Signature]

 Manager of Legislative and Administrative Services

RATES & CHARGES

SCHEDULE A-1 Residential Service Rates - Urban

Applicable to Urban Customers.
Applicable to residential or domestic use.
Applicable to domestic water systems with connected load of 5HP or less.

Rate: Basic Charge \$10.57 per period.
 All kWh per period @6.847cents per kWh.

Demand Charge

First 20 kW - nil
Each additional kW per period @ \$4.80 per kW.

Minimum Charge

The minimum charge per period shall be \$10.57

Schedule A-1 The Corporation of the City of Nelson
Effective April 1, 2009

Accepted for
filing _____

SCHEDULE A-3

Residential Service Rates - Rural

Applicable to Rural Customers.

Applicable to residential or domestic use.

Applicable to common residential use.

Applicable to domestic water systems with connected load of 5HP or less.

Rate:

Energy Charge - Bi-monthly

Basic Charge \$10.57 per period.

All kWh per period @ 6.847 cents per kWh.

Demand Charge

First 20 kW - nil

All additional kW @ \$4.80 per kW.

Minimum Charge

The minimum charge per period shall be \$10.57

Schedule A-3

The Corporation of the City of Nelson
Effective April 1, 2009

Accepted for
filing _____

SCHEDULE B-1

Small Commercial Service Rates - Urban

Applicable to Urban Customers.

Applicable to small non-residential customers of loads up to 25 KVA where no Demand Meter is installed.

Rate:

Energy Charge - Bi-monthly

Basic Charge \$ 24.21 per period.

All kWh per period @ 8.635 cents per kWh.

Minimum Charge

The minimum charge per period shall be \$ 24.21

Schedule B-1

The Corporation of the City of Nelson
Effective April 1, 2009

Accepted for
filing _____

SCHEDULE B-4

Commercial Service Rates - Rural

Applicable to Rural Customers.

Applicable to small non-residential customers of loads up to 25 KVA where no Demand Meter is installed.

Rate:

Energy Charge - Bi-monthly

Basic Charge \$ 24.95 per period.

All kWh per period @ 8.894 cents per kWh.

Minimum Charge

The minimum charge per period shall be \$ 24.95

Schedule B-4

The Corporation of the City of Nelson

Effective April 1, 2009

Accepted for filing _____

SCHEDULE C-1

General Service Rates - Urban

Rate:

Energy Charge - Monthly

Basic Charge \$ 24.21 per month.

First 15,000 kWh per month @ 8.635 cents per kWh.

All additional kWh per month over 15,000 @ 4.936 cents per kWh.

Demand Charge

\$ 5.13 per KVA of billing demand above 25 KVA.

Minimum Charge

The minimum charge per period shall be the greater of:

- a) \$ 24.21 per month, or
- b) the demand charge

Billing Demand

The greatest of:

- a) The maximum demand in KVA the current billing month, or
- b) Seventy-five percent (75%) of the maximum demand in KVA registered during the months in the previous eleven month period.

Discounts

- a) If service under this rate is metered at Primary Voltage, a metering discount of 1.5% shall apply.
- b) If the Customer supplies the necessary step down transformers and transmission line voltage protective equipment and installs the same on his premises. a further discount of 42.08 cents per KVA of Billing Demand shall apply.

Schedule C-1 The Corporation of the City of Nelson
Effective April 1, 2009

Accepted for
filing _____

SCHEDULE C-4

General Service Rates - Rural

Rate:

Energy Charge - Monthly

Basic Charge \$ 24.95 per month.

First 15,000 kWh per month @ 8.894 cents per kWh.

All additional kWh per month over 15,000 @ 5.035 cents per kWh.

Demand Charge

\$ 5.28 per KVA. of billing demand above 25 KVA.

Minimum Charge

a) \$ 24.95 per month, or

b) the demand charge.

Billing Demand

The greatest of:

a) The maximum demand in KVA the current billing month, or

b) Seventy-five percent (75%) of the maximum demand in KVA registered during the months in the previous eleven month period.

Discounts

a) If service under this rate is metered at Primary Voltage, a metering discount of 1.5% shall apply.

b) If the Customer supplies the necessary step down transformers and transmission line voltage protective equipment and installs the same on his premises, a further discount of 42.08 cents per KVA of Billing Demand shall apply.

Schedule C-4

The Corporation of the City of Nelson
Effective April 1, 2009

Accepted for filing _____

SCHEDULE E-1

City of Nelson Service Rate

Applicable for all City of Nelson (company) accounts for electrical consumption billed bi-monthly.

Rate:

Energy Charge - Monthly

All kWh per month @ 6.580 cents per kWh

Schedule E-1

The Corporation of the City of Nelson
Effective April 1, 2009

Accepted for
filing _____

SCHEDULE F-1

Commercial Flat Service Rates - Urban

Applicable to Urban Customers.

Applicable to Commercial Utilities with usage of energy estimated to be less than 400 kWh per billing period.

Rate: \$36.67 bi-monthly.

Schedule F-1

The Corporation of the City of Nelson
Effective April 1, 2009

Accepted for
filing _____

SCHEDULE F-2

Commercial Flat Service Rates - Rural

Applicable to Rural Customers.

Applicable to Commercial Utilities with usage of energy estimated to be less than 400 kWh per billing period.

Rate: \$40.35 bi-monthly.

Schedule F-2

The Corporation of the City of Nelson
Effective April 1, 2009

Accepted for
filing _____

SCHEDULE G-3

Street or Outdoor Lighting - Urban

Applicable to Urban Customers where the City owns, installs and maintains the lamps.

Applicable only to high intensity distribution lamps as may be approved by the City.

A surcharge of \$ 5.76 per Month will apply if the City installs a pole for the above lighting.

For fixtures with lamp rates different from those above, the Monthly rate shall be 1.5% of the installed cost of the fixtures plus 1.81 cents per watt of the rating of the lamp and ballast.

Maintenance will be conducted by City crews during regular working hours. The customer will be responsible for any willful damage caused by any person or thing.

The original term of the contract shall be for three years and may be renewed for periods of one year until terminated by written notice of at least 30 days by the City or the customer.

Rate:

<u>Lamp Size in Watts</u>	<u>Monthly Charge</u>
150	\$14.89
250	\$18.66

Schedule G-3

The Corporation of the City of Nelson
Effective April 1, 2009

Accepted for
filing _____

SCHEDULE G-4 Street or Outdoor Lighting - Rural

Applicable to Rural Customers where the City owns, installs and maintains the lamps.

Applicable only to high intensity distribution lamps as may be approved by the City.

A surcharge of \$ 5.76 per Month will apply if the City installs a pole for the above lighting.

For fixtures with lamp rates different from those above, the Monthly rate shall be 1.5% of the installed cost of the fixtures plus 2.13 cents per watt of the rating of the lamp and ballast.

Maintenance will be conducted by City crews during regular working hours. The customer will be responsible for any willful damage caused by any person or thing.

The original term of the contract shall be for three years and may be renewed for periods of one year until terminated by written notice of at least 30 days by the City or the customer.

Deposit

The minimum deposit shall be an amount equal to 2 1/2 times the average monthly invoice.

Rate:	<u>Lamp Size in Watts</u>	<u>Monthly Charge</u>
	150	\$16.38
	250	\$20.50

Schedule G-4 The Corporation of the City of Nelson
Effective April 1, 2009

Accepted for
filing _____



ERICA M. HAMILTON
COMMISSION SECRETARY
Commission.Secretary@bcuc.com
web site: <http://www.bcuc.com>

SIXTH FLOOR, 900 HOWE STREET, BOX 250
VANCOUVER, B.C. CANADA V6Z 2N3
TELEPHONE: (604) 660-4700
BC TOLL FREE: 1-800-663-1385
FACSIMILE: (604) 660-1102

Log No. 28477

VIA E-MAIL

jpostlethwaite@nelson.ca

March 19, 2009

Ms. Janet Postlethwaite
Manager of Legislative and Administrative Services
Corporation of the City of Nelson
Suite 101, 310 Ward Street
Nelson, BC V1L 4E8

Dear Ms. Postlethwaite:

Re: Corporation of the City of Nelson
Approval of Electricity Utility Amendment By-Law 3129, 2009

Further to your February 10, 2009 filing for Commission approval of the Electricity Utility Amendment By-Law 3129, 2009 and Commission Order G-20-09, please find enclosed one duly executed set of tariff pages accepted for filing effective April 1, 2009.

Yours truly,

A handwritten signature in black ink, appearing to read "Erica M. Hamilton".

Erica M. Hamilton

dg
Enclosure

RATES & CHARGES

SCHEDULE A-1 Residential Service Rates - Urban

Applicable to Urban Customers.
Applicable to residential or domestic use.
Applicable to domestic water systems with connected load of 5HP or less.

Rate: Basic Charge \$10.57 per period.
 All kWh per period @6.847cents per kWh.

Demand Charge

First 20 kW - nil
Each additional kW per period @ \$4.80 per kW.

Minimum Charge

The minimum charge per period shall be \$10.57

Schedule A-1 The Corporation of the City of Nelson
 Effective April 1, 2009

Accepted for
filing _____

Accepted for filing: **MAR 12 2009**
Effective: **APR 1 2009**
Order No.: **G 20 09**

E. Hamilton
SECRETARY
B.C. UTILITIES COMMISSION

SCHEDULE A-3

Residential Service Rates - Rural

Applicable to Rural Customers.
Applicable to residential or domestic use.
Applicable to common residential use.
Applicable to domestic water systems with connected load of 5HP or less.

Rate:

Energy Charge - Bi-monthly

Basic Charge \$10.57 per period.
All kWh per period @ 6.847 cents per kWh.

Demand Charge

First 20 kW - nil
All additional kW @ \$4.80 per kW.

Minimum Charge

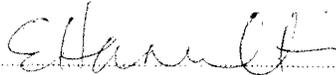
The minimum charge per period shall be \$10.57

Schedule A-3

The Corporation of the City of Nelson
Effective April 1, 2009

Accepted for
filing _____

Accepted for filing: **MAR 12 2009**
Effective: **APR 1 2009**
Order No.: **G 20 09**


SECRETARY
B.C. UTILITIES COMMISSION

SCHEDULE B-1

Small Commercial Service Rates - Urban

Applicable to Urban Customers.

Applicable to small non-residential customers of loads up to 25 KVA where no Demand Meter is installed.

Rate:

Energy Charge - Bi-monthly

Basic Charge \$ 24.21 per period.

All kWh per period @ 8.635 cents per kWh.

Minimum Charge

The minimum charge per period shall be \$ 24.21

Schedule B-1

The Corporation of the City of Nelson

Effective April 1, 2009

Accepted for
filing _____

Accepted for filing: **MAR 12 2009**

Effective: **APR 1 2009**

Order No.: **G 20 09**


SECRETARY
B.C. UTILITIES COMMISSION

SCHEDULE B-4

Commercial Service Rates - Rural

Applicable to Rural Customers.

Applicable to small non-residential customers of loads up to 25 KVA where no Demand Meter is installed.

Rate:

Energy Charge - Bi-monthly

Basic Charge \$ 24.95 per period.

All kWh per period @ 8.894 cents per kWh.

Minimum Charge

The minimum charge per period shall be \$ 24.95

Schedule B-4

The Corporation of the City of Nelson

Effective April 1, 2009

Accepted for filing _____

Accepted for filing

MAR 12 2009
APR 1 2009

Effective:

Order No.:

G 20 09



SECRETARY

B.C. UTILITIES COMMISSION

SCHEDULE C-1

General Service Rates - Urban

Rate:

Energy Charge - Monthly

Basic Charge \$ 24.21 per month.

First 15,000 kWh per month @ 8.635 cents per kWh.

All additional kWh per month over 15,000 @ 4.936 cents per kWh.

Demand Charge

\$ 5.132 per KVA of billing demand above 25 KVA.

Minimum Charge

The minimum charge per period shall be the greater of:

- a) \$ 24.21 per month, or
- b) the demand charge

Billing Demand

The greatest of:

- a) The maximum demand in KVA the current billing month, or
- b) Seventy-five percent (75%) of the maximum demand in KVA registered during the months in the previous eleven month period.

Discounts

- a) If service under this rate is metered at Primary Voltage, a metering discount of 1.5% shall apply.
- b) If the Customer supplies the necessary step down transformers and transmission line voltage protective equipment and installs the same on his premises, a further discount of 42.08 cents per KVA of Billing Demand shall apply.

Schedule C-1 The Corporation of the City of Nelson
Effective April 1, 2009

Accepted for
filing _____

Accepted for filing: **MAR 12 2009**
 Effective: **APR 1 2009**
 Order No.: **G 20 09**

Ethan G.
 SECRETARY
 B.C. UTILITIES COMMISSION

SCHEDULE C-4

General Service Rates - Rural

Rate:

Energy Charge - Monthly

Basic Charge \$ 24.95 per month.

First 15,000 kWh per month @ 8.894 cents per kWh.

All additional kWh per month over 15,000 @ 5.035 cents per kWh.

Demand Charge

\$ 5.281 per KVA. of billing demand above 25 KVA.

Minimum Charge

- a) \$ 24.95 per month, or
- b) the demand charge.

Billing Demand

The greatest of:

- a) The maximum demand in KVA the current billing month, or
- b) Seventy-five percent (75%) of the maximum demand in KVA registered during the months in the previous eleven month period.

Discounts

- a) If service under this rate is metered at Primary Voltage, a metering discount of 1.5% shall apply.
- b) If the Customer supplies the necessary step down transformers and transmission line voltage protective equipment and installs the same on his premises, a further discount of 42.08 cents per KVA of Billing Demand shall apply.

Schedule C-4

The Corporation of the City of Nelson
Effective April 1, 2009

Accepted for filing _____

Accepted for filing: **MAR 12 2009**

Effective: **APR 1 2009**

Order No.: **6 20 09**



SECRETARY

B.C. UTILITIES COMMISSION

SCHEDULE E-1

City of Nelson Service Rate

Applicable for all City of Nelson (company) accounts for electrical consumption billed bi-monthly.

Rate:

Energy Charge - Monthly

All kWh per month @ 6.580 cents per kWh

Schedule E-1

The Corporation of the City of Nelson
Effective April 1, 2009

Accepted for
filing _____

Accepted for filing: **MAR 12 2009** *E. Haney*
Effective: **APR 1 2009** SECRETARY
Order No.: **6 20 09** B.C. UTILITIES COMMISSION

SCHEDULE F-1

Commercial Flat Service Rates - Urban

Applicable to Urban Customers.

Applicable to Commercial Utilities with usage of energy estimated to be less than 400 kWh per billing period.

Rate: \$36.67 bi-monthly.

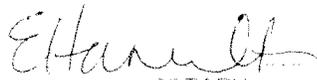
Schedule F-1

The Corporation of the City of Nelson

Effective April 1, 2009

Accepted for
filing _____

Acc. No.: **MAR 12 2009**
Effective: **APR 1 2009**
Order No.: **G 20 09**


SECRETARY
B.C. UTILITIES COMMISSION

SCHEDULE F-2

Commercial Flat Service Rates - Rural

Applicable to Rural Customers.

Applicable to Commercial Utilities with usage of energy estimated to be less than 400 kWh per billing period.

Rate: \$40.35 bi-monthly.

Schedule F-2

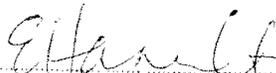
The Corporation of the City of Nelson
Effective April 1, 2009

Accepted for
filing _____

Accepted for filing: **MAR 12 2009**

Effective: **APR 1 2009**

Order No.: **6 20 09**


SECRETARY
B.C. UTILITIES COMMISSION

SCHEDULE G-3

Street or Outdoor Lighting - Urban

Applicable to Urban Customers where the City owns, installs and maintains the lamps.

Applicable only to high intensity distribution lamps as may be approved by the City.

A surcharge of \$ 5.76 per Month will apply if the City installs a pole for the above lighting.

For fixtures with lamp rates different from those above, the Monthly rate shall be 1.5% of the installed cost of the fixtures plus 1.81 cents per watt of the rating of the lamp and ballast.

Maintenance will be conducted by City crews during regular working hours. The customer will be responsible for any willful damage caused by any person or thing.

The original term of the contract shall be for three years and may be renewed for periods of one year until terminated by written notice of at least 30 days by the City or the customer.

Rate:

<u>Lamp Size in Watts</u>	<u>Monthly Charge</u>
150	\$14.89
250	\$18.66

Schedule G-3

The Corporation of the City of Nelson
Effective April 1, 2009

Accepted for filing _____

Accepted for filing: **MAR 12 2009**
Effective: **APR 1 2009**
Order No.: **6 20 09**


SECRETARY
B.C. UTILITIES COMMISSION



Nelson Hydro

Suite 101 – 310 Ward Street, British Columbia V1L 5S4

February 6, 2014

Erica Hamilton
Commissioner Secretary
BC Utilities Commission
Box 250, 900 Howe St.
VANCOUVER BC V6Z 2N3

Sent first via Email and then via Regular Mail

Dear Ms. Hamilton,

Re: Request for Rate Increase – 2014

Please find attached two copies of Bylaw 3277, *Electrical Utility Amendment*, for approval by the BC Utilities Commission. This bylaw amendment includes a 2.85% general rate increase for all classes effective April 1, 2014 which will result in a 1.97% increase in revenue for the year. The primary drivers behind the general rate increase are provided as follows:

- Inflationary increases in the operating budget (e.g. wages and materials) and increased power purchase costs and it is prudent that these increased costs be recovered through a general rate increase. This rate increase will also help fund the longer term capital requirements and an increase to the City dividend.
- Discounts for increased consumption – Commercial: In order to encourage conservation of electricity over the last several years Nelson Hydro has been working toward flattening the commercial rates by reducing the block 2 discount relative to block 1. As of 2013 the commercial rates are flat and staff is recommending that the commercial rates be left flat until such time as the utility conducts a conservation rate analysis.

Page 2 / ...

Page 2

Re: Request for Rate Increase – 2014

The April 1st date of implementation is preferred so that our customers will not receive a rate hike during their peak consumption of power. After the 2014 rate increases Nelson Hydro will continue to have the lowest residential rates of Fortis BC and other municipal hydro utilities, and will have implemented the lowest electrical rate increase in the province at 2.85% versus 3.3% - 9% being contemplated by other BC electrical utilities.

Thank you for the consideration of this rate increase. It would be sincerely appreciated if BCUC is able to approve this increase as soon as possible since it would be advantageous to have the bylaw return to City Council for adoption at its March 3, 2014 Regular meeting in order to become effective by April 1st, 2014.

Please do not hesitate to contact Marg Craig, Nelson Hydro Office Administrator at 250.352.8230 or mcraig@nelson.ca if you require any further information.

Sincerely,



Marg Craig
Nelson Hydro Office Administrator

Copy: Philip Nakoneshny, Director, Rates and Finance
Alex Love, General Manager, Nelson Hydro

THE CORPORATION OF THE CITY OF NELSON

BYLAW NO. 3277

A BYLAW TO AMEND "THE CORPORATION OF THE CITY OF NELSON HYDRO SERVICES BYLAW NO. 3257, 2013"

WHEREAS it is deemed desirable and expedient to amend "The Corporation of the City of Nelson Hydro Services Bylaw No. 3257, 2013" to increase rates to cover the costs of operating the City of Nelson's hydro system;

NOW THEREFORE the Council of the Corporation of the City of Nelson, in open meeting assembled, enacts as follows:

1. Schedule "B" of "The Corporation of the City of Nelson Hydro Services Bylaw No. 3257, 2013" is hereby rescinded and Schedule "B" attached hereto and forming part of this Bylaw is hereby substituted.
2. This Bylaw shall receive the approval of the British Columbia Utilities Commission prior to adoption.
3. This Bylaw may be cited as the "**Electrical Utility Amendment (Hydro Rates 2014) Bylaw No. 3277, 2014.**"
4. This Bylaw shall come into force and effect on April 1st, 2014

READ A FIRST TIME the 3rd day of February, 2014
READ A SECOND TIME the 3rd day of February, 2014
READ A THIRD TIME the 3rd day of February, 2014

RECEIVED the approval of the British Columbia Utilities Commission on the.

FINALLY PASSED AND ADOPTED the day of , 2014

CERTIFIED A TRUE AND CORRECT COPY OF
THE "Electrical Utility Amendment (Hydro Rates 2014)
Bylaw No. 3277, 2014."

Mayor

Manager of Legislative and Administrative Services

Corporate Officer

SCHEDULE "B"
SERVICE DESCRIPTIONS AND RATES

RATES & CHARGES

RATE A-1 Residential Service Rates - Urban

Applicable to Urban Customers
Applicable to residential or domestic use
Applicable to domestic water systems with connected load of 5HP or less

Rate: Basic Charge \$14.15 per period
All kWh per period @ 9.171cents per kWh

Demand Charge

First 20 kW - nil
Each additional kW per period @ \$6.43 per kW

Minimum Charge

The minimum charge per period shall be \$14.15

Rate A-1 The Corporation of the City of Nelson
 April 1, 2014

Accepted for filing _____

SCHEDULE "B"
SERVICE DESCRIPTIONS AND RATES

RATE A-3

Residential Service Rates - Rural

Applicable to Rural Customers

Applicable to residential or domestic use

Applicable to common residential use

Applicable to domestic water systems with connected load of 5HP or less

Rate:

Energy Charge - Bi-monthly

Basic Charge \$14.15 per period

All kWh per period @ 9.171 cents per kWh

Demand Charge

First 20 kW - nil

All additional kW @ \$6.43 per kW

Minimum Charge

The minimum charge per period shall be \$14.15

Rate A-3

The Corporation of the City of Nelson
April 1, 2014

Accepted for filing _____

SCHEDULE "B"
SERVICE DESCRIPTIONS AND RATES

RATE B-1

Small Commercial Service Rates - Urban

Applicable to Urban Customers

Applicable to small non-residential customers of loads up to 25 KVA where no Demand Meter is installed

Rate:

Energy Charge - Bi-monthly

Basic Charge \$ 32.43 per period.

All kWh per period @ 10.452 cents per kWh

Minimum Charge

The minimum charge per period shall be \$ 32.43

Rate B-1

The Corporation of the City of Nelson
April 1, 2014

Accepted for filing _____

SCHEDULE "B"
SERVICE DESCRIPTIONS AND RATES

RATE B-4

Commercial Service Rates - Rural

Applicable to Rural Customers

Applicable to small non-residential customers of loads up to 25 KVA where no Demand Meter is installed

Rate:

Energy Charge - Bi-monthly

Basic Charge \$ 33.42 per period

All kWh per period @ 10.766 cents per kWh

Minimum Charge

The minimum charge per period shall be \$ 33.42

Rate B-4

The Corporation of the City of Nelson
April 1, 2014

Accepted for filing _____

SCHEDULE "B"
SERVICE DESCRIPTIONS AND RATES

RATE C-1

General Service Rates - Urban

Rate:

Energy Charge - Monthly

Basic Charge \$ 32.43 per month

First 15,000 kWh per month @ 9.367 cents per kWh

All additional kWh per month over 15,000 @ 9.367 cents per kWh

Demand Charge

\$ 6.873 per KVA of billing demand above 25 KVA

Minimum Charge

The minimum charge per period shall be the greater of:

- a) \$ 32.43 per month, or
- b) the demand charge

Billing Demand

The greatest of:

- a) The maximum demand in KVA the current billing month, or
- b) Seventy-five percent (75%) of the maximum demand in KVA registered during the months in the previous eleven month period

Discounts

- a) If service under this rate is metered at Primary Voltage, a metering discount of 1.5% shall apply
- b) If the Customer supplies the necessary step down transformers and transmission line voltage protective equipment and installs the same on his premises, a further discount of 56.36 cents per KVA of Billing Demand shall apply

Rate C-1

The Corporation of the City of Nelson
April 1, 2014

Accepted for filing _____

SCHEDULE "B"
SERVICE DESCRIPTIONS AND RATES

RATE C-4

General Service Rates - Rural

Rate:

Energy Charge - Monthly

Basic Charge \$ 33.42 per month

First 15,000 kWh per month @ 9.649 cents per kWh

All additional kWh per month over 15,000 @ 9.649 cents per kWh

Demand Charge

\$7.073 per KVA. of billing demand above 25 KVA

Minimum Charge

- a) \$ 33.42 per month, or
- b) the demand charge

Billing Demand

The greatest of:

- a) The maximum demand in KVA the current billing month, or
- b) Seventy-five percent (75%) of the maximum demand in KVA registered during the months in the previous eleven month period

Discounts

- a) If service under this rate is metered at Primary Voltage, a metering discount of 1.5% shall apply

- b) If the Customer supplies the necessary step down transformers and transmission line voltage protective equipment and installs the same on his premises, a further discount of 56.36 cents per KVA of Billing Demand shall apply

Rate C-4

The Corporation of the City of Nelson
April 1, 2014

Accepted for filing _____

SCHEDULE "B"
SERVICE DESCRIPTIONS AND RATES

RATE E-1

City of Nelson Service Rate

Applicable for all City of Nelson (company) accounts for electrical consumption billed bi-monthly

Rate:

Energy Charge - Monthly

All kWh per month @ 8.813 cents per kWh

Rate E-1

The Corporation of the City of Nelson
April 1, 2014

Accepted for filing _____

SCHEDULE "B"
SERVICE DESCRIPTIONS AND RATES

RATE F-1

Commercial Flat Service Rates - Urban

Applicable to Urban Customers

Applicable to Commercial Utilities with usage of energy estimated to be less than 400 kWh per billing period

Rate:

\$49.11 bi-monthly

Rate F-1

The Corporation of the City of Nelson
April 1, 2014

Accepted for filing _____

SCHEDULE "B"
SERVICE DESCRIPTIONS AND RATES

RATE F-2

Commercial Flat Service Rates - Rural

Applicable to Rural Customers

Applicable to Commercial Utilities with usage of energy estimated to be less than 400 kWh per billing period

Rate:

\$54.05 bi-monthly

Rate F-2

The Corporation of the City of Nelson
April 1, 2014

Accepted for filing _____

SCHEDULE "B"
SERVICE DESCRIPTIONS AND RATES

RATE G-3

Street or Outdoor Lighting - Urban

Applicable to Urban Customers where the City owns, installs and maintains the lamps.

Applicable only to high intensity distribution lamps as may be approved by the City.

A surcharge of \$ 7.71 per Month will apply if the City installs a pole for the above lighting.

For fixtures with lamp rates different from those above, the Monthly rate shall be 1.5% of the installed cost of the fixtures plus 2.42 cents per watt of the rating of the lamp and ballast.

Maintenance will be conducted by City crews during regular working hours. The customer will be responsible for any willful damage caused by any person or thing.

The original term of the contract shall be for three years and may be renewed for periods of one year until terminated by written notice of at least 30 days by the City or the customer.

Rate:

<u>Lamp Size in Watts</u>	<u>Monthly Charge</u>
150	\$19.94
250	\$24.99

Rate G-3

The Corporation of the City of Nelson
April 1, 2014

Accepted for filing _____

SCHEDULE "B"
SERVICE DESCRIPTIONS AND RATES

RATE G-4

Street or Outdoor Lighting - Rural

Applicable to Rural Customers where the City owns, installs and maintains the lamps.

Applicable only to high intensity distribution lamps as may be approved by the City.

A surcharge of \$ 7.71 per Month will apply if the City installs a pole for the above lighting.

For fixtures with lamp rates different from those above, the Monthly rate shall be 1.5% of the installed cost of the fixtures plus 2.86 cents per watt of the rating of the lamp and ballast.

Maintenance will be conducted by City crews during regular working hours. The customer will be responsible for any willful damage caused by any person or thing.

The original term of the contract shall be for three years and may be renewed for periods of one year until terminated by written notice of at least 30 days by the City or the customer.

Deposit

The minimum deposit shall be an amount equal to 2 1/2 times the average monthly invoice.

Rate:

<u>Lamp Size in Watts</u>	<u>Monthly Charge</u>
150	\$21.94
250	\$27.46

Rate G-4

The Corporation of the City of Nelson
April 1, 2014

Accepted for filing _____

SCHEDULE "B"
SERVICE DESCRIPTIONS AND RATES

RATES & CHARGES

RATE M-1 Manual Meter Reading

Applicable to Urban Residential Customers
Applicable to Rural Residential Customers

An optional service is offered to those customers who prefer not to have a radio read meter at their service entrance. A digital non-radio read meter will be installed as an alternate to the standard digital radio read meter.

The customer will be required to pay a onetime "Setup Charge". For each billing cycle thereafter, the customer will be required to pay a "Manual Read Charge" along with the regular residential service rates applicable under Schedule A-1 or Schedule A-3 of this bylaw.

This service may be discontinued if it is not compatible with the Technology, Practices, Procedures or Capacity of the Electric Utility. In the event of program cancellation a refund of the setup fee will be made to any customer who subscribed to the service less than two years prior.

Rate: Setup Charge

Each electric meter \$158.01

Manual Read Charge

Manual Read for each billing cycle \$21.79

Rate M-1 The Corporation of the City of Nelson
April 1, 2014

Accepted for filing _____



ERICA HAMILTON
COMMISSION SECRETARY
Commission.Secretary@bcuc.com
web site: <http://www.bcuc.com>

SIXTH FLOOR, 900 HOWE STREET, BOX 250
VANCOUVER, BC CANADA V6Z 2N3
TELEPHONE: (604) 660-4700
BC TOLL FREE: 1-800-663-1385
FACSIMILE: (604) 660-1102

Log No. 46783

VIA EMAIL
mcraig@nelson.ca

March 7, 2014

Ms. Marg Craig
Office Administrator
Nelson Hydro and PW Operations
City of Nelson
Suite 101 – 310 Ward Street
Nelson, BC V1L 5S4

Dear Ms. Craig:

Re: City of Nelson
Bylaw 3277 Electrical Utility Amendment

Further to your February 6, 2014 filing of Electrical Utility Amendment Bylaw No. 3277, requesting approval of an increase to the City of Nelson's electrical rates effective April 1, 2014, enclosed please find Order G-28-14.

When Nelson Hydro files future Electrical Utility Amendment Bylaws the Commission's review and approval requires additional information on the composition of the rate change and the public notice process. The composition of the rate change must identify the change in each cost component in terms of dollars and percentage. Changes in Nelson Hydro's budget that corresponds to the rate change must also be provided along with explanatory notes. The Commission requires that Nelson Hydro describe the public notice process that it undertook to inform customers about the rate increase, which identifies the information provided, the opportunity for comment, any comments received, and the resolution of the comments.

Yours truly,

A handwritten signature in black ink, appearing to read "Erica Hamilton", written over a horizontal line.

Erica Hamilton

cms
Enclosures



**BRITISH COLUMBIA
UTILITIES COMMISSION**

**ORDER
NUMBER G-28-14**

SIXTH FLOOR, 900 HOWE STREET, BOX 250
VANCOUVER, B.C. V6Z 2N3 CANADA
web site: <http://www.bcuc.com>

TELEPHONE: (604) 660-4700
BC TOLL FREE: 1-800-663-1385
FACSIMILE: (604) 660-1102

**IN THE MATTER OF
the Utilities Commission Act, R.S.B.C. 1996, Chapter 473**

and

**Application by the Corporation of the City of Nelson
for Approval of Electrical Utility Amendment Bylaw No. 3277, 2014**

BEFORE: L.F. Kelsey, Commissioner
N.E. MacMurchy, Commissioner
B.A. Magnan, Commissioner March 6, 2014
D.M. Morton, Commissioner
C. van Wermeskerken, Commissioner

O R D E R

WHEREAS:

- A. On February 6, 2014, the Corporation of the City of Nelson (the City or Nelson Hydro) applied to the British Columbia Utilities Commission (Commission) for approval of Electrical Utility Amendment Bylaw No. 3277, 2014 to increase, effective April 1, 2014, its electrical rates by 2.85 percent;
- B. The Bylaw rate schedules include rates pertaining to the provision of electrical service to customers inside and outside of the City's municipal boundaries;
- C. The electrical utility rate increase is required due to increases in Nelson Hydro's operating costs, including increases in power purchase costs from its supplier FortisBC Inc. that were approved by Commission Order G-151-13; and
- E. The Commission reviewed Electrical Utility Amendment Bylaw No. 3277, 2014 and rate schedules, and finds that an electrical utility rate increase is necessary.

NOW THEREFORE the Commission orders as follows:

- 1. The Commission approves for the Corporation of the City of Nelson and accepts for filing Electrical Utility Amendment Bylaw No. 3277, 2014 incorporating a 2.85 percent general rate increase to customers outside of its municipal boundaries, effective April 1, 2014.

**BRITISH COLUMBIA
UTILITIES COMMISSION**

**ORDER
NUMBER** G-28-14

2

2. The Corporation of the City of Nelson, by way of a customer notice included in the next billing, must inform customers outside of its municipal boundaries of the rate increases.
3. The Corporation of the City of Nelson must provide the Commission with a final certified copy of Electrical Utility Amendment Bylaw No. 3277, 2014 following all approvals.

DATED at the City of Vancouver, in the Province of British Columbia, this TH7 day of March 2014.

BY ORDER



D.M. Morton
Commissioner

THE CORPORATION OF THE CITY OF NELSON

BYLAW NO. 3277

A BYLAW TO AMEND "THE CORPORATION OF THE CITY OF NELSON HYDRO SERVICES BYLAW NO. 3257, 2013"

WHEREAS it is deemed desirable and expedient to amend "The Corporation of the City of Nelson Hydro Services Bylaw No. 3257, 2013" to increase rates to cover the costs of operating the City of Nelson's hydro system;

NOW THEREFORE the Council of the Corporation of the City of Nelson, in open meeting assembled, enacts as follows:

1. Schedule "B" of "The Corporation of the City of Nelson Hydro Services Bylaw No. 3257, 2013" is hereby rescinded and Schedule "B" attached hereto and forming part of this Bylaw is hereby substituted.
2. This Bylaw shall receive the approval of the British Columbia Utilities Commission prior to adoption.
3. This Bylaw may be cited as the "**Electrical Utility Amendment (Hydro Rates 2014) Bylaw No. 3277, 2014.**"
4. This Bylaw shall come into force and effect on April 1st, 2014

READ A FIRST TIME the 3rd day of February, 2014
READ A SECOND TIME the 3rd day of February, 2014
READ A THIRD TIME the 3rd day of February, 2014

RECEIVED the approval of the British Columbia Utilities Commission on the.

FINALLY PASSED AND ADOPTED the day of , 2014

CERTIFIED A TRUE AND CORRECT COPY OF
THE "Electrical Utility Amendment (Hydro Rates 2014)
Bylaw No. 3277, 2014."

Mayor

Manager of Legislative and Administrative Services

Corporate Officer

SCHEDULE "B"
SERVICE DESCRIPTIONS AND RATES

RATES & CHARGES

RATE A-1 Residential Service Rates - Urban

Applicable to Urban Customers
Applicable to residential or domestic use
Applicable to domestic water systems with connected load of 5HP or less

Rate: Basic Charge \$14.15 per period
All kWh per period @ 9.171cents per kWh

Demand Charge

First 20 kW - nil
Each additional kW per period @ \$6.43 per kW

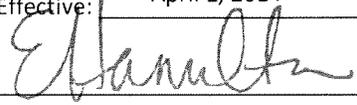
Minimum Charge

The minimum charge per period shall be \$14.15

Rate A-1 The Corporation of the City of Nelson
April 1, 2014

Accepted for Filing: March 6, 2014
Order G-28-14

Effective: April 1, 2014



Commission Secretary

SCHEDULE "B"
SERVICE DESCRIPTIONS AND RATES

RATE A-3

Residential Service Rates - Rural

Applicable to Rural Customers
Applicable to residential or domestic use
Applicable to common residential use
Applicable to domestic water systems with connected load of 5HP or less

Rate:

Energy Charge - Bi-monthly

Basic Charge \$14.15 per period
All kWh per period @ 9.171 cents per kWh

Demand Charge

First 20 kW - nil
All additional kW @ \$6.43 per kW

Minimum Charge

The minimum charge per period shall be \$14.15

Rate A-3

The Corporation of the City of Nelson
April 1, 2014

Accepted for Filing: March 6, 2014

Order G-28-14

Effective: April 1, 2014



Commission Secretary

SCHEDULE "B"
SERVICE DESCRIPTIONS AND RATES

RATE B-1

Small Commercial Service Rates - Urban

Applicable to Urban Customers

Applicable to small non-residential customers of loads up to 25 KVA where no Demand Meter is installed

Rate:

Energy Charge - Bi-monthly

Basic Charge \$ 32.43 per period.

All kWh per period @ 10.452 cents per kWh

Minimum Charge

The minimum charge per period shall be \$ 32.43

Rate B-1

The Corporation of the City of Nelson
April 1, 2014

Accepted for Filing: March 6, 2014

Order G-28-14

Effective: April 1, 2014



Commission Secretary

SCHEDULE "B"
SERVICE DESCRIPTIONS AND RATES

RATE B-4

Commercial Service Rates - Rural

Applicable to Rural Customers

Applicable to small non-residential customers of loads up to 25 KVA where no Demand Meter is installed

Rate:

Energy Charge - Bi-monthly

Basic Charge \$ 33.42 per period

All kWh per period @ 10.766 cents per kWh

Minimum Charge

The minimum charge per period shall be \$ 33.42

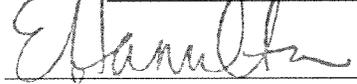
Rate B-4

The Corporation of the City of Nelson
April 1, 2014

Accepted for Filing: March 6, 2014

Order G-28-14

Effective: April 1, 2014



Commission Secretary

SCHEDULE "B"
SERVICE DESCRIPTIONS AND RATES

RATE C-1

General Service Rates - Urban

Rate:

Energy Charge - Monthly

Basic Charge \$ 32.43 per month

First 15,000 kWh per month @ 9.367 cents per kWh

All additional kWh per month over 15,000 @ 9.367 cents per kWh

Demand Charge

\$ 6.873 per KVA of billing demand above 25 KVA

Minimum Charge

The minimum charge per period shall be the greater of:

- a) \$ 32.43 per month, or
- b) the demand charge

Billing Demand

The greatest of:

- a) The maximum demand in KVA the current billing month, or
- b) Seventy-five percent (75%) of the maximum demand in KVA registered during the months in the previous eleven month period

Discounts

- a) If service under this rate is metered at Primary Voltage, a metering discount of 1.5% shall apply
- b) If the Customer supplies the necessary step down transformers and transmission line voltage protective equipment and installs the same on his premises, a further discount of 56.36 cents per KVA of Billing Demand shall apply

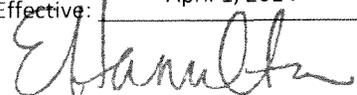
Rate C-1

The Corporation of the City of Nelson
April 1, 2014

Accepted for Filing: March 6, 2014

Order G-28-14

Effective: April 1, 2014



Commission Secretary

SCHEDULE "B"
SERVICE DESCRIPTIONS AND RATES

RATE C-4

General Service Rates - Rural

Rate:

Energy Charge - Monthly

Basic Charge \$ 33.42 per month

First 15,000 kWh per month @ 9.649 cents per kWh

All additional kWh per month over 15,000 @ 9.649 cents per kWh

Demand Charge

\$7.073 per KVA. of billing demand above 25 KVA

Minimum Charge

a) \$ 33.42 per month, or

b) the demand charge

Billing Demand

The greatest of:

a) The maximum demand in KVA the current billing month, or

b) Seventy-five percent (75%) of the maximum demand in KVA registered during the months in the previous eleven month period

Discounts

a) If service under this rate is metered at Primary Voltage, a metering discount of 1.5% shall apply

b) If the Customer supplies the necessary step down transformers and transmission line voltage protective equipment and installs the same on his premises, a further discount of 56.36 cents per KVA of Billing Demand shall apply

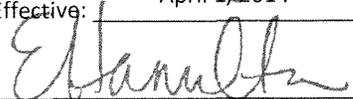
Rate C-4

The Corporation of the City of Nelson
April 1, 2014

Accepted for Filing: March 6, 2014

Order G-28-14

Effective: April 1, 2014



Commission Secretary

SCHEDULE "B"
SERVICE DESCRIPTIONS AND RATES

RATE E-1

City of Nelson Service Rate

Applicable for all City of Nelson (company) accounts for electrical consumption billed bi-monthly

Rate:

Energy Charge - Monthly

All kWh per month @ 8.813 cents per kWh

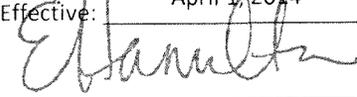
Rate E-1

The Corporation of the City of Nelson
April 1, 2014

Accepted for Filing: March 6, 2014

Order G-28-14

Effective: April 1, 2014



Commission Secretary

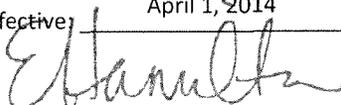
SCHEDULE "B"
SERVICE DESCRIPTIONS AND RATES

RATE F-1 Commercial Flat Service Rates - Urban

Applicable to Urban Customers
Applicable to Commercial Utilities with usage of energy estimated to be less than 400 kWh per billing period

Rate: \$49.11 bi-monthly

Rate F-1 The Corporation of the City of Nelson
April 1, 2014

Accepted for Filing: March 6, 2014
Order G-28-14
Effective: April 1, 2014


Commission Secretary

SCHEDULE "B"
SERVICE DESCRIPTIONS AND RATES

RATE F-2

Commercial Flat Service Rates - Rural

Applicable to Rural Customers

Applicable to Commercial Utilities with usage of energy estimated to be less than 400 kWh per billing period

Rate: \$54.05 bi-monthly

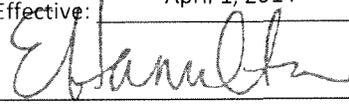
Rate F-2

The Corporation of the City of Nelson
April 1, 2014

Accepted for Filing: March 6, 2014

Order G-28-14

Effective: April 1, 2014



Commission Secretary

SCHEDULE "B"
SERVICE DESCRIPTIONS AND RATES

RATE G-3

Street or Outdoor Lighting - Urban

Applicable to Urban Customers where the City owns, installs and maintains the lamps.

Applicable only to high intensity distribution lamps as may be approved by the City.

A surcharge of \$ 7.71 per Month will apply if the City installs a pole for the above lighting.

For fixtures with lamp rates different from those above, the Monthly rate shall be 1.5% of the installed cost of the fixtures plus 2.42 cents per watt of the rating of the lamp and ballast.

Maintenance will be conducted by City crews during regular working hours. The customer will be responsible for any willful damage caused by any person or thing.

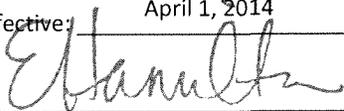
The original term of the contract shall be for three years and may be renewed for periods of one year until terminated by written notice of at least 30 days by the City or the customer.

Rate:

<u>Lamp Size in Watts</u>	<u>Monthly Charge</u>
150	\$19.94
250	\$24.99

Rate G-3

The Corporation of the City of Nelson
April 1, 2014

Accepted for Filing: March 6, 2014
Order G-28-14
Effective: April 1, 2014

Commission Secretary

SCHEDULE "B"
SERVICE DESCRIPTIONS AND RATES

RATE G-4

Street or Outdoor Lighting - Rural

Applicable to Rural Customers where the City owns, installs and maintains the lamps.

Applicable only to high intensity distribution lamps as may be approved by the City.

A surcharge of \$ 7.71 per Month will apply if the City installs a pole for the above lighting.

For fixtures with lamp rates different from those above, the Monthly rate shall be 1.5% of the installed cost of the fixtures plus 2.86 cents per watt of the rating of the lamp and ballast.

Maintenance will be conducted by City crews during regular working hours. The customer will be responsible for any willful damage caused by any person or thing.

The original term of the contract shall be for three years and may be renewed for periods of one year until terminated by written notice of at least 30 days by the City or the customer.

Deposit

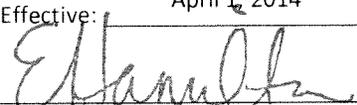
The minimum deposit shall be an amount equal to 2 1/2 times the average monthly invoice.

Rate:

<u>Lamp Size in Watts</u>	<u>Monthly Charge</u>
150	\$21.94
250	\$27.46

Rate G-4

The Corporation of the City of Nelson
April 1, 2014

Accepted for Filing: March 6, 2014
Order G-28-14
Effective: April 1, 2014

Commission Secretary

SCHEDULE "B"
SERVICE DESCRIPTIONS AND RATES

RATES & CHARGES

RATE M-1 Manual Meter Reading

Applicable to Urban Residential Customers
Applicable to Rural Residential Customers

An optional service is offered to those customers who prefer not to have a radio read meter at their service entrance. A digital non-radio read meter will be installed as an alternate to the standard digital radio read meter.

The customer will be required to pay a onetime "Setup Charge". For each billing cycle thereafter, the customer will be required to pay a "Manual Read Charge" along with the regular residential service rates applicable under Schedule A-1 or Schedule A-3 of this bylaw.

This service may be discontinued if it is not compatible with the Technology, Practices, Procedures or Capacity of the Electric Utility. In the event of program cancellation a refund of the setup fee will be made to any customer who subscribed to the service less than two years prior.

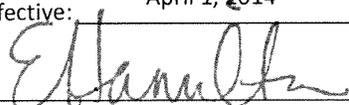
Rate: Setup Charge

Each electric meter \$158.01

Manual Read Charge

Manual Read for each billing cycle \$21.79

Rate M-1 The Corporation of the City of Nelson
April 1, 2014

Accepted for Filing: March 6, 2014
Order G-28-14
Effective: April 1, 2014

Commission Secretary

Nelson Hydro – Cost of Service Analysis and Rate Design Application, Project No. 1599166	Submitted: March 15, 2021
Response to British Columbia Utilities Commission Information Request (IR) No. 1	Appendix 1-45.6

APPENDIX 1-45.6



CITY OF NELSON
Composite Map
City Expansion
by Years

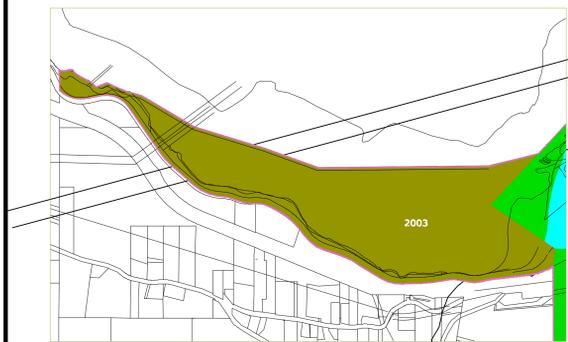
Legend

Description of Property

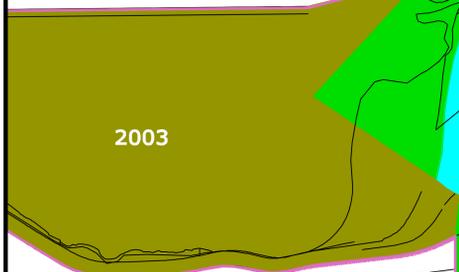
- District Lot Boundary
- Municipal Boundary 2007
- District Lot 95 Surveyed 1888
- Surveyed Lots 1888 (Original Government Townsite)
- Surveyed Lots 1889
- Surveyed Lots 1890
- District Lot 150 Surveyed 1890 (HOOVER Addition)
- District Lot 96 Surveyed 1891 (HUME Addition)
- Part of District Lot 96 incorporated into City
- District Lot 58A Surveyed 1888 (ANDERSON)
- City Expansion 1961: Parts of D.L.s 304, 182, 96, 183 & 97
- City Expansion 1974
- City Expansion 1975
- North Shore Expansion 1991
- Rosemont Expansion 1991
- Rosemont Expansion 1992
- North Shore Expansion 1993
- Blewett & West Nelson Expansion 2003
- Perrier Lane Expansion 2007

Date Incorporated into City of Nelson

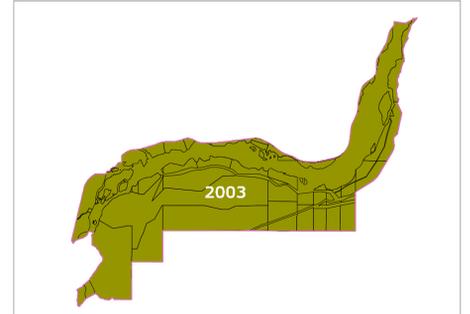
- 1897 } Original City of Nelson
- 1897
- 1921
- 1921
- 1961
- 1974
- 1975
- 1991
- 1991
- 1992
- 1993
- 2003
- 2007



West Nelson
(Insert 1)



See
Insert 1



Blewett Dam
(Insert 2)

