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Nelson Hydro

Cost of Service Analysis and Rate Design

Decision
and Order G-196-22

July 19, 2022

Before:
R.I Mason, Panel Chair
A.K. Fung, QC, Commissioner
T.A. Loski, Commissioner

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Executive Summary

Nelson Hydro filed its 2019 Cost of Service Analysis (2019 COSA) and Rate Design Application (RDA) on November 27, 2020 (Application). Nelson Hydro submits its 2019 COSA for approval and proposes a change to the Rural residential rate structure to realign rates based on the 2019 COSA. In the Application, Nelson Hydro also proposes a return on equity (ROE) to be recovered from Rural Ratepayers.

Nelson Hydro is unique as it is the only municipally-owned utility in British Columbia (BC) that serves customers outside of its municipal boundaries and possesses generation capacity with its transmission and distribution systems. Nelson Hydro is regulated by the British Columbia Utilities Commission (BCUC) with regard to the non-municipal (Rural) service area only, while its municipal (Urban) service area is excluded from BCUC regulation.

The Panel reviewed this Application by way of a public written hearing, which included three rounds of BCUC and intervener information requests (IR); written final arguments; sur-replies; and response to sur-replies. Seven interveners registered in the proceeding, and the BCUC received 145 letters of comment from members of the public.

In this Decision, the Panel makes the following findings and determinations:

COSA

The Panel approves Nelson Hydro's 2019 COSA subject to Nelson Hydro amending the 2019 COSA in accordance with the Panel's directives in this decision. Some aspects of the 2019 COSA with which the Panel disagrees, such as the assignment of generation and power purchase costs, are likely to have a material effect on the ultimate allocation of costs between the Rural and Urban customer classes, and consequently on Rural customers' rates.

The Panel directs Nelson Hydro to recalculate its 2019 COSA in a manner compliant with the directions set out in this decision and to submit the modified 2019 COSA to this Panel within 30 days after the issuance of this decision (Modified 2019 COSA). The Panel directs Nelson Hydro to use the Modified 2019 COSA as the basis for its subsequent revenue requirement applications.

The key aspects of Nelson Hydro's 2019 COSA with which the Panel disagrees are as follows:

Nelson Hydro should include all other revenues associated with its provision of electricity service in its revenue requirement. This enables the BCUC to ensure that the COSA properly allocates these other revenues along with Nelson Hydro's costs.

The Panel does not accept Nelson Hydro's proposed assignment of 100 percent of its generation assets and costs to Urban ratepayers because:

- Nelson Hydro's generation assets are used by both Urban and Rural customers;
- There is no sound regulatory reason for assigning the generation assets and costs 100 percent to Urban customers; and
- Nelson Hydro is not obligated by the *Community Charter* to assign 100 percent of its generating assets and costs to Urban customers.

For the same reasons, the Panel does not accept Nelson Hydro's proposed assignment of power purchase costs between Rural and Urban ratepayers.

The Panel does not accept Nelson Hydro's functionalization of transmission and distribution assets and the costs related to operating and maintaining these assets. Nelson Hydro uses different classification factors to classify transmission and distribution assets and their related costs, and functionalizing them separately would bring more consistency and transparency.

The Panel does not accept Nelson Hydro's functionalization of general and administration costs because functionalizing the customer billing and customer service representatives' costs separately would bring more consistency and transparency.

The Panel does not accept Nelson Hydro's proposed classification of power purchase costs because the classification only considers Nelson Hydro's Rural power purchases and not its total power purchases. The Panel directs Nelson Hydro to recalculate the COSA classifying its power purchase costs to demand, energy and customer using FBC's total charges for Nelson Hydro's power purchases for both Rural and Urban customers.

The Panel does not accept Nelson Hydro's classification of transmission assets 100 percent to demand because radial transmission lines that connect generating plants to an integrated system should be classified on the same basis as the underlying generation assets. The Panel directs Nelson Hydro to recalculate its COSA with 92 percent of transmission assets classified to demand and eight percent of transmission assets classified to energy.

The Panel does not accept Nelson Hydro's classification of distribution assets, other than streetlight assets, based on the aggregate classification of British Columbia Hydro and Power Authority's (BC Hydro) distribution assets because the Panel does not accept Nelson Hydro's choice of BC Hydro as an appropriate comparator. The Panel directs Nelson Hydro to recalculate its COSA with its distribution assets, other than streetlight assets, classified based on the aggregate classification of FBC's distribution assets.

The Panel does not accept Nelson Hydro's proposed method of classifying the combined accumulated amortization of transmission and distribution plant based on the average classification factors of transmission and distribution plant because Nelson Hydro acknowledges that classifying accumulated amortization of transmission and distribution plant separately would yield more accurate results. The Panel directs Nelson Hydro to recalculate its COSA with the accumulated amortization of each function classified separately, based on the average classification factors of the associated plant in service.

The Panel does not accept Nelson Hydro's use of FortisBC Inc.'s (FBC) general commercial customer class as the appropriate comparator for the load and coincidence factors for Nelson Hydro's Commercial customer class because FBC's Small Commercial Customer class is a better comparator. The Panel directs Nelson Hydro to recalculate the COSA using the load and coincidence factors of the Small Commercial class from FBC's 2009 COSA to estimate the load and coincidence factors for its own Commercial Class.

The Panel does not accept Nelson Hydro's proposal to use a weighting of three for its commercial customers to allocate its commercial customer-related costs because FBC uses a weighting of 1.8 for its Small Commercial Service customer class and this is a better comparator. The Panel directs Nelson Hydro to recalculate its COSA

with a weighting of 1.8 for its commercial customers when allocating costs of meters, line transformers and related costs.

Rate of Return

The Panel finds that a deemed debt to equity ratio of 50 percent/50 percent is appropriate for Nelson Hydro's Rural operations for the purpose of setting rates. The Panel considers the deemed equity component of 50 percent is appropriate because:

1) Nelson Hydro faces higher risk than the benchmark utility and therefore should have a higher deemed equity than the benchmark utility; and
2) Nelson Hydro is able to achieve an actual debt level of 50 percent.

The Panel finds that an ROE based on a 50-basis-point premium above the benchmark utility rate yielding an ROE of 9.25 percent is appropriate for Nelson Hydro's rural operations. The Panel considers that level of ROE represents a fair reflection of the risks associated with Nelson Hydro's rural operations.

The Panel sees no reason to deviate from the BCUC's current practice of setting the rate of return on equity for utilities in BC using a premium over the benchmark utility and finds this to be appropriate for Nelson Hydro's Rural operations.

The Panel determines that Nelson Hydro's Rural customer rates should be set based on the approved rate of return on equity, and the approved deemed capital structure effective the date the approved COSA and rate design go into effect. Nelson Hydro has proposed to phase in its rate of return on equity over three years. The Panel considers that such an approach would result in rates during the phase-in period to be insufficient to allow Nelson Hydro to earn a fair return, thus being in contravention of the Fair Return Standard.

The Panel finds that Nelson Hydro's proposed use of the interest rate of 4.11 percent for the cost of debt in accordance with the municipal spending authority is appropriate for the purpose of setting rates for its Rural operations.

Rate Design

The Panel makes no determination to approve Nelson Hydro's rate design proposal. Until Nelson Hydro makes the changes to its 2019 COSA required by the Panel, the Panel does not know whether changes to the rates for Nelson Hydro's Rural customers are justified. Therefore, it is premature to approve rate design changes, the purpose of which is to implement a rate increase for Nelson Hydro's Rural customers, until the Panel has reviewed the results of the Modified 2019 COSA.

The Panel considers that any changes to the rates of Nelson Hydro's Rural customers that arise as a result of the COSA should be made prospectively, once the COSA is finalized, and that the changes should be aligned with the changes that Nelson Hydro makes on January 1 as a result of a revenue requirements proceeding. Therefore, the earliest date on which the rate design changes could be made is January 1, 2023.

1.0 Introduction

Nelson Hydro filed its 2019 Cost of Service Analysis (COSA) and Rate Design Application (RDA) on November 27, 2020 (Application). Nelson Hydro submits its COSA for approval and proposes a change to the Rural residential rate structure to realign rates based on the COSA.[1] Nelson Hydro is unique as it is the only municipally-owned utility in British Columbia (BC) that serves customers outside of its municipal boundaries and possesses generation capacity with its transmission and distribution systems.[2] Nelson Hydro is regulated by the British Columbia Utilities Commission (BCUC) with regard to the non-municipal (Rural) service area only, while its municipal (Urban) service area is excluded from BCUC regulation.[3]

The rate design proposals in this Application include a COSA study and Return on Equity (ROE) Report (ROE Report) prepared by InterGroup Consultants Ltd. (InterGroup).[4] Nelson Hydro states that the COSA was conducted consistent with standard utility practice to determine whether each rate schedule adequately recovers its allocated cost of service.[5] The ROE Report provides information for the approvals requested in this Application.[6]

1.1 Approvals Sought

Nelson Hydro summarizes the final approvals sought pursuant to Sections 58 to 61 of the *Utilities Commission Act* (UCA) as follows:[7]

1. A proposed ROE for the Rural service area of 9.25 percent to be used for future rate applications;
2. Nelson Hydro's policies approved by City Council relating to the non-municipal portion of Nelson Hydro (i.e. the Allocation Factors Policy, Generation Rates Policy, Debt Policy, and Deferral Account Policy);
3. The COSA; and
4. Proposed rate changes to Rural residential rates effective September 1, 2021 (to be phased-in over a three-year period with follow-up adjustments, effective September 1, 2022 and September 1, 2023).

In response to Information Request (IR) No. 2, Nelson Hydro subsequently withdrew the approval sought for its policies approved by the City Council relating to its non-municipal customers.[8]

1.2 Background

In the Nelson Hydro 2017 Rate Application Reasons for Decision and Order G-119-17 dated August 8, 2017 (2017 Decision), the BCUC noted it was the first time in more than two decades that a public proceeding had been held with a designated panel to review non-municipal customer rates for Nelson Hydro.[9] During the 2017 proceeding, Nelson Hydro stated that it expected to be able to file a COSA study, along with the proposals to

[1] Exhibit B-1, Section 1.1, p. 1.
[2] Exhibit B-1, Section 1.1, p. 1.
[3] Exhibit B-1, Section 1.1, p. 1.
[4] Exhibit B-1, Section 1.1, p. 1.
[5] Exhibit B-1, Section 1.1, p. 1.
[6] Exhibit B-1, Section 1.1, p. 1.
[7] Exhibit B-1, Section 2.3, p. 2.
[8] Exhibit B-12, BCUC IR 75.2, 76.1,77.1, and 78.1.
[9] Nelson Hydro 2017 Decision and Order G-119-17 dated August 8, 2017, p. 3.

deal with the study implications, if any, in late 2017, and that the proposals may include rate rebalancing between the various customer classes, including Urban versus Rural differences.[10] Nelson Hydro explained that the COSA analysis, performed as part of the study, involves two major activities:

- Converting Nelson Hydro's system of accounts and the data recorded in municipal accounting formats to a reporting format more consistent with regulatory standards. This included such items as amortization, capital reserves and water license transfers, and would involve generating regulatory standard calculations to report ROE and shareholder payments.
- Functionalizing, classifying and allocating costs to the various customer classes, distinguishing between Urban and Rural customers, as well as Residential and General Service customers.[11]

In 2017, the BCUC cautioned Nelson Hydro to carefully consider any potential proposals for rate rebalancing, particularly with regard to any adverse impacts to certain customer classes that may result from this rate rebalancing.[12]

Nelson Hydro advised in its 2018 rate application that it was not able to complete the COSA study and clarified that it expected to have the documents completed by the end of June 2018.[13] Nelson Hydro indicated that the calculation of ROE and shareholder payments would be addressed in the COSA study then.[14] Since the COSA study's delayed completion and the lack of the study's results continued to impact Nelson Hydro's ability to provide certain information related to issues, such as ROE and other regulatory accounting matters, the BCUC in 2018 directed Nelson Hydro to file the COSA study and to fully address all issues identified by the BCUC in the 2017 Decision as part of the 2019 rate application.[15]

In the 2019 rate application, Nelson Hydro included a COSA study dated December 2018 with an amendment dated February 28, 2019 (together the 2017 COSA Study). However, Nelson Hydro stated that the results were provided "for information purposes rather than a rational [sic] for the 2019 rate change" and that there is "no impact from [the] Cost of Service Study filed by Nelson Hydro to the rate increase sought in the current application for [the] Rural service area."[16] Nelson Hydro added that it anticipated filing a COSA and RDA in "late 2019 for the year 2020."[17]

The BCUC in 2019 found that Nelson Hydro had failed to comply with the BCUC directive in the 2018 Decision to file a COSA, as the intention of the directive was for the BCUC to have the ability to review and examine the issues of "ROE, utility return, and other regulatory matters." Including the COSA as an appendix with no approval being sought constituted a failure to address the directive.[18] Nelson Hydro acknowledges that it did not comply

[10] Nelson Hydro 2017 Rate Application Reasons for Decision (2017 Decision) and Order G-119-17 dated August 8, 2017, p. 21; Nelson Hydro 2017 Rate Application, Exhibit B-3, BCUC IR 13.3.
[11] Nelson Hydro 2017 Decision and Order G-119-17 dated August 8, 2017, p. 21.
[12] Nelson Hydro 2017 Decision and Order G-119-17 dated August 8, 2017, p. 22.
[13] Nelson Hydro 2018 Rate Application Reasons for Decision (2018 Decision) and Order G-124-18 dated July 11, 2018, p. 4.
[14] Nelson Hydro 2018 Decision and Order G-124-18 dated July 11, 2018, p. 5.
[15] Nelson Hydro 2018 Decision and Order G-124-18 dated July 11, 2018, p. 12.
[16] Nelson Hydro 2019 Rate Application Reasons for Decision (2019 Decision) and Order G-274-19 dated November 7, 2019, p. 6; Nelson Hydro 2019 Rate Application, Exhibit B-1, p. 10.
[17] Nelson Hydro 2019 Decision and Order G-274-19 dated November 7, 2019, p. 6.
[18] Nelson Hydro 2019 Decision and Order G-274-19 dated November 7, 2019, p. 6.

with the BCUC's directive in the 2018 Decision, but states it is hopeful the comprehensiveness of the Application evidences that it is now approaching its regulatory obligations with "renewed rigorousness." [19]

1.3 Regulatory Process

In accordance with the regulatory timetables established by the BCUC, the Panel reviewed this Application by way of a public written hearing, which included three rounds of BCUC and intervener IRs; written final arguments; sur-replies; and response to sur-replies.[20]

The following seven interveners registered in the proceeding:

- Residential Consumer Intervenor Association (RCIA, formerly Residential Consumer Intervenor Group – RCIG);
- BC Old Age Pensioners' Organization, Council of Senior Citizens' Organizations of BC, Disability Alliance BC, and Tenant Resource and Advisory Centre (BCOAPO);
- Ms. Ramona Faust, Area E Director of Regional District of Central Kootenay;
- Mr. Thomas Newell, Area F Director of Regional District of Central Kootenay;
- Mr. David Okros;
- FortisBC Inc. (FBC); and
- Nelson and District Chamber of Commerce.

RCIA, BCOAPO, Ms. Faust, Mr. Newell and Mr. Okros participated in IRs and/or filed Final Arguments.

The BCUC received 145 letters of comment.

On December 9, 2021, the BCUC denied Nelson Hydro's request for interim approval to implement Phase 1 of its proposed increase of 5.72 percent to its Rural residential customer rate, effective January 1, 2022.[21] The BCUC explained that Nelson Hydro's Rural residential customer rates were already interim as this had already been granted by the BCUC[22], and further that the implementation of the proposed 5.72 percent increase was premature and that Nelson Hydro was not harmed by delaying any changes that may arise from the BCUC's decision relating to the 2019 COSA .

1.4 Legislative Framework

The UCA sets out the framework for the BCUC's approval of public utility rates, which provides, in part, the following:

[19] Exhibit B-1, pp. 6–7.
[20] Orders G-346-20, G-117-21, G-224-21, G-278-21, and G-387-21.
[21] Order G-363-21.
[22] Order G-342-21.

- Sections 58 and 60 include mandatory considerations, including the requirement that rates not be "unjust, unreasonable, unduly discriminatory or unduly preferential" and authorize the BCUC to establish rates;
- Section 59(4) states that it is a question of fact, of which the commission is the sole judge, (a) whether a rate is unjust or unreasonable, (b)whether, in any case, there is undue discrimination, preference, prejudice or disadvantage in respect of a rate or service, or (c) whether a service is offered or provided under substantially similar circumstances and conditions;
- Section 59(5) provides that a rate is "unjust" or "unreasonable" if the rate is (a) more than a fair and reasonable charge for service of the nature and quality provided by the utility, (b) insufficient to yield a fair and reasonable compensation for the service provided by the utility, or a fair and reasonable return on the appraised value of its property, or (c) unjust and unreasonable for any other reason; and
- Section 60(1)(b.1) states that in setting a rate, the BCUC may use "any mechanism, formula or other method of setting the rate that it considers advisable and may order that the rate derived from such a mechanism, formula or other method is to remain in effect for a specified period."

1.4.1 Municipal Legislative Framework

Relevant provisions of the *Community Charter* are as follows:

Municipal purposes

7 The purposes of a municipality include

(a) providing for good government of its community,
(b) providing for services, laws and other matters for community benefit,
(c) providing for stewardship of the public assets of its community, and
(d) fostering the economic, social and environmental well-being of its community.

Fundamental powers

8 (1) A municipality has the capacity, rights, powers and privileges of a natural person of full capacity.
(2) A municipality may provide any service that the council considers necessary or desirable, and may do this directly or through another public authority or another person or organization.

[…]

(10) Powers provided to municipalities under this section

(a) are subject to any specific conditions and restrictions established under this or another Act, and
(b) must be exercised in accordance with this Act unless otherwise provided.

1.5 Structure of the Decision

This decision contains the following:

- In section 2, the Panel considers Nelson Hydro's 2019 COSA and its proposed assignment, functionalization, classification and allocation of assets and costs;
- In section 3, the Panel considers the appropriate capital structure and rate of return for Nelson Hydro;

- In section 4, the Panel considers Nelson Hydro's proposed rate design, including a proposal for phasing in changes to its Rural residential rates; and
- In section 5, the Panel summarizes its directives in the decision.

2.0 Cost of Service Analysis

The COSA study is necessary to determine the cost of service for the Rural operations. The following section addresses the 2019 COSA and the rate implications for Nelson Hydro's Rural customer classes. The topics in this section are:

- An overview of the 2019 COSA;
- The revenue requirement on which the 2019 COSA is based;
- Issues arising from the 2019 COSA; and
- The Panel's overall determination on the 2019 COSA.

2.1 Overview of the 2019 COSA

Nelson Hydro's 2019 COSA, performed by InterGroup, provides the basis for the rate design recommendations in the Application that are addressed in section 4 below. Nelson Hydro states that the COSA is being filed for approval "to fully address all issues identified by the BCUC in the 2017 Decision as part of the 2019 rate application" and to justify the differentiation of rates between Rural and Urban service areas.[23]

The purpose of a COSA study, as explained by Nelson Hydro, is to determine the extent to which all its customers are paying an equitable share of its costs, and whether Rural customers are fully covering their costs consistent with the cost-of-service concept built into ratemaking by the rate regulator overseeing Rural service rates.[24] InterGroup notes that Nelson Hydro requires a COSA to determine the cost allocation, and appropriate rates for its customers to a degree of complexity commensurate with its status as a small, integrated and regional energy provider.[25]

InterGroup explains that the rates charged to customer classes are "ideally developed based on the principles of 'cost of service,' the most widely accepted standard applied for regulated utilities to determine whether rates are just and reasonable."[26] Nelson Hydro maintains three types of customer classes: Residential, Commercial and Streetlight.[27]

InterGroup explains a COSA starts with a utility's revenue requirement, and that the 2019 COSA is based on actual data for 2019 with limited adjustments to normalize one account (brushing).[28] The 2019 COSA attempts

[23] Exhibit B-1, Section 8.1, p. 57.
[24] Exhibit B-1, Appendix 8.1, p. 1.
[25] Exhibit B-1, Appendix 8.1, p. 1.
[26] Exhibit B-1, Appendix 8.1, p. 6.
[27] Exhibit B-1, Section 9.1, p. 61.
[28] Exhibit B-1, Appendix 8.1, p. 1.

to address the typical utility rate concepts of a "rate base", and to fully reflect depreciation accounting.[29] The Panel addresses the revenue requirement used in the 2019 COSA in section 2.2 below.

InterGroup further explains that in general, a COSA has three key steps:

- Functionalization (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).[30]

The Panel addresses these three COSA steps below in sections 2.4, 2.5 and 2.6 respectively.

InterGroup notes that Nelson Hydro's 2019 COSA includes an assignment step prior to functionalization. Where possible, costs are first assigned directly to the service area where the cost responsibility arises, (i.e. Urban or Rural).[31] Costs that cannot be allocated 100 percent to the Urban or Rural service areas are considered Common and are broken out to all customers based on usage.[32] The Panel addresses assignment in section 2.3 below.

Nelson Hydro explains that the COSA is used to establish cost guidelines for the evaluation of rate schedule revenue levels through Revenue-Cost-Coverage (RCC) ratios.[33] The RCC ratios show whether the rates charged to each rate schedule adequately recover their allocated cost of service.[34] InterGroup notes that Nelson Hydro requires a COSA to determine the cost allocation, and appropriate rates for its customers to a degree of complexity commensurate with its status as a small, integrated and regional energy provider.[35] The results of the 2019 COSA for each customer class in the Rural and Urban service areas as proposed by Nelson Hydro are shown below in Table 1.

[29] Exhibit B-1, Appendix 8.1, pp. 1, 7.
[30] Exhibit B-1, Appendix 8-1, p. 7.
[31] Exhibit B-1, Appendix 8-1, p. 7.
[32] Exhibit B-1, Section 8.2, p. 58.
[33] Exhibit B-1, Section 8.3, p. 59.
[34] Exhibit B-1, Section 8.3, p. 59.
[35] Exhibit B-1, Appendix 8.1, p. 1.

Table 1: 2019 COSA Results[36]

	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	$995	$1,083	$88	108.8%
Streetlight - Rural	$37	$33	($4)	89.4%
Total Rural	**$9,089**	**$7,592**	**($1,496)**	

	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%
Commercial - Urban	$5,216	$5,796	$580	111.1%
Streetlight - Urban	$93	$97	$4	104.3%
Total Urban	**$11,109**	**$11,089**	**($21)**	

Panel Discussion

The Panel finds that the purpose of the 2019 COSA is to determine an equitable allocation of Nelson Hydro's costs between its Rural and Urban customers and between the Residential, Commercial and Streetlight classes of Rural customers. This purpose is entirely consistent with the purpose set out in the 2019 COSA and Application and is not disputed by any of the interveners.

The Panel further finds that the cost-of-service principle, also known as the cost causation principle, is the appropriate method to allocate costs to the Rural customer classes and thereby determine whether the Rural rates are not unjust, unreasonable, unduly discriminatory or unduly preferential, as required by sections 59 to 60 of the UCA. Specifically, the cost-of-service principle provides that a utility's costs are allocated to customer classes according to each class's degree of responsibility for the cost being incurred.

The Panel observes that a possible outcome of the 2019 COSA is that Nelson Hydro's rates for Rural and Urban customers may differ in the future, whereas in the recent past these rates have been the same or have risen by the same proportion each year. This is not a consideration for the Panel. The BCUC has no jurisdiction over Nelson Hydro's Urban rates, which are excluded from regulation under the UCA, and Nelson Hydro is at liberty to set them at any level it chooses, whether or not those rates are sufficient to cover the cost of service to Urban customers. The Panel's determinations are based on whether the proposed allocation of Nelson Hydro's costs to Rural customer classes is consistent with the cost-of-service principle.

[36] Exhibit B-12, BCUC IR 52.8.

2.2 Revenue Requirement

A revenue requirement represents the total costs required by a utility to provide service to its customers during a year.[37] A common Canadian regulatory practice is to use a forward-looking or prospective basis for setting the revenue requirement and rates.[38]

For the purpose of Nelson Hydro's COSA, InterGroup has done the analysis based on the most recent actuals (2019 as adjusted), using a rate base/rate of return method.[39] The components of the Nelson Hydro's revenue requirement include:

- **Operating and Maintenance (O&M) expenses:** The 2019 Annual Report for the City of Nelson (the City) provides O&M expenses for Nelson Hydro at $11.910 million, including $2.448 million for Wages and Benefits, and $9.462 million for Supplies and Services, including a 0.295 million loss on disposal of assets added to the O&M expenses for purposes of the COSA.[40] Adjustment 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 as vegetation management is performed based on a three-year cycle.[41] The actual vegetation management costs for the Rural service area in 2019 were high due to Nelson Hydro's efforts to increase reliability and reduce outages.[42] 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.[43]
- **Amortization (or depreciation):** The total amortization expense for 2019 was $1.187 million.[44]
- **Interest Charges:** Interest is a typical revenue requirement item which comprises costs related to borrowing for utility needs. Nelson Hydro makes use of relatively small amounts of debt and as a result, 2019 total interest costs were $0.224 million.[45]
- **ROE:** As Nelson Hydro is not a fully rate-regulated utility and does not formally report a ROE on actual basis, 2019 ROE was calculated based on the equity portion of rate base, and a 9.25 percent ROE as proposed by Nelson Hydro.[46]
- **Capital Reserve Transfer:** Capital Reserve Transfer of $2.877 million [based on 2019 actuals] was added to only the Urban customer classes considering the status of Nelson Hydro as a municipality-owned utility and the need to generate revenues to fund capital.[47]

The total revenue requirement before ROE and Capital Reserve Transfers for 2019 at $13.892 million is set out in Table 2 below

[37] Exhibit B-1, Appendix 8-1, p. 3.
[38] Exhibit B-1, Appendix 8-1, p. 3.
[39] Exhibit B-1, Appendix 8-1, p. 3.
[40] Exhibit B-4. BCUC IR 5.1.1 and 6.1.
[41] Exhibit B-1, Appendix 8-1, p. 3; Exhibit B-4, BCUC IR 5.1.1.
[42] Exhibit B-4, BCUC IR 5.1.1.
[43] Exhibit B-4, BCUC IR 5.1.1.
[44] Exhibit B-1, Appendix 8-1, p.,3.
[45] Exhibit B-1, Appendix 8-1, p. 3.
[46] Exhibit B-1, Appendix 8-1, p. 4.
[47] Exhibit B-1, Appendix 8-1, p. 4.

Table 2: 2019 Revenue Requirement ($000)[48]

Line #	Revenue Requirement Component	2019 Actual
1	O&M Expenses	12,481
1a	*Wages and Benefits*	*2,448*
1b	*Supplies and Services*	*9,758*
1c	*Vegetation Management Adjustments*	*-298*
1d	*Other Adjustments*	*-86*
1e	*City of Nelson Purchases [265 cfs]*	*658*
2	Amortization	1,187
3	Interest charges	225
4=1+2+3	**Total Expenses**	**13,892**

The balance of the other adjustments and items is explained as follows:

- The "Other Adjustments" figure of ($0.086 million) is the net result of removing $0.118 million in export revenues, removing $0.342 million in third-party expenses that are fully recovered as part of other revenues, and adding back internal charges from other City departments, which are eliminated in the Annual Report's consolidation as Table 2 is prepared based on the City's 2019 Annual Report.[49]
- "City of Nelson Purchases" are the water licence reserve payment from Nelson Hydro to the City representing compensation for 265 cubic feet per second (cfs) of water obtained by the City through the Water Rights Agreement between the City and BC Hydro.[50]

2.2.1 Other Revenue

InterGroup's COSA is prepared based on the City's 2019 Annual Report, with adjustments, as the City prepares financial statements only on a consolidated basis and does not prepare separate financial statements for any one department. [51] Nelson Hydro explains that "Note 20" in the financial statements provides segmented financial information by major classification, including for Nelson Hydro.[52]

The following revenues for Nelson Hydro appear in Note 20 of the City's 2019 Annual Report: [53]

- Other Revenue from Own Services: $2,699,910
- Investment Income: $255,758
- Grants – Conditional: $162,600
- Nelson Hydro Sales: $18,681,152
- Losses on Disposal of Assets: $(296,719)

[48] Exhibit B-1, Appendix 8-1, Table 2, p.,4.
[49] BCOAPO Final Argument, p. 21; Exhibit B-4, BCUC IR5.3
[50] Exhibit B-8, Faust IR 10
[51] Exhibit B-9, BCOAPO IR 5.1
[52] Exhibit B-9, BCOAPO IR 5.1
[53] BCOAPO Final Argument, p. 21; Exhibit B-9, BCOAPO IR 5.1.2: City of Nelson 2019 Annual Report, p. 64.

As previously noted, the Annual Report includes $0.342 million in third-party expenses, which are fully recovered as part of other revenues and are removed from Nelson Hydro O&M expenses.[54] Nelson Hydro explains that third-party revenues and expenses come from charges to homeowners and developers for new or upgraded service connections.[55]

Positions of the Parties

BCOAPO submits that the revenues from Nelson Hydro Sales and the losses on disposal of assets have been accounted for in the COSA, but that the only other revenues captured in the COSA appear to be the $342,000 used to offset third-party expenses.[56] BCOAPO submits that a comprehensive COSA would account for the balance of the other revenues reported. For example, investment income revenue is frequently included as an offset to interest charges and revenues from other services provided are generally used to offset the costs of the services/assets with which they are associated.[57] BCOAPO is of the view that the BCUC should direct Nelson Hydro to fully account for the other revenues received in future COSAs.[58]

In response, Nelson Hydro notes that it does not have control over other revenues, which vary year-over-year. Nelson Hydro submits that the revenue requirement for COSA purposes reflects the revenue required to provide services to ratepayers, but acknowledges that other revenues from own sources in 2019 are very high compared to other years. Nelson Hydro does note the other revenues can be reviewed and/or tested in future applications to determine if they should be addressed in subsequent COSAs as BCOAPO has recommended.[59]

With regard to the investment income revenue highlighted by BCOAPO, Nelson Hydro states that this is an item related to intra-year cash balances that is already addressed as part of the working capital calculation.[60]

Nelson Hydro also notes that other revenues that are actually earned by Nelson Hydro will be "accounted for and credited to the Rural side of the utility as appropriate and future general rate applications will account for the actual financial results and rates set accordingly."[61]

Panel Determination

The Panel directs Nelson Hydro to recalculate the COSA using a revenue requirement that accounts fully for other revenues received that are related to the provision of electricity service.

Nelson Hydro, like other public utilities, should include all other revenues associated with its provision of electricity service in its revenue requirement. This enables the BCUC to ensure that the COSA properly allocates these other revenues along with Nelson Hydro's costs.

Nelson Hydro's argument that some other revenues are not included because it has no control over them is not persuasive. Public utility rates are set on a prospective basis using forecasts for variables which, like other

[54] Exhibit B-4, BCUC IR 5.3
[55] Exhibit B-15, BCOAPO IR 51.3.
[56] BCOAPO Final Argument, p. 21.
[57] BCOAPO Final Argument, p. 21.
[58] BCOAPO Final Argument, p. 21.
[59] Nelson Hydro Reply Argument, p. 19.
[60] Nelson Hydro Reply Argument, p. 19.
[61] Nelson Hydro Reply Argument, p. 19.

revenues, vary year-over-year, and in the normal course the utility takes the risk that the forecasts are accurate. Nelson Hydro should forecast its other revenues as it forecasts other variable aspects of its revenue requirement, such as its costs and customer sales volumes.

If Nelson Hydro wishes its customers to take the risk of other revenues being lower than forecast or reap the benefit if they are higher than forecast, Nelson Hydro should apply to the BCUC to set up a regulatory account for this purpose.

It is not clear to the Panel how revenues actually earned by Nelson Hydro will be "credited to the Rural side of the utility as appropriate" as it submits. Nelson Hydro has made no application for a regulatory account, which would enable it to pass on to Rural customers the benefits of offsetting revenues being higher than forecast.

2.3 Assignment to Service Areas

The first step in Nelson Hydro's COSA is to assign its assets and costs to its Rural and Urban service areas, or to assign them to common costs attributable to both service areas. Nelson Hydro states its COSA needs to primarily adopt a standard cost-of-service approach for the regulated utility, while accounting for the unique factors of it also being a municipally-owned utility.[62] Nelson Hydro's proposed assignment of assets and costs is set out in Table 3 and Table 4 respectively:

Table 3: Mid-Year Balance of Capital Assets[63]

	Mid-year Balance	Urban	Rural	Common
Generation Plant				
Generating Stations	13,687	13,687	0	0
Substations	1,090	1,090	0	0
Subtotal	**14,777**	**14,777**	**0**	**0**
Transmission and Distribution Plant				
Transmission	5,876	0	0	5,876
Substations	6,347	3,389	298	2,660
Primary and Secondary Poles & Conduct.	15,615	4,952	10,662	0
Underground Conduct. & Devices	6,861	3,943	2,918	0
Transformers	5,195	2,774	2,422	0
Meters	1,216	729	486	0
Streetlight	223	223	0	0
Other	392	392	0	0
Subtotal	**41,724**	**16,402**	**16,787**	**8,535**
Total	**56,501**	**31,179**	**16,787**	**8,535**
Accumulated Amortization	**15,611**	**9,254**	**5,183**	**1,175**
Net Book Value	**40,890**	**21,926**	**11,603**	**7,361**

[62] Exhibit B-1, Section 8.1, p. 57.

[63] Exhibit B-1, Appendix 8-1, Table 5, p. 9.

Table 4: Assigned O&M Expenses ($000)[64]

	2019 Actual Total	Allocation		
		Urban	Rural	Common
O&M Expenses	**12,481**	**3,423**	**6,025**	**3,032**
Wages and Benefits	***2,448***	***369***	***307***	***1,772***
Generation	*179*	*179*	*0*	*0*
Transmission and Distribution	*553*	*185*	*307*	*61*
General	*1,717*	*6*	*0*	*1,711*
Supplies and Services	***9,374***	***2,792***	***5,323***	***1,260***
Generation	*394*	*394*	*0*	*0*
Power Purchases	*6,636*	*2,225*	*4,411*	*0*
Transmission and Distribution	*1,121*	*136*	*897*	*88*
General	*1,222*	*37*	*14*	*1,171*
City of Nelson Purchases [265 cfs]	*658*	*658*	*0*	*0*
Nelson Hydro Purchases [surplus energy]	*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**

In the following sections, the Panel reviews Nelson Hydro's proposed assignment of assets and costs between Rural and Urban customers and addresses issues raised by interveners.

2.3.1 Generation

In this section the Panel addresses the assignment of Nelson Hydro's generation assets and their associated operating costs between Rural and Urban ratepayers.

Evidence

The City first developed electricity generation on the Kootenay River in 1905 for the economic and social well-being of City residents.[65] Nelson Hydro states it began selling its power to the Rural service area in 1922 to the mutual benefit of both the City and the Rural service as it had a surplus of generated power and there was no other service provider for the Rural area at that time.[66] As electrical loads increased over the years, the City added generation to maximize its water licenses to benefit all customers.[67] When it could not meet all customers' needs, the City entered into agreements with FBC (and its predecessor, West Kootenay Light & Power) and built infrastructure to access this additional supply.[68] FBC wholesale rates have increased over this time, as approved by the BCUC.[69]

As Nelson Hydro is a department of the City, the City only prepares financial statements on a consolidated basis and does not prepare separate financial statements for any one department. [70] Since Nelson Hydro would have needed to maintain two separate accounting systems in order to account for a cost-of-service approach for the Rural service and municipal accounting principles approach for the Urban service, it was not able to determine the true cost of servicing Rural customers prior to 2009.[71] In 2009, the creation of the Public Sector Accounting

[64] Exhibit B-1, Appendix 8-1, Table 7, p. 11.
[65] Exhibit B-1, Appendix 7.2, p. 1.
[66] Exhibit B-1, Section 3.3, pp. 11–12.
[67] Exhibit B-1, Appendix 7.2, p. 2.
[68] Exhibit B-1, Appendix 7.2, p. 2.
[69] Exhibit B-1, Appendix 7.2, p. 2.
[70] Exhibit B-4, BCUC IR 40.1; Exhibit B-9, BCOAPO IR 5.1.
[71] Exhibit B-1, Appendix 7.2, p. 2; Exhibit B-1, Section 4.4.2.2, p. 38

Board (PSAB) required that local governments account for their assets and charge amortization.[72] As a result, Nelson Hydro states that the City now has the capability to implement a true cost-of-service model to accurately calculate the Rural rate.[73]

Nelson Hydro explains that the approach it takes to allocate generation between Urban and Rural is one where the generation from its hydraulic generation facilities is first allocated to Urban customers.[74] Then, when hydro surpluses occur over and above the usage by the Urban customers, Rural customers are served on the basis of a deemed commercial transaction for power with Nelson Hydro.[75] Nelson Hydro explains that this shared power to the Rural areas is priced equivalent to the best alternative supply to the Rural area, namely FBC wholesale purchases.[76] Nelson Hydro states that the reason for this approach was to reflect the Nelson Hydro Generation Rates Policy adopted by the City, which notes that Nelson Hydro generation is first available to customers within the City's municipal boundaries and any surplus will then be made available to Rural customers.[77] This differs from distribution substations, which are assigned based on the physical location of the assets and the area they service, despite the generation facilities being located in the Rural area.[78]

Nelson Hydro states that the feeder loading study was used as the basis to estimate Nelson Hydro's own generation energy delivered to Urban and Rural customers.[79] The five-year average from 2015 to 2019 of generation data from the Feeder Loading Study indicates 89 percent of Nelson Hydro's generation is utilized by the Urban ratepayers with 11 percent surplus generation being made available to Rural ratepayers.[80] However, Nelson Hydro confirmed that the amounts that make up these allocations are based on calculated values and not metered data.[81] Nelson Hydro explained, at a high level, the values are calculated in accordance with the following steps:

1) If the City's consumption is higher than the amount of power generated by the City's power plant, all the generated power is allocated to the Urban area.
2) If the City's consumption is lower than the amount being generated by the City's power plant, the excess amount is allocated to the Rural area.
3) If the amount being generated by the City's power plant is greater than the amount being consumed by both the Urban and Rural areas, then the excess consumption is sold to FBC or other utilities. [82]

Nelson Hydro states that it used actual revenues and direct costs and then allocated actual power purchase and common costs based on the methodology proposed in the COSA for the years 2013 to 2018 to determine if there were excess revenues to fund amortization expense, ROE (i.e. dividend to the City) and capital reserves

[72] Exhibit B-1, Section 4.4.2.2, p. 38.
[73] Exhibit B-1, Section 4.4.2.2, p. 38.
[74] Exhibit B-1, Section 8.2, p. 58.
[75] Exhibit B-1, Section 8.2, p. 58.
[76] Exhibit B-1, Section 8.2, p. 58.
[77] Exhibit B-4, BCUC IR 10.1.
[78] Exhibit B-4, BCUC IR 10.2; Exhibit B-15, BCOAPO IR 56.1; Exhibit B-12, Appendix 2-62.1.
[79] Exhibit B-4, BCUC IR 12.2.
[80] Exhibit B-12, Appendix 2-62.16; Nelson Hydro Final Argument, p. 8.
[81] Exhibit B-12, BCUC IR 62.14.
[82] Exhibit B-12, BCUC IR 62.15.

from both the Rural and Urban sides of the utility.[83] Nelson Hydro states that the calculations show that Rural revenues were not able to contribute to either dividend or capital reserves.[84]

Nelson Hydro states that the City has never "pooled" costs.[85] Nelson Hydro states that the idea that its self-generation and power purchases should be "pooled" or blended and allocated evenly amongst the Rural and Urban service areas results in a dynamic where the Urban customers costs are higher than the Rural customer costs: This result is inequitable given that it is well-established and has been recognized by the BCUC that servicing the Rural customers is inherently costlier due to geographic factors, among others.[86]

Nelson Hydro notes that it is not common for utilities to preferentially assign power derived from low-cost resources to one class of its customers and power from higher cost resources to another class of its customers as a municipality owning its own generation and serving customers outside its municipal boundaries is unique.[87] Nelson Hydro clarifies that its situation is not that one class of customers is being treated differently than the other, but one location or territory is being treated differently reflecting the entitlement of that customer group according to policy.[88] Nelson Hydro provides the following examples of such treatment:

- Manitoba Hydro delivers low-cost hydro generated power to its own residents, but sells this power at market prices to other places like Saskatchewan and the United States.[89]
- In Newfoundland, a Provincial Order in Council (2013–343) directed that Muskrat Falls project costs be recovered solely from Island customers (and not Labrador customers) despite the project being located in Labrador and the assets being interconnected.[90] By provincial policy, Island customers are not part of the same generation pool as Labrador, which receives the output of the Churchill Falls dam (lower cost), while the Island receives power from Muskrat Falls (higher cost).[91]

Nelson Hydro's Argument

Nelson Hydro submits that the COSA correctly assigns its generation assets 100 percent to its Urban customers and values any surplus generation that is supplied to its Rural customers at the FBC wholesale energy rate.[92]

Nelson Hydro submits that the City owns Nelson Hydro's generation assets, which were built and paid for by the City for the benefit of its Urban residents, and that the Rural ratepayers did not take the risk associated with building and managing the assets. Nelson Hydro adds that Rural rates have not been sufficient to generate a return to the City or to cover amortization expenses, and at no time did any City council "ever make a commitment or enter into any agreement thereby entitling the Rural service areas to a portion of the City's generation beyond surplus generation." Nelson Hydro submits it would "simply be unfair and unreasonable to

[83] Exhibit B-18, BCUC IR 96.1; Exhibit B-13, Faust Appendix 2-M1.
[84] Exhibit B-18, BCUC IR 96.1; Exhibit B-13, Faust Appendix 2-M1.
[85] Exhibit B-1, Section 3.4.5, p. 30, footnote 104.
[86] Exhibit B-1, Section 3.4.5, p. 30, footnote 104.
[87] Exhibit B-6, RCIA IR 27.1.
[88] Exhibit B-6, RCIA IR 27.1.
[89] Exhibit B-6, RCIA IR 27.1.
[90] Exhibit B-6, RCIA IR 27.1.
[91] Exhibit B-14, RCIA IR 34.2.
[92] Nelson Hydro Final Argument, p. 8.

the City and its residents to attempt to force the utility to share its generation with ratepayers from outside the City, when these residents have not invested in these assets." [93]

Nelson Hydro submits that its Rural customers have only paid for their attributable O&M costs and "cannot now claim to have developed a vested ownership interest" in the City's generation assets that would entitle them to the full benefits of low-cost generation. Nelson Hydro adds that the effect of the municipal exemption in the UCA is to prevent the BCUC from "reallocating ownership of the generation assets to all customers of the utility" and that any such reallocation would be "an extension of the BCUC's authority to the municipal portion of the utility, and contrary to the lawful scope of the Commission's regulatory oversight under the UCA." [94]

Nelson Hydro submits that as the owner of municipal assets, the City Council "has the sole authority to choose how to use these assets, as long as that is done in a manner to satisfy its statutory obligations under the *Community Charter*." Nelson Hydro submits that the municipal assets were never brought into the scope of the BCUC's regulation, but rather "City Council chose to service Rural ratepayers and surplus generation was made available to this service area as early as 1922 based on agreements between the parties as this predated the advent of the BCUC." [95]

Nelson Hydro submits that other levels of government preferentially assign power derived from low-cost sources to certain customers based on "historical context and to achieve government objectives" and that Nelson Hydro is uniquely able to do this because the Urban service area is exempt from BCUC regulation, "along with the City's authorities and obligations under the *Community Charter*." [96]

Nelson Hydro states that the *Community Charter* cannot be ignored when regulating Nelson Hydro[97] as it is a department of the City subject to the *Community Charter.* Nelson Hydro argues that accepted principles of statutory interpretation require that the UCA be read in a manner that considers the *Community Charter* as part of an overarching legislative scheme.[98] Nelson Hydro argues that any regulation of Nelson Hydro requires consideration and careful interpretation of both legislative schemes.[99]

Nelson Hydro cites case law *Re Rizzo & Rizzo Shoes,* which states, "Today there is only one principle or approach, namely, the words of an Act are to be read in their entire context and in their grammatical and ordinary sense harmoniously with the scheme of the Act, the object of the Act, and the intention of Parliament." [100] Nelson Hydro also cites *Sullivan on the Construction of Statutes* by Ruth Sullivan, which states that it is "presumed that the legislature does not intend to contradict itself; it is presumed to create coherent schemes. Therefore, interpretations that avoid the possibility of conflict or incoherence among different enactments are preferred…". [101]

[93] Nelson Hydro Final Argument, pp. 8–9.
[94] Nelson Hydro Final Argument, p. 10.
[95] Nelson Hydro Final Argument, p. 12.
[96] Nelson Hydro Final Argument, p. 11.
[97] Nelson Hydro Final Argument, p. 4.
[98] Nelson Hydro Final Argument, pp. 4, 19.
[99] Nelson Hydro Final Argument, p. 19.
[100] Rizzo &Rizzo Shoes Ltd. (RE), Supreme Court Judgements, [1998] S.C.J. No. 2, at para. 21 citing E. Driedger in Construction of Statutes (2nd ed. 1983) at pg. 87.
[101] Nelson Hydro Argument, p. 19; Ruth Sullivan, Sullivan on the Construction of Statutes, 5th ed. (Markham: Lexis Nexis, 2008), at p. 1 ("Sullivan").

Nelson Hydro submits that the current basis for the authority for the City to operate Nelson Hydro is section 8(2) of the *Community Charter*, which states that a municipality may provide "any service that the council considers necessary or desirable" and the City has exercised this authority by enacting relevant bylaws for the operation of Nelson Hydro. [102] Nelson Hydro states that section 8(10)(b) of the *Community Charter* says that powers provided to municipalities under section 8, which it submits includes the ability to operate Nelson Hydro, "must be exercised in accordance with" the *Community Charter*. [103]

Nelson Hydro submits that it is obligated under the *Community Charter* to allocate the benefit of its taxpayer-owned assets to City taxpayers. [104]

Nelson Hydro states that the treatment of generation as an Urban asset reflects the scope of the BCUC's authority under the UCA, while recognizing the City's authorities and obligations under the *Community Charter*. [105] Nelson Hydro cites *The Law of Canadian Municipal Corporations* by Ian Rogers as stating the power of a municipality to hold property is confined to the purposes of the municipality. [106]

Nelson Hydro submits that the *Community Charter* "clearly states that the City is to manage and operate Nelson Hydro in a manner that benefits the residents of the City" and that "it is clear that the *Community Charter* prevents the City from operating its electrical utility service in a manner that is not to the benefit of its residents." Nelson Hydro submits that the COSA shows that the City "is not adequately recovering the cost of service for the Rural Residential customer class or making a return on its assets in the Rural part of the utility," and that by "not collecting sufficient revenue in servicing the Rural service area despite taking on all the associated risks and liabilities" the City is not benefitting its taxpayers/residents. [107]

Nelson Hydro believes this would include any use of "blended costs" in rate-setting, which appears to suggest a reallocation of the City's generation assets to the Rural ratepayers. [108] Nelson Hydro states that any such reallocation would be inconsistent with the contribution (or lack thereof) from Rural ratepayers, and be an extension of the BCUC's authority to the municipal portion of Nelson Hydro, and contrary to the lawful scope of the BCUC's regulatory oversight under the UCA. [109] Nelson Hydro asserts that the only issue that is appropriate for consideration by the BCUC with regard to the City's generation is how any surplus generation that is made available to the Rural area should be priced. [110]

Position of RCIA

RCIA submits that there is no substantive basis for assigning specific common utility assets, such as Nelson Hydro's generation plant for the preferential use of one class of customers, except where individual assets can be demonstrated to physically service only one such class. RCIA further submits that there is no mechanism at Nelson Hydro's generation plant nor in its transmission system that differentially directs power generated at the

[102] Nelson Hydro Final Argument, p. 19.
[103] Nelson Hydro Final Argument, p. 20.
[104] Nelson Hydro Final Argument, p. 11.
[105] Nelson Hydro Final Argument, p. 3.
[106] Nelson Hydro Final Argument, p. 8.
[107] Nelson Hydro Final Argument, pp. 19–21.
[108] Nelson Hydro Final Argument, p. 10.
[109] Nelson Hydro Final Argument, p. 10.
[110] Nelson Hydro Final Argument, pp. 10–11.

plant to Urban customers. As a result, it is "physically demonstrable that the Bonnington Powerplant does not preferentially service Nelson Hydro's Urban customers."[111]

RCIA submits that Nelson Hydro's Rural customers contributed to the cost of its generation plant from when it was first constructed. RCIA explains that Rural customers' rates paid for the otherwise underutilized surplus capacity of the plant, as well as covering the carrying and operating costs of the plant. As a result, RCIA submits that Nelson Hydro's provision of service to Rural ratepayers, which it undertook voluntarily, provided benefits to Urban as well as Rural ratepayers. [112]

In reply, Nelson Hydro submits that the City residents/taxpayers, as the ultimate owners of the City assets, have been and continue to bear the risk related to these assets. In addition to this, Nelson Hydro submits that Rural rates have not paid into the capital of the generation assets, either directly or through the owner recouping its capital investment through amortization expense, to earn beneficial rights to these assets in exchange for the owner (the City), receiving a guaranteed regulated rate of return on those assets. The Rural ratepayers do not pay City of Nelson taxes and have no entitlement to any benefit of the City's generation assets.[113]

Nelson Hydro submits that the City of Nelson taxpayers alone bore the risk of construction and operational failure, and every asset that the City builds in the Rural area is potentially at risk in the event that these assets become redundant, then that loss of value is borne 100 percent by the citizens of the City, not Rural ratepayers.[114]

Nelson Hydro argues that while general comments by interveners argue that Rural customers contributed value to Nelson Hydro, none of the evidence that Nelson Hydro has presented has been directly challenged nor has any evidence to the contrary been brought forward through the IR process or final arguments of the interveners.[115]

Nelson Hydro does note that Rural rates have contributed at least in part to the distribution assets (through debt service) but clearly not the generating assets of Nelson Hydro.[116] Nelson Hydro provides the following evidence, which it submits demonstrates it is highly improbable that Rural rates contributed to the capital of Nelson Hydro's generating assets:[117]

- Local governments in British Columbia did not charge amortization expense prior to 2009 when the Public Sector Accounting Board ("PSAB") standards were introduced. Accordingly, it would have been impossible for Rural or even Urban ratepayers to be paying amortization expense before 2009.[118]

[111] RCIA Final Argument, p. 7.
[112] RCIA Final Argument, p. 8.
[113] Nelson Hydro Reply Argument, p. 9.
[114] Nelson Hydro Reply Argument, p. 9.
[115] Nelson Hydro Reply Argument, p. 9.
[116]Nelson Hydro Reply Argument, p. 9.
[117] Nelson Hydro Reply Argument, p. 10.
[118] Nelson Hydro Reply Argument, p. 10.

- When the City began servicing the Rural service area in 1922, Council agreed to borrow for the construction of the Rural distribution assets to serve Rural customers as it had surplus power. When new generation was developed in 1935 and 1950, the Rural load was small.
- The City's 1981 Application for Exemption to exempt the Rural area from BCUC regulation, and its attachments, provide evidence that the Rural utility was not even covering its basic operating costs or contributing to capital at that time.[119]
- As part of this proceeding, Nelson Hydro supplied a schedule that used the COSA allocation factors to restate the financial results of the Rural and Urban sides of the utility from 2013 to 2018. This schedule again supports that Rural rates during this period were, in most years, not even covering the direct operating and maintenance cost and were not contributing to amortization expense or an ROE.[120]

Nelson Hydro submits that this evidence demonstrates that Rural ratepayers have no entitlement to its generation assets and protecting its own taxpayers from relying on other entities to supply electricity to the City was the reason that City Council developed its own fully-integrated electric utility.[121] Nelson Hydro states that although it does not have complete records of its 125 years of operation, it submits that the evidence submitted by Nelson Hydro supports the COSA's allocation of 100 percent of the generating assets and costs to Urban.[122]

RCIA submits that there is no need for the BCUC to make any findings about ratepayer ownership interest in Nelson Hydro's assets or the "reallocating ownership" of these assets when determining the appropriate rates for Nelson Hydro to recover its reasonable costs and a fair return from its Rural ratepayers. [123]

In reply, Nelson Hydro submits that RCIA's logic "ignores the right of the municipality to be excluded from BCUC regulation for activities within its boundaries" and that providing service outside its boundaries does not make it a single BCUC-regulated entity, such that "all costs should be treated as common and shared." Nelson Hydro adds that RCIA provides no evidence supporting its assertion that Rural ratepayers contributed to the costs to "carry and operate Nelson Hydro's underutilized hydro generation assets" or rebutting the evidence filed by Nelson Hydro.[124]

RCIA submits that Nelson Hydro's operations outside the City have no special status that narrows or excludes the powers and authority exercised by the BCUC when it regulates a "public utility".[125] RCIA states that outside the boundaries of the City, Nelson Hydro owns and operates a public utility within the meaning of the UCA and is subject to all of the provisions of the UCA that apply to a "public utility".[126]

The RCIA submits that the concern raised by Nelson Hydro about the City meeting its statutory obligations can be of little or no merit,[127] as RCIA argues that if the requested rate adjustment is necessary to allow the City to

[119] Nelson Hydro Reply Argument, p. 10.
[120] Nelson Hydro Reply Argument, p. 12.
[121] Nelson Hydro Reply Argument, p. 12.
[122] Nelson Hydro Reply Argument, pp. 9, 12.
[123] RCIA Final Argument, p. 9.
[124] Nelson Hydro Reply, pp. 24–25.
[125] RCIA Final Argument, p. 6.
[126] RCIA Final Argument, p. 6.
[127] RCIA Final Argument, p. 12.

meet its statutory obligation, then Nelson Hydro, without this rate adjustment, is and has been in breach of this and would continue this way based on the proposed phasing-in of the requested rate adjustment.[128]

The RCIA also submits that Nelson Hydro's arguments about the City's statutory obligations are not supported by the *Community Charter*.[129] RCIA argues that Section 7 of the *Community Charter* states that the purposes of a municipality include, but are not limited to, providing for services, laws and other matters for community benefit. RCIA submits that the City achieves this when Nelson Hydro provides services for community benefit, while providing services outside the boundaries of the City at rates approved by the BCUC.[130] RCIA notes that the *Community Charter* explicitly contemplates that a municipality may provide a service outside the municipality, as Section 13(3) of the *Community Charter* states that, if consent is given, the municipal powers, "duties" and functions provided under the *Community Charter* or any other Act in relation to the service may be exercised in such an area. RCIA submits that the way the BCUC exercises its authority under the UCA to set rates for Nelson Hydro's service to the Rural area does not cause the municipality to fall out of compliance with the *Community Charter*; as it remains that, within the City, Nelson Hydro is providing services for community benefit.[131]

RCIA submits that Nelson Hydro's Urban rates are an obvious and useful benchmark for the BCUC to consider when evaluating Nelson Hydro's proposed rates for its Rural ratepayers. Nelson Hydro's Rural and Urban ratepayers are in many cases located in very close proximity (separated only by a municipal boundary) and its assets span the municipal boundary. It is therefore clear that Nelson Hydro's Urban rates provide a useful and proximate benchmark against which to evaluate rates proposed for Rural ratepayers.[132]

In reply, Nelson Hydro agrees with RCIA that with regard to its Rural service area, it does not have any "special status that narrows or excludes the powers and authority exercised by the BCUC when it regulates a 'public utility'.[133] Rather, Nelson Hydro submits that the Urban area's exclusion from regulation under the UCA must be fully respected and the BCUC must consider municipal legislation when determining rates for the Rural service area.[134]

Nelson Hydro acknowledges that in previous years, the City's accounting practices were not sophisticated enough to properly identify that it was operating to the detriment of Urban ratepayers.[135] Nelson Hydro submits that the primary purpose of this Application is to bring the City back into compliance with its *Community Charter* obligations while also ensuring that the Rural rates comply with the UCA.[136] Nelson Hydro submits that its "community" is the residents within the boundaries of the City and the City Council is in the best position to determine what actions benefit the community.[137] Nelson Hydro explains that the COSA reflects the decision of how Council has chosen to operate Nelson Hydro, and that "[p]assing on the value of its generating assets

[128] RCIA Final Argument, p. 12
[129] RCAI Final Argument, p. 12
[130] RCIA Final Argument, p. 12
[131] RCIA Final Argument, pp. 12-13
[132] RCIA Final Argument, p. 11
[133] RCIA Final Argument, p. 24
[134] RCIA Final Argument, p. 24
[135] Nelson Hydro Reply Argument, p. 26
[136] Nelson Hydro Reply Argument, p. 27
[137] Nelson Hydro Reply Argument, p. 27

beyond surplus for some other intrinsic community benefit is not how Council has decided to pursue community benefit. .[138]

Nelson Hydro argues that the BCUC should not look at Urban rates as these rates fund the capital reserves and that other regulated utilities would provide a better comparable.[139] Nelson Hydro submits that the key distinguishing characteristic between the Rural and Urban service areas is that the Rural service area is regulated by the BCUC and the Urban service area is not[140] and to Nelson Hydro's knowledge, the BCUC does not typically analyze the rates of utilities it does not regulate in deciding appropriate benchmark rates.[141]

Position of BCOAPO

BCOAPO disagrees with Nelson Hydro's assignment of surplus energy, as well as the basis of assigning Nelson Hydro's own generation to Urban customers first. BCOAPO argues that utilities with an integrated electrical system typically would pool the cost of generation and power purchases and assign them to all customers using appropriate demand/energy allocators (Nelson Hydro refers to this as the electron tracking).[142] BCOAPO also states that the evidence provided by Nelson Hydro for the exceptions to this treatment is not applicable to them.[143]

In response, Nelson Hydro states that the Application does not refer to the exceptions used by BCOAPO, and suggesting that Nelson Hydro relied on these exceptions in its Application is incorrect.[144] Nelson Hydro argues that metering has long been used to reconcile the power purchase costs and power sales of each entity that has generation assets or is a power purchaser where electrons flow throughout the integrated grid.[145] This allows electric utility regulators to approve rate designs without tracking electrons.[146] Nelson Hydro concludes that the basis of assignment for the COSA has been fully explained in the Application and no other alternative calculations have been supported in the record.[147]

While BCOAPO agrees that the *Community Charter* and the UCA are read together as part of one overarching scheme, BCOAPO submits that the BCUC must protect the interests of ratepayers beyond municipal limits as this is within its jurisdiction under the UCA. BCOAPO submits that there are limits to the *Community Charter*'s interpretation and latitude of power: its actions "must be construed in their context and in a manner that is consistent with their crucial function within the statutory scheme."[148] In BCOAPO's view, this also means protecting the interests of Rural customers to whom Nelson Hydro provides services.[149]

BCOAPO states that Nelson Hydro appears to interpret the community benefit aspect of the *Community Charter* as a wide-reaching mandate that prohibits it from acting in any way other than that suggested in its

[138] Nelson Hydro Reply Argument, p. 27.
[139] Nelson Hydro Reply Argument, p. 26.
[140] Nelson Hydro Reply Argument, p. 25.
[141] Nelson Hydro Reply Argument, p. 26.
[142] BCOAPO Final Argument, p. 28.
[143] BCOAPO Final Argument, p. 29.
[144] Nelson Hydro Reply Argument, p. 8.
[145] Nelson Hydro Reply Argument, p. 13.
[146] Nelson Hydro Reply Argument, p. 13.
[147] Nelson Hydro Reply Argument, p. 31.
[148] BCOAPO Final Argument, p. 34.
[149] BCOAPO Final Argument, p. 34.

Application.[150] BCOAPO's opinion diverges from Nelson Hydro on what is a fair and reasonable rate for Rural ratepayers and how to determine such a reasonable rate while ensuring that the community benefit is maintained.[151]

BCOAPO submits that the broad nature of the *Community Charter* allows Nelson Hydro to adopt a blended rate approach without "being off-side" its requirements to act in the best interests of its residents.[152] BCOAPO states that Nelson Hydro appears to take the view that the *Community Charter* requires benefits of its hydraulic generation be prioritized to the Urban ratepayer. BCOAPO submits that such prioritization is not required in order for Nelson Hydro and the City to meet their obligations under the *Community Charter*.[153] BCOAPO submits that the *Community Charter*'s requirements simply require services (in this case, ownership of hydro generation) to benefit the community. BCOAPO explains that even if the blended-rate approach was adopted, the benefits of low cost of hydraulic generation (as compared to purchases for FBC) would accrue to City residents, in relation to the alternative where Nelson Hydro did not own any hydraulic generation. [154]

In BCOAPO's view, Nelson Hydro has not sufficiently explained why the *Community Charter* can only support an application that maximizes benefits to the residents of Nelson to the detriment of many other factors and considerations. Moreover, BCOAPO submits that Nelson Hydro's interpretation of the *Community Charter* oversimplifies what the best interests of the community mean and it is conceivable that social considerations also have weight when determining what is in the best interest of the community.[155]

In response, Nelson Hydro submits that BCOAPO has failed to understand a basic tenet of the *Community Charter* and the community benefit obligation: it is City Council's authority to determine how to best satisfy the standard.[156]

Nelson Hydro does not disagree with BCOAPO in that there may be more than one way that the City could meet its obligations under the *Community Charter* in operating Nelson Hydro.[157] Nelson Hydro states that City Council has broad discretion under the *Community Charter* in deciding how to meet its statutory obligation to act in the best interests of its community. Nelson Hydro submits that City Council, as a body elected by its community, is in the best position to make determinations on how to benefit the community[158] and it is not for BCOAPO or the BCUC to determine how the City should meet its obligation to make decisions for the benefit of its community.[159]

Nelson Hydro acknowledges that Nelson residents may receive some tangential benefits in subsidizing the rates of its Rural neighbors, but City Council has decided that there is more community benefit in reserving the benefit

[150] BCOAPO Final Argument, p. 32.
[151] BCOAPO Final Argument, p. 32.
[152] BCOAPO Final Argument, p .34.
[153] BCOAPO Final Argument, p. 33.
[154] BCOAPO Final Argument, p. 33.
[155] BCOAPO Final Argument, p. 33.
[156] Nelson Hydro Reply Argument, p. 14.
[157] Nelson Hydro Reply Argument, p. 14.
[158] Nelson Hydro Reply Argument, p. 14.
[159] Nelson Hydro Reply Argument, p. 14.

of the City's generation for City residents[160] as the City residents/taxpayers are the ultimate owners of the City assets, and bear the risk related to these assets.[161]

Nelson Hydro submits that it has proposed fair, just and reasonable rates for the Rural service area, rates competitive with those of FBC, a private utility that does not need to consider the broad and diverse obligations, which are held by a municipality in BC.[162]

Position of Faust

Faust submits that as long as the Rural customers are under the jurisdiction of the BCUC, Nelson Hydro must operate in compliance with the UCA.[163] Ms. Faust submits that the financial allocations in the COSA are not justified under the *Community Charter*. Faust acknowledges that the *Community Charter* directs municipalities to act in the best interest of the communities they serve, but it does not stipulate that municipalities can or must punish one class of customers.[164]

Faust submits that the record does not support the assumption that Rural customers' revenues have never "helped to build equity in Nelson Hydro's infrastructure." Faust explains that Nelson Hydro's Rural customers paid more than its Urban customers for several years and that both rates were increased at the same rate "to accomplish capital investment." Faust adds that the contribution by Rural customers has been "significant and sustained for nearly 100 years," and that expansions in capacity since 1922 were "paid for out of Revenue generated from all customers."[165]

Faust submits that all power generated by Nelson Hydro should be merged and sold to all customers. [166]

Position of Okros

Okros submits that the rate increases sought by Nelson Hydro are unreasonable and the Panel does not have to approve or disapprove the Hydro Policies of the City in order to look at the effects of those policies on the Rural customers.[167]

In reply to Faust and Okros, Nelson Hydro submits that it does not believe it is productive to respond to general opposition that is not supported with any substance.[168] In Nelson Hydro's view, these interveners' primary basis for rejection of the COSA is a perception of an "unfair" allocation of generation to Urban ratepayers.[169] Nelson Hydro submits that the basis for this allocation is fully explained in the Application and in the IRs.[170]

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[160] Nelson Hydro Reply Argument, p. 15.
[161] Nelson Hydro Reply Argument, p. 9.
[162] Nelson Hydro Reply Argument, p. 15.
[163] Faust Final Argument, p. 9.
[164] Faust Final Argument, p. 1.
[165] Faust Final Argument, pp. 2–3.
[166] Faust Final Argument, p. 4.
[167] Okros Final Argument, p. 2
[168] Nelson Hydro Reply Argument, p. 31.
[169] Nelson Hydro Reply Argument, p. 31.
[170] Nelson Hydro Reply Argument, p. 31.

Panel Determination

The Panel does not accept Nelson Hydro's proposed assignment of 100 percent of its generation assets and costs to Urban ratepayers. **The Panel directs Nelson Hydro to recalculate its COSA with generation assets and costs assigned 100 percent to common assets and costs**.

In its COSA, Nelson Hydro assigns its utility assets and costs to one of three groups: Urban, Rural or Common. Assets and costs that are "100 percent related to serve" either Urban or Rural customers are assigned to their respective groups, and the remaining assets and costs, which "cannot be assigned 100 percent to Urban or Rural" are assigned to the Common group. So, for instance, the COSA assigns all transmission assets and costs to the Common group because they "serve both Urban and Rural customers."[171]

Unlike transmission assets and costs, however, the COSA assigns 100 percent of the generation assets and costs to the Urban group. The Panel disagrees with Nelson Hydro's assignment of generation assets and costs for the following reasons:

- Nelson Hydro's generation assets are used by both Urban and Rural customers;
- There is no sound regulatory reason for assigning the generation assets and costs 100 percent to Urban customers; and
- Nelson Hydro is not obligated by the *Community Charter* to assign 100 percent of its generating assets and costs to Urban customers.

Nelson Hydro's assertion that pooling generation and power purchase costs would result in "a dynamic where the Urban customers [sic] costs are higher than the Rural customer [sic] costs" is yet to be determined. Until the COSA is finalized, the correct allocation of costs to Urban and Rural customers is not known.

Nelson Hydro's generation assets are used by both Urban and Rural customers

Nelson Hydro does not dispute that both Urban and Rural ratepayers use power from its generating facilities. The COSA states that Urban customers use 88.9 percent of the power generated by Nelson Hydro that is not sold to FBC or BC Hydro, and that Rural customers use the remaining 11.1 percent.[172] For this reason alone, generation assets and costs could reasonably be assigned to Common.

Despite this, if there were a clear separation of the generation assets between those used by Urban and Rural customers, then some or all of the generation assets and costs could reasonably be assigned between those two groups and any residue assigned to Common. This is the case for distribution substation assets and costs, for example, which the COSA assigns to Urban, Rural and Common based on the physical location of the assets.[173]

However, there is no clear separation of the generation assets in this instance. Physically, the generation assets reside in the Rural area, which does not support an allocation of 100 percent of the assets and costs to Urban customers, but the Panel does not consider this to be determinative.

[171] Exhibit B-1, Appendix 8-1, p. 8.

[172] Exhibit B-1, Appendix 8-1, Table 6, p. 10.

[173] Exhibit B-9, BCOAPO IR 17.5; Exhibit B-19, BCOAPO IR 97.1.

There is no physical separation of the power flows between Urban and Rural customers. All the power from Nelson Hydro's generating facilities is delivered by its one integrated transmission system[174] into its one integrated distribution system to service both Urban and Rural customers. Nelson Hydro's Urban and Rural customers draw their power from one common pool.

Further, there is no corporate separation of the generation assets and costs. Nelson Hydro, which owns the generation assets, is a single entity, part of the City. Nelson Hydro has no subsidiaries, no inter-subsidiary transfer-pricing or other agreements, and operates as one utility.

The evidence demonstrates to the Panel that Nelson Hydro's generation assets are used by both Urban and Rural customers with no clear separation, and therefore 100 percent of its generation assets and costs should be assigned to Common. Once assigned to Common, generation costs would then ultimately be allocated between Rural and Urban ratepayers based on a sound regulatory basis, as discussed in the sections below.

Assigning Nelson Hydro's generation assets and costs 100 percent to Common is consistent with the approach Nelson Hydro proposes for its transmission lines and two substations, which are also used by both Urban and Rural ratepayers and are assigned to Common.

There is no sound regulatory reason for assigning the generation assets and costs 100 percent to Urban customers

The Panel is not persuaded by Nelson Hydro's arguments for assigning 100 percent of its generation assets and costs to Urban customers.

Nelson Hydro submits that Rural ratepayers have not contributed equitably to the investment in these assets or their operation. However, Nelson Hydro acknowledges that in previous years the City's accounting practices were not sophisticated enough to properly identify that it was operating to the detriment of Urban ratepayers,[175] so it is difficult to see how it could be determined with any reasonable certainty that Rural ratepayers have not contributed equitably towards the assets that were used to generate their power. The Panel makes no determination on this point but finds that it is not relevant for the purposes of setting rates for Rural ratepayers of Nelson Hydro.

The BCUC sets rates on a prospective basis. This is well-established regulatory practice and a widely accepted principle of rate-making.[176] The Panel does not consider the original motivations for Nelson Hydro's investments (e.g. providing benefits to the City's residents) or whether Rural ratepayers have historically contributed equitably to such investments in the past to be relevant today in a prospective examination of Rural rates. What is relevant is that the generation assets used to provide electricity service to both Rural and Urban ratepayers are today owned by Nelson Hydro, a BCUC-regulated public utility in respect of the Rural service. Nelson Hydro does not dispute these facts.

[174] Exhibit B-1, Appendix 8-1, p. 1; Nelson Hydro Final Argument, p. 11.

[175] Nelson Hydro Reply Argument, p. 26.

[176] *ATCO Gas & Pipelines Ltd. v. Alberta (Energy & Utilities Board),* 2006 SCC 4, a decision of the Supreme Court of Canada at paras. 135–139; *Newfoundland and Labrador Hydro v. Newfoundland and Labrador (Board of Commissioners of Public Utilities)* 2012 NLCA 38 at para. 59; *Northwestern Utilities Ltd. and al. v. Edmonton* [1979] 1 S.C.R. 684.

The Panel disagrees that the effect of assigning generation assets and costs to Common would constitute "reallocating ownership of the generation assets to all customers of the utility"[177] as Nelson Hydro suggests. The assignment of assets in a COSA is to determine the customers from whom the related costs should be recovered. Cost assignments do not change the ownership of the underlying assets. The generation assets are, and continue to be, owned by Nelson Hydro, and used for the provision of electricity service for all of its customers. The generation assets are not, as Nelson Hydro implies, owned by the City's residents who have "invested in the utility's assets."[178]

The Panel disagrees with Nelson Hydro that the generation assets were "never brought into the scope of the Commission's regulation." Nelson Hydro has been using its generation assets to provide energy to Rural ratepayers since 1922, which predates September 11, 1980 when Nelson Hydro's authorization under the UCA was deemed to be granted. Therefore, to the extent that they are used to provide service to Rural ratepayers, the generation assets have been within the scope of the BCUC's regulation since at least September 11, 1980.

The Panel disagrees that the City Council has "the sole authority to chose [sic] how to use" the generation assets so long as the City satisfies the *Community Charter*, as Nelson Hydro claims. While the Panel agrees that Nelson Hydro operates under the authority of section 8(2) of the *Community Charter*, Nelson Hydro is a public utility according to the definition provided by the UCA, and therefore also operates under the authority of the UCA. Nelson Hydro has the authority to make management decisions regarding the use of its generation assets, but its decisions must be consistent with the provisions of the UCA. For example, pursuant to section 52 of the UCA, Nelson Hydro may not dispose of its generation assets without the approval of the BCUC.

Further, Nelson Hydro's authorization to provide service to Rural ratepayers means that section 121 of the UCA applies, which provides that nothing done under the *Community Charter* supersedes or impairs a power conferred on the BCUC or an authorization granted to a public utility. This means that Nelson Hydro's management authority over the use of its generation assets does not supersede or impair the BCUC's rate-setting role for Nelson Hydro's Rural ratepayers, including the BCUC's powers to determine the appropriate allocation of generation assets and costs.

Nelson Hydro's Obligations Under the *Community Charter*

Nelson Hydro argues that the City "is not adequately recovering the cost of service for the Rural Residential customer class or making a return on its assets in the Rural part of the utility," and that by "not collecting sufficient revenue in servicing the Rural service area despite taking on all the associated risks and liabilities" the City is not benefitting its taxpayers/residents.[179] The Panel makes no determination as to whether Nelson Hydro's provision of electricity services to Rural ratepayers is benefitting the City's taxpayers/residents, but notes that the City is provided an opportunity to earn a fair return on the assets Nelson Hydro employs to deliver its regulated electricity service to Rural customers, which is a form of benefit. Further, the Panel has not yet determined whether Nelson Hydro is collecting sufficient revenue to cover the costs of providing service to Rural ratepayers. This question is the subject of this COSA proceeding, and the Panel is not yet in a position to make a final determination.

[177] Nelson Hydro, Final Argument, p. 10.
[178] Nelson Hydro, Final Argument, p. 10
[179] Nelson Hydro Final Argument, pp. 19–21.

The Panel disagrees with Nelson Hydro that the *Community Charter* obligates Nelson Hydro to assign all of the generation assets and costs to Urban.

The Panel acknowledges that the section 7(b) of the *Community Charter* says that one purpose of a municipality is "providing for services, laws and other matters for community benefit." The Panel further acknowledges that the principles of statutory interpretation require both the *Community Charter* and the UCA to be considered as part of the overarching legislative scheme under which Nelson Hydro operates, and that the words of both statutes must be read together "in their entire context and in their grammatical and ordinary sense harmoniously with the scheme of the Act[s], the object of the Act[s], and the intention of Parliament." [180]

Sections 59 and 60 of the UCA expressly provide the power to the BCUC to determine a rate for Nelson Hydro to charge its Rural ratepayers that is not unjust, unreasonable, unduly discriminatory or unduly preferential. As explained above, section 121 of the UCA expressly provides that nothing done under the *Community Charter* supersedes or impairs a power conferred on the BCUC or an authorization granted to a public utility. Therefore, even if a rate approved by the BCUC for Rural ratepayers did not provide "community benefit" in the meaning of section 7(b) of the *Community Charter*, the UCA has paramountcy over the *Community Charter* and the rate stands. This interpretation is also consistent with section 8(10) of the *Community Charter,* which states that powers provided to municipalities under section 8 are "subject to any specific conditions and restrictions established under this or another Act," the other Act in this case being the UCA.

Further, pursuant to section 60 (1) (b.1) of the UCA, the BCUC "may use any mechanism, formula or other method of setting the rate that it considers advisable", and this includes determining that Nelson Hydro's generation costs should be assigned to Common and thereafter allocated on a sound regulatory basis between Urban and Rural customers.

Nelson Hydro cites Sullivan's point that it is "presumed that the legislature does not intend to contradict itself; it is presumed to create coherent schemes. Therefore, interpretations that avoid the possibility of conflict or incoherence among different enactments are preferred…" [181] This does not support Nelson Hydro's position. The *Community Charter* and the UCA are a "coherent scheme", and there is no contradiction in this instance. The UCA expressly takes precedence over the *Community Charter* in matters related to public utility rate setting.

2.3.2 Power Purchases

Nelson Hydro states that its power purchase costs are treated as a generation function. However, as power purchase costs are the single largest cost item in Nelson Hydro's revenue requirements and differ from other generation-related costs they are assigned separately. [182] Power purchase costs include energy and demand purchase costs, as well as basic charges paid to FBC for the supply of electricity. [183]

Nelson Hydro states that the power purchases are assigned to service areas based on the Feeder Loading study conducted by Nelson Hydro for the period from 2015 to 2019. [184] The Feeder Loading study was developed on

[180] Rizzo &Rizzo Shoes Ltd. (RE), Supreme Court Judgements, [1998] S.C.J. No. 2, at para. 21 citing E. Driedger in Construction of Statutes (2nd ed. 1983), p. 87.

[181] Nelson Hydro Final Argument, p. 19.

[182] Exhibit B-4, BCUC IR 14.2.

[183] Exhibit B-4, BCUC IR 12.6.

[184] Exhibit B-1, Appendix 8-1, Section 4.1.2, p. 10.

the basis that Nelson Hydro's own generation is made first available to serve Urban customers.[185] Nelson Hydro assigns power purchases 33.5 percent to Urban and 66.5 percent to Rural.[186]

Nelson Hydro explains that it first began selling its surplus generated power to the Rural service area in 1922 to the mutual benefit of both the City and the Rural service area as Nelson Hydro had a surplus of generated power and there was no other service provider for the Rural area at that time.[187] As the electrical needs in the Urban and Rural areas grew and the power generated by Nelson Hydro was fixed by its water licences, a shortfall in self-generated power resulted in Nelson Hydro making power purchases from West Kootenay Light & Power (WKPL), the predecessor to FBC, to continue servicing the Rural service area.[188]

Position of Nelson Hydro

Nelson Hydro submits that it would not purchase "nearly the same amount of power from FBC but for the fact that it services the Rural service area", adding that it is "fully capable of accurately accounting for how it allocates generated power versus purchased power" and that physically tracing the electrons through its "integrated electrical distribution system" is not required to fairly account for establishing which customers are creating the need to incur the power purchases. [189]

Positions of Parties

Ms. Faust disagrees with the assignment of power purchase cost based on the Feeder Loading study results. Ms. Faust states that a minimum of 53 percent and as high as 58 percent (depending on actual Demand loads) of all FBC purchases were consumed by Urban customers. As a result, Ms. Faust argues that Nelson Hydro's use of the Feeder Loader study results in a disproportionate assignment of costs to rural customers.[190] In Sur-Reply Argument, Ms. Faust repeats that energy from a common energy stream cannot be separated out, and thus should be treated on a pooled basis.[191]

Mr. Okros argues that the assignment of power purchase costs is disproportionate and disadvantageous to Rural customers, citing the approach had a clear goal of extracting more money from Rural customers.[192]

Panel Determination

The Panel does not accept Nelson Hydro's proposed assignment of power purchase costs between Rural and Urban ratepayers. **The Panel directs Nelson Hydro to recalculate its COSA with power purchase costs assigned 100 percent to common costs**.

[185] Exhibit B-8, Faust IR 21; Exhibit B-13, Faust IR T3-7 and T7-1.
[186] Exhibit B-4, BCUC IR 12.6; Exhibit B-1, Appendix 8-1, Section 4.1.2, Table 7, p. 11.
[187] Exhibit B-1, Section 3.3, pp. 11–12.
[188] Exhibit B-1, Section 3.3, p. 12.
[189] Nelson Hydro Final Argument, pp. 11–12.
[190] Faust Final Argument, p. 11.
[191] Faust Sur-Reply Argument, pp. 3–6.
[192] Okros Final Argument, p. 2.

Nelson Hydro purchases power from FBC to serve both its Rural and Urban customers when its own generating facilities are providing insufficient power. The COSA shows that Rural customers consume 70.8 percent of the purchased power and Urban customers consume the remaining 29.2 percent.[193]

The Panel has found in section 2.3.1 above that Nelson Hydro's generation assets are used by both Urban and Rural customers with no clear separation, and as a consequence, generation assets and costs should be assigned to Common. For the same reasons, the Panel finds that Nelson Hydro's power purchases are used by both Urban and Rural customers with no clear separation, and that power purchase costs should be allocated 100 percent to Common and thereafter allocated on a sound regulatory basis (discussed below).

The Panel disagrees with Nelson Hydro's premise that Rural ratepayers should pay for proportionately more of the power purchase costs than the Urban ratepayers. Nelson Hydro submits that it would not purchase "nearly the same amount of power from FBC but for the fact that it services the Rural service area", but the same could be said of the Urban service area. Further, Nelson Hydro acknowledges that the need to purchase additional power was only added as demand grew "in the Urban and Rural areas", undermining the notion that Rural ratepayers are proportionately more responsible for power purchase costs than Urban ratepayers.[194]

2.3.3 Surplus Energy

When Nelson Hydro's generating plant is sufficient for servicing all the Urban's needs, any surplus energy is provided to the Rural service area.[195] Nelson Hydro submits that the only issue that is appropriate for consideration by the BCUC with regard to the City's generation is how any surplus generation that is made available to the Rural area should be priced.[196] Nelson Hydro states that valuing such generation at the FBC wholesale rate under Rate Schedule 41 is fair and reasonable.[197] The dollar amount transferred represents the kilowatt-hour (kWh) of surplus generation from Nelson Hydro's own generation transferred to Rural customers, as outlined in the Feeder Loader study, at the FBC wholesale energy rate, excluding the demand charge.[198]

Alternative pricing methodologies were explored, which include the use of Mid-C pricing and the Nelson Hydro's average cost of generation. Nelson Hydro states that Mid-C pricing cannot be used due to multiple factors, including the lack of Mid-C forecasts required to use the Mid-C price to calculate the price.[199] If the price was to occur at Nelson Hydro's average cost of generation, Nelson Hydro states that the surplus energy cost would be $0.150 million lower than the cost included in the COSA and would increase Rural residential RCC by about 1.3 percent.[200]

[193] COSA p. 10.
[194] Exhibit B-1, p. 12.
[195] Exhibit B-1, Appendix 8.1, p. 8
[196] Nelson Hydro's Final Argument, p. 10–11.
[197] Nelson Hydro Final Argument, p. 11; Exhibit B-1, Appendix 8-1, Section 4.1.2, Footnote 21, p. 11.
[198] Exhibit B-4, BCUC IR 10.1 and IR 12.3; Exhibit B-6, RCIG IR 26.1; Exhibit B-13, Faust IR T5-1 and IR T7-1.
[199] Exhibit B-12, BCUC IR 54.2.
[200] Exhibit B-15, BCOAPO IR 62.2.

Panel Determination

The Panel makes no determination with respect to Nelson Hydro's valuation of surplus energy.

In the previous sections 2.3.1 and 2.3.2, the Panel determined that both Nelson Hydro's own generation and its power purchases are used by both Rural and Urban ratepayers, and the associated costs should be treated as Common and allocated between Rural and Urban customers on a sound regulatory basis.

As a result, the notion of "surplus energy" from Nelson Hydro's own generation assets to be used by Rural ratepayers does not arise. All the energy generated by Nelson Hydro is used by both Rural and Urban ratepayers, and if there remains a surplus, the energy is sold to FBC or BC Hydro for the benefit of both sets of Nelson Hydro's ratepayers.

2.3.4 Transmission and Distribution

In this section, the Panel addresses the assignment of Nelson Hydro's transmission and distribution assets and their associated operating costs between Rural and Urban ratepayers.

Transmission poles/lines are assigned as common assets considering that the power transmitted using the transmission lines serves both Urban and Rural customers.[201]

The remaining substations, primary and secondary poles and conductors, underground conductors and devices, transformers, meters, and streetlights are assigned to Urban and Rural based on the physical location of the asset [within the City boundaries, North Shore, or South Shore].[202] Nelson Hydro states that where the labour and material cost inputs for a specific asset at that location are clearly defined, those costs are used and in other cases, an average cost is allocated to each asset at each location based on the total for the project.[203]

Substation and generating station assets are clearly defined by the location of the facility and the area it services.[204] Some substations serve both Urban and Rural service areas. The common facilities are located centrally enough to be able to serve load in both the Rural and Urban areas. Therefore, they are assigned as common assets.[205] Nelson Hydro states that the common substations consist of Mill Street Substation, which serves Urban Nelson and the Northshore in the Rural area, and the Granite Terminal Station which supplies both Millstreet and Rosemont areas.[206]

Positions of Parties

BCOAPO submits that the results of the Feeder Loader study could be used to improve the assignment of common substation costs by assigning the cost for "shared" feeders based on the percentage of load delivered to each of the two areas as determined by the study and recommends that the BCUC direct Nelson Hydro to pursue such improvements in the next COSA.[207]

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[201] Exhibit B-1, Appendix 8.1, p. 8.
[202] Exhibit B-4, BCUC IR 10.2.
[203] Exhibit B-4, BCUC IR 10.2.
[204] Exhibit B-4, BCUC IR 10.2.
[205] Exhibit B-5, BCOAPO IR 56.1.
[206] Exhibit B-9, BCOAPO IR 16.4.
[207] BCOAPO Final Argument, p. 35.

Nelson Hydro responds that it is not a beneficial investment in time or resources to prepare the COSA with common substation costs assigned to Urban and Rural based on the Feeder Loader study and it would not result in any significant impact to the COSA outcome.[208]

Panel Determination

The Panel accepts Nelson Hydro's assignment of transmission assets and costs to Common. These assets are used by both Rural and Urban ratepayers, and it is appropriate that the associated costs be shared between them.

The Panel also accepts the assignment of the majority of distribution assets to Rural or Urban customers based on the physical location of the assets, which indicates the service area that benefits from the asset. The Panel agrees that the two substations, Mill Street and Granite Terminal, should be assigned to Common as these assets are used by both Rural and Urban ratepayers, and it is appropriate that the associated costs be shared between them.

The Panel declines to direct Nelson Hydro to amend its next COSA to use a feeder loader study to assign the cost for shared distribution feeders between Rural and Urban ratepayers. The Panel is satisfied that assigning the costs of shared distribution feeders to Common costs provides a reasonable allocation of the costs between Rural and Urban customers. There is no evidence that the allocation of the costs would be significantly improved by assigning the costs on the basis of an estimate from a feeder loader study, compared to how the Common costs are allocated in the COSA.

2.3.5 General

Nelson Hydro states that it does not record any "general" assets that are common in the utility industry, such as trucks or buildings.[209] Facilities and equipment for general use are shared with the City, which provides these assets from its overall pool of assets and an internal accounting charge is imposed for Nelson Hydro's use of these assets.[210] This charge is included in the O&M portion of the revenue requirement and, as a result, there are no assets recorded for these components.[211]

Nelson Hydro states that general costs are predominantly assigned as common costs as they relate to services that benefit all customers.[212] For example, the costs under accounts, such as share of finance costs, administrative costs, computer services costs, training, and office supplies cannot be directly assigned to Urban or Rural and need to be under a common cost group.[213] Nelson Hydro does explain that a small amount can be directly assigned, for example, district heating-related costs are assigned to Urban.[214]

Positions of Parties

No arguments were made for the assignment of general costs.

[208] Nelson Hydro Reply Argument, para. 58, p. 18.
[209] Exhibit B-1, Appendix 8-1, Section 4.1.1, p. 8.
[210] Exhibit B-1, Appendix 8-1, Section 4.1.1, p. 8 and Section 4.3, p. 15.
[211] Exhibit B-1, Appendix 8-1, Section 4.1.1, p. 8.
[212] Exhibit B-4, BCUC IR 12.8.
[213] Exhibit B-4, BCUC IR 12.8.
[214] Exhibit B-4, BCUC IR 12.8.

Panel Determination

The Panel accepts Nelson Hydro's assignment of general costs to Common. These costs benefit both Rural and Urban ratepayers, and it is appropriate that they are shared between them.

2.4 Functionalization

InterGroup states that functionalization consists of determining to which function or role a utility's costs relate, and that utilities typically functionalize their costs to generation, transmission, distribution and general plant.[215]

InterGroup states that for the purposes of the 2019 COSA, Nelson Hydro's costs are functionalized to:[216]

- Generation – generation assets, plant operating cost, purchased power, etc.;
- Transmission and Distribution – these functions are combined and include transmission and distribution assets, costs related to operating and maintenance of these assets, and proving service; and
- General plant – general cost, such as computer services, etc.

InterGroup states that Nelson Hydro owns no general plant assets, and Nelson Hydro's other capital assets are functionalized as follows:

Table 5: Mid-Year Balance of Capital Assets[217]

	Mid-year Balance	Urban	Rural	Common
Generation Plant				
Generating Stations	13,687	13,687	0	0
Substations	1,090	1,090	0	0
Subtotal	**14,777**	**14,777**	**0**	**0**
Transmission and Distribution Plant				
Transmission	5,876	0	0	5,876
Substations	6,347	3,389	298	2,660
Primary and Secondary Poles & Conduct.	15,615	4,952	10,662	0
Underground Conduct. & Devices	6,861	3,943	2,918	0
Transformers	5,195	2,774	2,422	0
Meters	1,216	729	486	0
Streetlight	223	223	0	0
Other	392	392	0	0
Subtotal	**41,724**	**16,402**	**16,787**	**8,535**
Total	**56,501**	**31,179**	**16,787**	**8,535**
Accumulated Amortization	**15,611**	**9,254**	**5,183**	**1,175**
Net Book Value	**40,890**	**21,926**	**11,603**	**7,361**

[215] Exhibit B-1, Appendix 8-1, Section 4.2, p. 11.

[216] Exhibit B-1, Appendix 8-1, Section 4.2, p. 11.

[217] Exhibit B-1, Appendix 8-1, Section 4.2, p. 9.

Nelson Hydro's O&M expenses are functionalized as follows:

Table 6: O&M Expenses by Function[218]

	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**

In this section, the Panel reviews Nelson Hydro's proposed functionalization of assets and O&M expenses and addresses issues by interveners.

2.4.1 Generation

The 2019 COSA functionalizes generation assets, plant operating cost, and purchased power to generation.[219]

Panel Determination

The Panel accepts Nelson Hydro's functionalization of generation assets, plant operating cost, and purchased power to generation.

The Panel directs that in its next COSA, Nelson Hydro includes power purchase costs in the generation category and not as a separate item as shown in Table 6 above. This would more clearly indicate that power purchase costs are functionalized to generation, as Nelson Hydro states.

2.4.2 Transmission and Distribution

In Nelson Hydro's 2019 COSA, the transmission and distribution functions are combined, and include transmission and distribution assets and costs related to operating and maintaining these assets.[220]

[218] Exhibit B-1, Appendix 8-1, Section 4.2, p. 12.
[219] Exhibit B-1, Appendix 8-1, Section 4.2, p. 11.
[220] Exhibit B-1, Appendix 8-1, Section 4.2, p. 11.

Panel Determination

The Panel does not accept Nelson Hydro's functionalization of transmission and distribution assets and costs related to operating and maintaining these assets.

The Panel directs Nelson Hydro to functionalize transmission assets and costs separately from distribution assets and costs. As noted in section 2.5 below, Nelson Hydro uses different classification factors to classify transmission and distribution assets and their related costs, and functionalizing them separately would bring more consistency and transparency. Further, as InterGroup notes, it is more common for utilities to functionalize transmission and distribution separately.

2.4.3 General and Administrative Costs

Nelson Hydro states that the O&M expenses included under general plant are general administrative costs and primarily reflect costs, such as general administrative staff salaries and wages, share of City of Nelson services, computer services, material and supplies, office supplies, and training.[221] In response to a BCOAPO IR, Nelson Hydro clarified that customer billing costs are functionalized to General.[222] Nelson Hydro also explained that costs for customer service representatives, which only totalled $123,738 in 2019,[223] are also functionalized to General.[224]

Positions of the Parties

BCOAPO has two issues in regard to functionalization. First, BCOAPO submits that customer billing costs should be removed from General and treated as a separate Transmission and Distribution sub-function.[225]

Second, BCOAPO notes that account 4255000 (Share of Finance Dep), assigned to general plant costs, includes the costs for customer service representatives. BCOAPO submits that these costs should also be treated as a separate Distribution sub-function so that they can be classified as customer-related and allocated appropriately. BCOAPO submits that the BCUC should direct Nelson Hydro to include both these revisions in its next COSA.[226]

Nelson Hydro replies that, while it views the above refinement as not being beneficial investments in time or resources when compared to the marginal enhanced accuracy that can be achieved in the COSA (added costs that ratepayers will end up paying for, including low-income ratepayers), Nelson Hydro does not object to making this refinement in the next COSA.[227]

Panel Determination

The Panel does not accept Nelson Hydro's functionalization of general and administrative costs because functionalizing the customer billing and customer service representatives' costs separately would bring more

[221] Exhibit B-4, BCUC IR 13.1
[222] Exhibit B-9, BCOAPO IR 21.2; Exhibit B-15, BCOAPO 66.3 Attachment 1, Tab Salaries and Wages, Row 10.
[223] Exhibit B-9, BCOAPO IR 21.3.
[224] Exhibit B-15, BCOAPO 66.3 Attachment 1, Tab Salaries and Wages, Row 11.
[225] BCOAPO Final Argument p. 38.
[226] BCOAPO Final Argument p. 38.
[227] Nelson Hydro Reply Argument, p. 21.

consistency and transparency. **The Panel directs Nelson Hydro to revise its COSA to functionalize its customer billing costs and its customer service representatives costs to separate distribution sub-accounts**.

The Panel notes Nelson Hydro's willingness to take this approach in future, and considers that the effort to make this change is small. Since the Panel is directing Nelson Hydro to revise its COSA for other reasons, the Panel considers it worthwhile to make this small change at the same time rather than waiting until the submission of the next COSA.

2.5 Classification Factors

Once costs are functionalized, they are classified based on the cost drivers of demand, energy, customer, and revenue.[228] Nelson Hydro states that none of its costs are classified by revenue.[229]

InterGroup states that this step is more complicated as it cannot be developed using accounting or other information from Nelson Hydro, but instead uses detailed load data. To avoid the need to develop specific classification factors based on a range of detailed studies, InterGroup explains that the Nelson Hydro COSA uses broad industry-accepted factors, which are then tested for reasonableness for application to Nelson Hydro.[230]

2.5.1 Generation

InterGroup states that the determination of appropriate generation classification factors considers the relationship between capacity (peak demand) and energy requirements. The cost of capacity relates to the cost to accommodate peak loads at the time of the highest system load in the system, whereas the cost profile of pure energy use is that of sustained consumption of kWh throughout the year.[231] Utilities with an interconnected system, particularly those using hydroelectric generation, classify generation plant to both demand and energy cost drivers. The 2019 COSA provides the following examples of classification factors used by other utilities to classify their generation assets and related costs, as summarized by the BCUC:

Table XX: Generation Classification Factors by Other Utilities[232]

Utilities	Demand	Energy
BC Hydro (BCH)	55%	45%
FortisBC Inc. (FBC)	20%	80%
Yukon Energy and Yukon Electrical (Yukon Energy)	40%	60%
Newfoundland and Labrador Hydro (NFLH)	45.5%	54.4%

In the 2019 COSA, Nelson Hydro's generation plant is classified in the same manner as that of FBC, namely 20 percent to demand and 80 percent to energy.[233] InterGroup explains that this decision was driven by two overriding considerations:[234]

[228] Exhibit B-1, Appendix 8-1, Section 4.3, p. 13.
[229] Exhibit B-4, BCUC IR 15.1.
[230] Exhibit B-1, Appendix 8-1, Section 4.3, p. 13.
[231] Exhibit B-1, Appendix 8-1, Section 4.3, p. 13.
[232] Exhibit B-1, Appendix 8-1, Section 4.3, pp. 13–14.
[233] Exhibit B-1, Appendix 8-1, Section 4.3, p. 14.
[234] Exhibit B-1, Appendix 8-1, Section 4.3, p. 14.

- Use of factors that recognize the very seasonal nature of the hydraulic generation owned by Nelson Hydro, which provides far more summer energy and much more limited winter peak-capacity output; and
- Use of factors that have an established and accepted role in BC rate-setting.

To explain how FBC determined the classification split for its generation, Nelson Hydro cites the following passage from the FBC's 2009 COSA study:

> To develop the classification split for FBC, the output from the Kootenay River plants was priced as if it were purchased at the [BC Hydro] 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.[235]

Nelson Hydro notes that FBC used the same classification factors for generation in both its 2009 COSA and 2017 COSA.[236] When asked to clarify why using the classification factors FBC chose for its generation, which reflected its own circumstances relating to its BC Hydro 3808 purchases, was appropriate, Nelson Hydro responded that FBC does not only apply the classification ratio to BC Hydro 3808 purchases, but that it effectively applies the same classification ratio to its own Kootenay River plants.[237] Nelson Hydro adds that consistency between Nelson Hydro and FBC is reasonable because both Nelson Hydro's and FBC's plants are run of river facilities, are in the same river system, and face the same hydrologic conditions.[238] Also, water flow to each of the plants on the Kootenay River is controlled by BC Hydro in accordance with the various agreements between the water license holders.[239]

Nelson Hydro also notes that, unlike itself, BC Hydro, Yukon Energy and Newfoundland and Labrador Hydro operate systems with baseload hydraulic generation, including storage, which supply significant parts of their respective winter peaks with hydraulic generation derived from stored water.[240] In contrast, Nelson Hydro's run of river facility maximizes hydraulic output when water is available during freshet and is limited by its water license for winter generation.[241] Nelson Hydro states that this seasonal factor is by far the main reason why it is adopting FBC's ratio, which it states is more appropriate for a plant that is primarily an energy generator with little management for peak-period demand contribution.[242] Since the Nelson Hydro plant does provide some winter capacity, Nelson Hydro states that it is appropriate to reflect this in cost classification and confirmed that the 80 percent to energy is a relatively standard way of reflecting a hydrologic balance consistent with Nelson Hydro's generation.[243]

[235] Exhibit B-4, BCUC IR 21.4.
[236] Exhibit B-4, BCUC IR 21.4.
[237] Exhibit B-4, BCUC IR 16.1.
[238] Exhibit B-4, BCUC IR 16.1; Exhibit B-12, BCUC IR 55.1.
[239] Exhibit B-12, BCUC IR 55.1.
[240] Exhibit B-4, BCUC IR 16.2.
[241] Exhibit B-4, BCUC IR 16.2.
[242] Exhibit B-4, BCUC IR 16.2.
[243] Exhibit B-12, BCUC IR 55.2.

Generation-related costs, including amortization expense but not including purchased power, are classified based on the average classification factor for Generation Plant, which results in these costs also being classified as 20 percent demand and 80 percent energy.[244]

Nelson Hydro states that while the power purchase cost is treated as a generation function, it is the single largest cost item in the revenue requirement and differs from other generation-related costs. Power purchase costs are classified as follows: energy purchases to Energy; demand purchases to Demand and basic charge to Customer.[245]

Positions of the Parties

BCOAPO notes that the method used by FBC to develop the classification split for its generation is based on its own circumstance and submits that the same split, namely 20 percent to demand and 80 percent to energy, is unlikely to result if the same method was applied to Nelson Hydro's hydraulic output, that is, if it were priced at either BC Hydro's 3808 tariff or FBC's wholesale tariff.[246]

Panel Determination

The Panel accepts Nelson Hydro's proposed classification of generation plant and related costs, other than power purchase costs, namely 20 percent to demand and 80 percent to energy.

The Panel is persuaded that the nature of Nelson Hydro's generation is sufficiently similar to that of FBC's generation to support the adoption of FBC's classification of generation assets. Specifically, both utilities operate run-of-river hydraulic generation, which generates higher levels of summer energy and provides more limited capacity in the winter peak period. The BCUC approved FBC's 2009 COSA, which reflected its classification of generation assets and the associated O&M expenses as 20 percent to demand and 80 percent to energy in Order G-156-10.

The Panel also accepts Nelson Hydro's classification of power purchase costs to demand, energy and customer based on the breakdown used by FBC when charging Nelson Hydro for power purchases, subject to the direction below.

FBC's charges to Nelson Hydro for purchased power are broken down into demand, energy and customer components. It is reasonable for Nelson Hydro to classify its power purchase costs using this breakdown given that the FBC rate is itself approved by the BCUC and the categories into which the amounts are broken down match Nelson Hydro's cost drivers.

It is also reasonable that Nelson Hydro proposes a different classification for its power purchases than it does for its generation costs. Nelson Hydro's power purchases are "the single largest cost item" in its revenue requirement.

In the 2019 COSA, Nelson Hydro assigned its power purchase costs between Rural and Urban ratepayers prior to the costs being classified. Therefore, the classification of power purchases to demand, energy and customer was

[244] Exhibit B-1, Appendix 8-1, Section 4.3, p. 14; Exhibit B-15, BCOAPO IR 66.3 Attachment 1, Tab COS (Urban), Lines 57 and 62.
[245] Exhibit B-4, BCUC IR 14.2 and IR 14.4.
[246] BCOAPO Final Argument, p. 40.

based only on the portion that FBC charges for Rural power purchases. The Panel in section 2.3.2 above rejected Nelson Hydro's assignment of power purchase costs between Rural and Urban customers and directed Nelson Hydro to assign its power purchase costs to common costs. For consistency, **the Panel directs Nelson Hydro to recalculate the COSA classifying its power purchase costs to demand, energy and customer using FBC's total charges for Nelson Hydro's power purchases for both Rural and Urban customers, which the Panel previously directed to be assigned to Common costs**.

2.5.2 Transmission

InterGroup states that investment in transmission and distribution plant is typically driven by the number and location of customers, and by the peak demand imposed by those customers, rather than by energy consumption. As a result, transmission and distribution are normally classified to demand and customer, a practice followed by "basically all other Canadian utilities."[247]

Nelson Hydro explains that transmission plant is typically divided into two types for the purposes of a COSA: 1) Generation Integration Transmission, and 2) Grid Transmission.[248] Nelson Hydro further explains that the first type is a unique category of transmission assets, consisting of long radial lines, which largely deliver power from a distant generating station into the main load and grid transmission centers and is typically classified in the same manner as the underlying generation plant.[249] The second is the more common type of grid transmission, which most utilities, including BC Hydro and FBC classify as 100 percent to demand. For the purposes of its COSA, Nelson Hydro states that all Nelson Hydro's transmission is considered to be Grid Transmission, and like most utilities, Nelson Hydro classified it as 100 percent demand related.[250]

Nelson Hydro confirmed that the practice of designating [Generation] Integration Transmission to long radial lines that serve to almost entirely connect generation to the grid is very standard in COSA, and is used by utilities, such as Manitoba Hydro, Newfoundland and Labrador Hydro, BC Hydro and FBC. Both BC Hydro and FBC apply this concept to their COSA studies, but their respective Generation Integration Transmission assets make up a very small portion of their transmission (e.g. 10 percent in FBC's case). Nelson Hydro states that "if [it] were to apply the same ratio to its small base of transmission assets, it would have an immaterial effect on RCC ratios."[251]

When asked whether it would be appropriate to use a classification factor other than 100 percent to demand, Nelson Hydro responded that any transmission classified based on the underlying generation would only be applicable at most to the Nelson Hydro hydraulic generation plant connection.[252]

Regarding the classification of transmission costs, Intergroup states that transmission- and distribution-related costs are classified based on average classification factor for transmission/distribution plant.[253] In response to a

[247] Exhibit B-1, Appendix 8-1, Section 4.3, p. 14.
[248] Exhibit B-4, BCUC IR 17.1.
[249] Exhibit B-4, BCUC IR 17.1.
[250] Exhibit B-1, Appendix 8-1, Section 4.3, p. 14, Exhibit B-4, BCUC IR 17.1 and IR 17.2.
[251] Exhibit B-12, BCUC IR 56.1 and IR 56.1.1.
[252] Exhibit B-4, BCUC IR 17.2.1.
[253] Exhibit B-1, Appendix 8-1, p. 15.

BCOAPO IR, Nelson Hydro clarified that it would be more accurate to classify Transmission O&M expenses based on the classification of Transmission Plant.[254]

Positions of Parties

Regarding Transmission costs and amortization, BCOAPO notes that Nelson Hydro applied the aggregate[255] classification factors for transmission and distribution assets to transmission and distribution costs; however, the proportion of these costs attributable to transmission versus distribution is unlikely to match the relative proportions of the asset values.[256] BCOAPO notes that, while more complex, Nelson Hydro has acknowledged that classifying transmission costs and amortization based on the classification of transmission assets and using a similar approach for distribution would yield more accurate results.[257]

While BCOAPO appreciates that some level of simplification may be necessary in undertaking a COSA due to data and resource availability issues, particularly for small utilities like Nelson Hydro, it is of the view that some refinements are fairly easy to implement, such as separating out transmission versus distribution for the purpose of classifying costs and amortization.[258] BCOAPO notes that the overall accuracy of the COSA results will be impacted by simplifying assumption and/or using data from other utilities and BCOAPO submits that this must be considered when interpreting and applying the COSA results. Indeed, BCOAPO believes that while each simplifying assumption may only have a small impact, taken all together, such assumptions could have a more material impact on the COSA's results.[259]

Panel Determination

The Panel does not accept Nelson Hydro's classification of transmission assets 100 percent to demand. **The Panel directs Nelson Hydro to recalculate its COSA with 92 percent of transmission assets classified to demand and eight percent of transmission assets classified to energy**.

In the Panel's view, it is not appropriate to classify 100 percent of Nelson Hydro's transmission assets to demand, as if 100 percent of Nelson Hydro transmission were grid transmission. The transmission assets are used to connect Nelson Hydro's generation plant to its distribution grid, and as explained above, this generation plant is only partially classified to demand due to its nature as a run-of-river plant. Radial transmission lines that connect generating plants to an integrated system are typically classified on the same basis as the underlying generation assets, as Nelson Hydro observes.[260] Nelson Hydro acknowledged this point when stating that any transmission classified based on the underlying generation would only be applicable to the Nelson Hydro hydraulic generation plant connection.

The 2019 COSA proposes using "broad industry-accepted factors"[261] rather than developing utility-specific classification factors based on detailed studies, and the Panel generally accepts this approach for reasons of

[254] Exhibit B-15, BCOAPO IR 67.2.
[255] Nelson Hydro uses the term "average classification factors" rather than "aggregate classification factors".
[256] BCOAPO Final Argument, p. 41.
[257] BCOAPO Final Argument, p. 41.
[258] BCOAPO Final Argument, p. 41.
[259] BCOAPO Final Argument, p. 41.
[260] Exhibit B-1, Appendix 8-1, Section 4.3, p. 14.
[261] Exhibit B-1, Appendix 8-1, p. 13.

efficiency. The Panel has also accepted, in section 2.5.1 above, Nelson Hydro's contention that it is similar to FBC with regard to the classification of generation assets.

In the absence of detailed studies on how the costs of Nelson Hydro's transmission assets should be classified, the Panel is satisfied that FBC provides a useful comparator, as it was for the classification of Nelson Hydro's generation assets. FBC classifies 90 percent of its transmission assets as grid transmission, hence 100 percent to demand, and the remaining 10 percent on the same basis as the underlying generation plant, namely 20 percent to demand and 80 percent to energy. The Panel is of the view that this is a satisfactory basis for Nelson Hydro to use. The resulting classification factors for Nelson Hydro's transmission assets would, on this basis, be 92 percent to demand and eight percent to energy.

The Panel does not accept Nelson Hydro's proposed classification of its transmission costs, including amortization expense, on the same basis as the average classification factors for its combined transmission and distribution assets. **The Panel directs Nelson Hydro to recalculate its COSA with transmission costs, including amortization expense, classified on the same basis as its transmission assets, as directed above**.

Nelson Hydro used different "broad industry-accepted" classification factors to classify its transmission and distribution assets separately. The Panel sees no compelling reason to then combine these assets for the purpose of classifying transmission and distribution costs based on the average classification factors for transmission and distribution plant when it would be more accurate to use the respective asset classification factors.

The Panel notes that Nelson Hydro does not object to making this adjustment in the next COSA. Since the Panel has already directed Nelson Hydro to recalculate its COSA for other reasons, the Panel considers this additional modification to the COSA calculations to be worth making now.

2.5.3 Distribution

Nelson Hydro explains that investment in distribution assets is driven partly by the demand placed on the system and partly by the number of customers to be served.[262] Nelson Hydro cautioned that it can be difficult to develop comparisons to other utilities with respect to distribution classification factors since not all utilities account for similar assets in the same way and they classify distribution costs to demand and customer using widely different factors.[263]

Nelson Hydro submits that a simple approach, which can be applied without requiring new asset classification categories and is representative of the BC experience, is to use BC Hydro's classification factors of 73 percent demand and 27 percent customer.[264] The only exception to this relates to the 'Streetlights' sub-function of distribution plant, where Nelson Hydro directly assigned these assets to the Streetlight customer class.[265] This direct assignment method only affects the Urban area as the existing Rural streetlight infrastructure is fully amortized.[266]

[262] Exhibit B-1, Appendix 8-1, Section 4.3, p. 15.
[263] Exhibit B-4, BCUC IR 18.1.
[264] Exhibit B-1, Appendix 8-1, Section 4.3, p. 15.
[265] Exhibit B-1, Appendix 8-1, Section 4.3, p. 15.
[266] Exhibit B-4, BCUC IR 10.4.

Nelson Hydro confirms that the BC Hydro classification factors it used are in fact aggregate classification factors of total distribution plant (i.e. they will be reflective of the proportions of BC Hydro distribution assets in each sub-function).[267] Nelson Hydro explains that relying on BC Hydro's aggregate classification factors is more appropriate than relying on FBC's because BC Hydro's classification factors represent an industry standard that was readily available and could be easily applied, given it did not need further analysis to ensure the respective asset categories were equivalent between the two utilities.[268] Nelson Hydro submits that this approach is reasonable, practical to apply, and cost-effective.[269] Nelson Hydro noted that it typically relies on FBC's approach, but in this case the FBC factors are more granular and harder to apply given the need to subdivide assets into the correct components, which Nelson Hydro could not confirm it could easily do in the precise divisions used by FBC.[270] Nelson Hydro explains that it was necessary to apply the results of a peer utility to determine a fair cost-of-service allocation without excessive investment in research, given the minuscule impact these ratios have on the ultimate allocation of costs in the Nelson Hydro case.[271]

Nelson Hydro also states that it doesn't have information to compare its distribution plant with those of BC Hydro and FBC, except to say that the latter two are much larger than Nelson Hydro and they all face a similar climate.[272] In response to IRs, Nelson Hydro did provide FBC's aggregate classification factors of total distribution plant as 47.3 percent to demand, 51.5 percent to customer and 1.2 percent of direct assignment.[273]

Regarding the classification of distribution costs, Intergroup states that transmission- and distribution-related costs are classified based on average classification factor for transmission/distribution plant.[274]

Positions of Parties

BCOAPO noted that Nelson Hydro grouped the assets of the "Transmission and Distribution" functions into "sub-functions", such as Transmission, Substations, Poles – Primary and Secondary, Underground Conductors & Devices, Transformers, Meters, Streetlighting, and Other, and stressed that this sub-function detail is critical as different classification and allocation factors apply in many instances.[275]

In BCOAPO's view, Nelson Hydro made several simplifying assumptions in classifying its assets and related costs. One of them was to adopt the aggregate classification factors for BC Hydro's distribution plant and to apply them to Nelson Hydro's Distribution Plant. BCOAPO highlighted that the Distribution function includes many sub-functions for which BC Hydro's classification factors varied. Since BC Hydro's relative proportion of distribution assets by sub-function is different than that of Nelson Hydro, BCOAPO submits that applying BC Hydro's classification factors for each sub-function to Nelson Hydro's distribution assets would lead to a different aggregate allocation. Nelson Hydro calculated the aggregate classification based on its own distribution asset breakdown and BC Hydro's classification factors and results differed materially from the aggregate BC Hydro classification factors: customer- and demand-related costs are respectively 12 percent and 88 percent for

[267] Exhibit B-9, BCOAPO IR 27.2.
[268] Exhibit B-12, BCUC IR 57.1.
[269] Exhibit B-12, BCUC IR 57.1.
[270] Exhibit B-12, BCUC IR 57.1.
[271] Exhibit B-12, BCUC IR 57.1.
[272] Exhibit B-4, BCUC IR 18.2.
[273] Exhibit B-12, BCUC IR 57.2 and IR 57.2.1.
[274] Exhibit B-1, Appendix 8-1, p. 15.
[275] BCOAPO Final Argument, p. 36.

Nelson Hydro's assets as opposed to 27 percent and 73 percent based on BC Hydro's.[276] Notwithstanding the above, BCOAPO admitted in its Final Argument that determining classification factors for individual Distribution sub-functions is a refinement that may be more difficult to implement.[277]

Regarding Distribution costs and amortization, BCOAPO notes that Nelson Hydro applied the aggregate classification factors for Transmission and Distribution assets to Transmission and Distribution costs; however, the proportion of these costs attributable to Transmission versus Distribution is unlikely to match the relative proportions of the asset values. BCOAPO notes that, while more complex, Nelson Hydro has acknowledged that classifying Distribution costs and amortization based on the classification of Distribution assets would yield more accurate results. BCOAPO further notes that the same observation applies to the different categories of Distribution costs where the proportions of the assets associated with each sub-function are unlikely to mirror the proportional breakdown of the costs or amortization associated with the assets. BCOAPO concludes that even if Transmission and Distribution are separated, applying the aggregate Distribution asset classification factors to all Distribution costs and amortization is likely to yield inaccurate results.[278]

While BCOAPO appreciates that some level of simplification may be necessary in undertaking a COSA, it is of the view that some refinements are fairly easy to implement, such as separating out Transmission versus Distribution for the purpose of classifying costs and amortization.

Panel Determination

The Panel accepts Nelson Hydro's direct assignment of streetlight assets, a sub-category of distribution assets, to the Streetlight customer class. The Panel agrees with Nelson Hydro that these assets should be directly assigned because the Streetlight customer class is the only user of the streetlight assets.

The Panel does not accept Nelson Hydro's classification of distribution assets, other than streetlight assets, based on the aggregate classification of BC Hydro's distribution assets. **The Panel directs Nelson Hydro to recalculate its COSA with its distribution assets, other than streetlight assets, classified based on the aggregate classification of FBC's distribution assets, ensuring that no Nelson Hydro distribution assets other than streetlight assets be directly assigned**.

The Panel has previously accepted that it is reasonable for reasons of efficiency for Nelson Hydro to use the classification factors of industry peers rather than perform its own detailed cost studies. However, the Panel does not accept Nelson Hydro's choice of BC Hydro as an appropriate comparator in this instance.

Nelson Hydro's reason for not adopting FBC's classification of distribution assets is that FBC's factors are "more granular and harder to apply." The Panel agrees that using FBC's classification of distribution sub-functions such as poles, towers and fixtures would be harder to apply. However, it is no harder for Nelson Hydro to use FBC's overall distribution asset classification factors than it was to use BC Hydro's overall distribution asset classification factors.

[276] BCOAPO Final Argument, p. 40; Exhibit B-9, BCOAPO IR 27.2.2.
[277] BCOAPO Final Argument, p. 41.
[278] BCOAPO Final Argument, p. 41.

As previously noted, the Panel accepts FBC as being a reasonable comparator for Nelson Hydro given the utilities' similarities in their generation functions. In the absence of compelling evidence that another utility is a better comparator than FBC for distribution asset classification, the Panel prefers Nelson Hydro to use FBC as the comparator in this instance as well.

FBC classifies its distribution assets 47.3 percent to demand, 51.5 percent to customer and 1.2 percent are directly assigned. Nelson Hydro already directly assigns its streetlight assets, so the Panel considers the relevant FBC classification factors to use are those to demand and customer. In order that 100 percent of Nelson Hydro's distribution costs are classified, **Nelson Hydro is directed to recalculate its COSA with its distribution assets other than streetlight assets classified 47.9 percent to demand[279] and 52.1 percent to customer.[280]**

The Panel does not accept Nelson Hydro's proposed classification of its distribution costs, including amortization expense, on the same basis as the average classification factors for its combined transmission and distribution assets. **The Panel directs Nelson Hydro to recalculate its COSA with distribution costs, including amortization expense, classified on the same basis as its distribution assets, other than streetlight assets, as directed above**.

As noted in section 2.4.2 above, the Panel sees no compelling reason for Nelson Hydro to combine its transmission and distribution assets for the purpose of classifying transmission and distribution costs based on the average classification factors for transmission and distribution when it would be more accurate to use the respective asset classification factors.

2.5.4 General

Nelson Hydro states that general administration costs are classified based on total plant in service.[281] This is done based on the proportion of total assets classified to customer, demand and energy categories (i.e. Total Plant in Service for each group: Urban, Rural and Common).[282]

Panel Determination

The Panel accepts Nelson Hydro's classification method for general costs based on the average classification of total plant in service to demand, energy and customer factors. Having accepted the classification method, the Panel acknowledges that the proportion of total assets classified to demand, energy and customer for each group (Urban, Rural and Common) will be affected by the Panel's previous directions regarding the assignment of generation plant and power purchase costs to the Common area, the functionalization of certain general costs to distribution, as well as the classification factors to classify transmission and distribution assets. Therefore, the Panel accepts that the resulting average classification of total plant in service to classify general costs will be different than in the Application.

[279] 47.3 * 100 / 98.8 = 47.9.

[280] 51.5 * 100 / 98.8 = 52.1.

[281] Exhibit B-4, BCUC IR 14.4.

[282] Exhibit B-15, BCOAPO IR 66.3 Attachment 1, Tab COS (Urban), Lines B76 to V77, Tab COS (Rural), Lines B76 to V77, and Tab COS (Common), Lines B76 to V77.

2.5.5 Accumulated Amortization

There was no specific rationale provided for the assignment or functionalization of accumulated amortization. However, based on Nelson Hydro's COSA model, accumulated amortization appears to be assigned and functionalized based on the capital assets to which it relates.[283]

Nelson Hydro classifies accumulated amortization related to generation plant based on the average classification factor for Generation Plant (i.e. 20 percent to demand and 80 percent to energy).[284]

Nelson Hydro classifies the accumulated amortization related to transmission and distribution plant combined based on the average classification factors for transmission and distribution plant.[285]

Positions of Parties

Regarding transmission and distribution amortization, BCOAPO notes that the proportion of amortization attributable to transmission versus distribution is unlikely to precisely match the relative proportions of the asset values. BCOAPO notes that Nelson Hydro has acknowledged that classifying transmission amortization based on the classification of transmission assets and using a similar approach for distribution would yield more accurate results.[286]

Panel Determination

The Panel accepts Nelson Hydro's classification method for accumulated amortization of generation plant only but does not accept Nelson Hydro's proposed method of classifying the combined accumulated amortization of transmission and distribution based on the average classification factors of transmission and distribution plant. As Nelson Hydro acknowledges, classifying accumulated amortization of transmission and distribution plant separately would yield more accurate results. **The Panel directs Nelson Hydro to recalculate its COSA with the accumulated amortization of each function classified separately, based on the average classification factors of the associated plant in service**.

2.5.6 Working Capital

Nelson Hydro states that working capital requirements are calculated based on cash requirements for O&M expenses.[287] Nelson Hydro assigns the working capital portion of rate base as Common as it could not assign it as either 100 percent Urban or Rural.[288] Nelson Hydro classifies working capital (cash and inventory) based on the proportion of total assets classified to demand, energy, and customer categories (i.e. total plant in service).[289]

[283] Exhibit B-15, BCOAPO IR 66.3 Attachment, Capital.
[284] Exhibit B-1, Appendix 8-1, Section 4.3, p. 15; Exhibit B-15, BCOAPO IR 66.3 Attachment 1, Tab COS (Urban), Line 31.
[285] Exhibit B-4, BCUC IR 19.1; Exhibit B-15, BCOAPO IR 66.3 Attachment 1, Cells O32 to V32 in Tabs: COS (Urban), COS (Rural) and COS (Common).
[286] BCOAPO Final Argument, p. 41.
[287] Exhibit B-1, Appendix 8-1, Section 3, p. 5.
[288] Exhibit B-1, Appendix 8-1, Section 4.1.1, p. 9.
[289] Exhibit B-1, Appendix 8-1, Section 4.3, p. 16.

Nelson Hydro states that the inventory portion of the working capital could be further detailed based on the breakdown of inventory balances, but this would be time consuming and have a very small impact on the COSA.[290]

Nelson Hydro confirms that the working capital 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.[291] Nelson Hydro explains that it used this method because working capital is part of rate base, so it was linked to other components of rate base.[292] While Nelson Hydro admits that there is a reasonable logic to the alternative approach of linking working capital returns to O&M, the impact of changing to this method and classifying working capital based on O&M expenses is extremely small (i.e. it shifts only about $2,000 to $3,000 at utility level between rate classes).[293]

Panel Determination

The Panel accepts Nelson Hydro's classification method for working capital based on the average classification factors of total plant in service to demand, energy and customer factors. Having accepted the classification method, the Panel acknowledges that the proportion of total assets classified to demand, energy and customer for the Common group will be affected by the Panel's previous directions regarding the assignment of generation plant and power purchase costs to the Common area, the functionalization of certain general costs to distribution, as well as the classification factors to classify transmission and distribution assets. Therefore, the Panel accepts that the resulting average classification factors of total plant in service to classify working capital will be different than in the Application.

2.6 Allocation Factors

Allocation is the third step of a COSA, whereby the functionalized and classified revenue requirement is allocated between the various customer classes.

2.6.1 Customer Classes

Nelson Hydro allocates its revenue requirement between the following three customer classes:[294]

- Residential,
- Commercial, and
- Streetlight.

Table 7 below provides more detailed information on the number of customers and sales to the various commercial rate schedules.

[290] Exhibit B-1, Appendix 8-1, Section 4.3, p. 16.
[291] Exhibit B-4, BCUC IR 10.5.
[292] Exhibit B-4, BCUC IR 20.1.
[293] Exhibit B-4, BCUC IR 20.1.
[294] Exhibit B-4, BCUC IR 3.4.

Table 7: Nelson Hydro Customer Numbers and Sales by Rate Schedule for 2019[295]

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**

Nelson Hydro explains that its Rural residential customers' monthly average usage is 1,140 kWh, which is for 4,203 customers that account for 88 percent of Rural sales and is higher than the average residential usage for its customers at about 918 kWh/month.[296] Nelson Hydro explains that the higher Rural residential usage appears to be impacted by a small number of Rural residential accounts that use about half of the energy for this class.[297] Nelson Hydro is reviewing the Rural residential accounts with large energy consumptions to determine if they should be under commercial rate class.[298]

Nelson Hydro notes that there are only 35 Rural Streetlight customers, which make up less than 0.5 percent of total Rural sales.[299]

Nelson Hydro states that its Commercial customer class encompasses four different rate schedules, each of which applies to commercial customers with different characteristics:

1) Small Commercial;
2) General Service;
3) Commercial Flat Service; and
4) Municipal Service.

Nelson Hydro states that each rate schedule applies depending on the practicalities of serving the specific customers. Nelson Hydro explains that very small customers (under 400 kWh/bimonthly billing cycle) are on a Commercial Flat Service (there are 75 of them), while very large customers (over 25 Kilo Volt Amperes (kVA)) are on General Service with more sophisticated demand meters.[300] With respect to the Small Commercial rate, Nelson Hydro's tariff schedule shows that this rate is applicable to non-residential customers with loads up to 25

[295] Exhibit B-4, BCUC IR 9.2.
[296] Exhibit B-4, BCUC IR 3.2 and IR 9.2.
[297] Exhibit B-4, BCUC IR 3.2.
[298] Exhibit B-4, BCUC IR 3.2.
[299] Exhibit B-4, BCUC IR 3.2 and IR 9.2.
[300] Exhibit B-4, BCUC IR 3.4.

kVA where no demand meter is installed.[301] Nelson Hydro states that the Municipal Service rate is not relevant to the Rural setting[302] as the municipal customer accounts are on the Urban side.[303]

Nelson Hydro explains that its Rural Small Commercial customers' monthly average usage is 1,165 kWh, which is for the 210 customers that account for 4.5 percent of Rural sales,[304] while its Rural General Service customers' monthly average usage is 9,002 kWh which is 44 customers that account for 7.3 percent of Rural sales.[305]

Nelson Hydro adds that the number of customers in each rate schedule is too small to have reliable data for analysis, and that such a breakdown of the Commercial customer class would not be reliable for ratemaking purposes.[306] Despite this, Nelson Hydro does provide the RCC ratios for the Rural service areas with Commercial class broken into Small Commercial and General Service shown in Table 8.

Table 8: Revenue-cost-Coverage Ratios for the Rural Service Area[307]

	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)**	

Nelson Hydro states, for the purpose of the above table, that 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.[308] Nelson Hydro explains that the load factors used for the combined class were determined to be relevant to all Commercial as a group, but once a subdivision of the group is undertaken, it is possible that different load characteristics should apply to each.[309] This is part of the reason Nelson Hydro does not recommend subdividing the class, but suggests looking at General Service/Commercial as a single class. In addition, Nelson Hydro explains that the Commercial Flat and municipal customers are combined for the table, but no RCC ratio is provided for Rural service areas for these customers as there are no associated energy costs for customers of the Commercial Flat Service in the COSA.[310]

[301] Exhibit B-9, BCOAPO IR 25.2.1.
[302] Exhibit B-12, BCUC IR 52.4.
[303] Exhibit B-12, BCUC IR 52.5.1.
[304] Exhibit B-4, BCUC IR 3.2 and IR 9.2.
[305] Exhibit B-4, BCUC IR 3.2 and IR9.2.
[306] Exhibit B-4, BCUC IR 3.4.
[307] Exhibit B-4, BCUC IR 3.4.1.
[308] Exhibit B-4, BCUC IR 3.4.1.
[309] Exhibit B-4, BCUC IR 3.4.1.
[310] Exhibit B-4, BCUC IR 3.4.1.

Positions of the Parties

BCOAPO notes that when the Rural Commercial class is broken down, there is a material difference in the RCC ratio between the Small Commercial customers (101.4 percent) and the larger Commercial customers (113.2 percent).[311] Furthermore, based on FBC's load factors for its Small Commercial and Commercial customer classes, the use of load factors specific to the Small Commercial and General Service customers is likely to increase that differential.[312] In BCOAPO's view, the difference is material enough that the BCUC should direct Nelson Hydro to treat the Small Commercial and General Service customers separately in its future COSAs.[313]

Nelson Hydro submits in reply that preparing the COSA with a breakdown of the Commercial class, using separate load characteristics and estimating energy sales associated with Flat Commercial accounts would not be a beneficial investment in time or resources as any differences resulting from such analysis affect only a small number of Rural customers and would not have a significant impact on the COSA results.[314]

Panel Determination

The Panel accepts Nelson Hydro's use of three customer classes: Residential, Commercial and Streetlight, for allocation purposes in the 2019 COSA.

The Panel is satisfied that these three classes of customer each have sufficiently different characteristics to justify being in separate classes.

The Panel does not consider that the Commercial customer class should be broken down further for the purposes of analyzing this 2019 COSA. There is insufficient evidence in this proceeding to differentiate reliably between Nelson Hydro's different types of commercial customers.

However, the Panel is concerned that Nelson Hydro has different rate schedules for their various types of commercial customers without the justification of a COSA to support the different rates. **The Panel directs Nelson Hydro in its next COSA to provide a cost-of-service justification for the rates for its different Commercial rate classes**.

2.6.2 Demand Allocation Factors

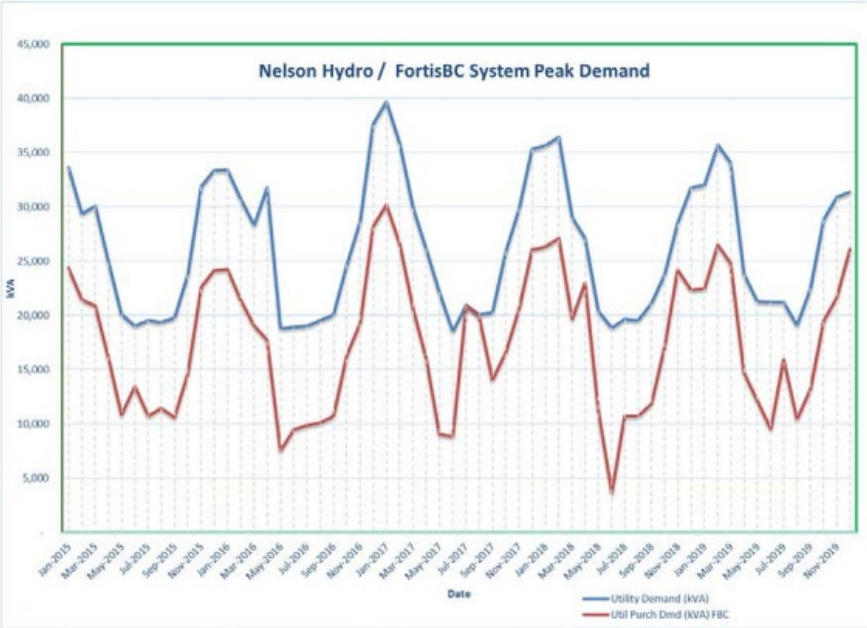
The 2019 COSA allocates demand-related costs differently depending on the functionalized nature of these costs.

Demand-related costs functionalized to the generation (including power purchase), and transmission functions are all allocated to customer classes based on each class's share of Nelson Hydro's system peak demand, or coincident peak, since sufficient capacity must be provided to meet the demands of all customers at the time of this peak.[315]

[311] BCOAPO Final Argument, p. 23.
[312] BCOAPO Final Argument, p. 23.
[313] BCOAPO Final Argument, p. 23.
[314] Nelson Hydro Reply Argument, p. 18.
[315] Exhibit B-1, Appendix 8-1, Section 4.4.1, p. 16; Exhibit B-4, BCUC IR 21.8; Exhibit B-9, BCOAPO IR 31.2.

Nelson Hydro provides a graph of its monthly peak demand from 2015 to 2019:

Table 9: Nelson Hydro's Monthly Peak Demand from 2015 to 2019[316]



InterGroup explains that it is appropriate to use the relatively simple approach of a single coincident peak (1CP) allocation rather than allocation methods based on multiple coincident peaks because Nelson Hydro has a winter peaking system, there are relatively small differences between customer usage characteristics and Nelson Hydro has data limitations.[317]

In contrast, demand-related costs associated with the distribution function are allocated to customer classes based on each class's own peak demand, or non-coincident peak, because distribution system components are sized to meet the maximum demands of local customers regardless of the time that peak occurs. [318]

InterGroup states that Nelson Hydro's coincident peaks and non-coincident peaks are not metered at the class level and must be estimated based on estimates of customer classes' load factors and coincidence factors.[319] Nelson Hydro explains that it did not undertake load research on individual customer class as it would have required a significant amount of effort and data that is not available. Instead, Nelson Hydro estimated customer class load factor and coincidence factors based on factors used by FBC in its 2009 COSA. Nelson Hydro justifies using FBC's load factors as both utilities are in the same general area of the province and share similar climate impacts. While Nelson Hydro states that it did not conduct a study to analyze which other utility's peak profile may be more appropriate to use as a comparator, it notes that FBC's 2009 COSA load factors for residential and commercial customers are calculated based on FBC's winter peaks, which are the maximum peaks for the year for both customer classes.[320]

[316] Exhibit B-4, BCUC IR 21.1.
[317] Exhibit B-1, Appendix 8-1, Section 4.4.1, p. 16.
[318] Exhibit B-1, Appendix 8-1, Section 4.4.1, p. 16.
[319] Exhibit B-1, Appendix 8-1, Section 4.4.1, p. 16.
[320] Exhibit B-4, BCUC IR 21.2.

The 2019 COSA uses customer class load and coincidence factors from the FBC 2009 COSA to calculate the coincident peak and non-coincident peaks:

Table 10: Load Parameters used for the 2019 COSA[321]

Customer Class	NCP Load Factor	Coincidence Factor
Residential	40%	80%
Commercial	43%	75%
Streetlight	47%	100%

Nelson Hydro explains that the commercial coincidence factor of 75 percent used in the 2019 COSA is that used by FBC for its general service customers. If Nelson Hydro had used the coincidence factor of 70 percent used by FBC for its Small Commercial customer class instead, it estimates it would increase the coincident peak allocation factor for the commercial class from 10.4 percent to 11.46 percent and increase the non-coincident peak allocation factor from 11 percent to 12.9 percent.[322]

Using FBC's 2009 COSA customer class load and coincidence factors, InterGroup calculates the non-coincident and coincident peaks for each customer class and the system coincident peak demand for Nelson Hydro as follows:

Table 11: Calculated Coincident Peak Based on FBC's 2009 Load Parameters [323]

		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

InterGroup calculates a coincident peak before losses of 34.3 megawatt (MW), slightly lower than the 2019 actual peak of 35.7 MW including losses observed in February 2019. InterGroup notes that the variance between the two figures is less than five percent which primarily reflects system losses.[324]

If InterGroup had used load and coincidence factors from FBC's 2017 COSA instead of from FBC's 2009 COSA, the various peaks would have been calculated as follows:

Table 12: Calculated Coincident Peak Based on FBC's 2017 Load Parameter[325]

[321] Exhibit B-1, Appendix 8-1, Section 4.4.1, pp. 16–17.
[322] Exhibit B-9, BCOAPO IR 25.1, IR 25.3 and IR 25.5; FBC's 2009 COSA application, Schedule 8.2, p. 2 of 3.
[323] Exhibit B-4, BCUC IR 21.7.
[324] COSA, p. 17.
[325] Exhibit B-12, IR 58.1.

		Residential	Commercial	Streetlight	Total
A	Sales at the Meter [MW.h]	102,301	53,889	884	
B	Load Factor	42%	55%	47%	
C=A/8.760/B	Noncoincident Peak (NCP)	27,805	11,185	215	
D	System Coincidence Factor	98%	85%	100%	
E=C*D	Coincident Peak (CP) at Meter	27,183	9,560	215	36,957

InterGroup explains that the above analysis indicates why the load and coincidence factors from FBC's 2017 COSA cannot be a reasonable representation of Nelson Hydro's system, as they would lead to a higher system peak demand (37.0 MW) than was actually measured (35.7 MW). [326]

The BCUC compiled the following table to summarize the resulting demand allocation factors for both coincident and non-coincident peaks, as proposed by Nelson Hydro:

Table 13: Demand Allocation Factors (Coincident Peak and Non-Coincident Peak) [327]

A	Hours in Year	8,760									
			Residential			Commercial			Streetlight		
		Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	
B	kWh Sales at the Meter	44,779,250	57,521,589	102,300,839	46,201,801	7,687,558	53,889,359	658,284	225,716	884,000	
C	Load Factor	40%	40%	40%	43%	43%	43%	47%	47%	47%	
D=B/A/C	Individ. Noncoincident Peak (NCP)(kW)	12,779	16,416	29,195	12,266	2,041	14,306	160	55	215	
E	System Coincidence Factor	80%	80%	80%	75%	75%	75%	100%	100%	100%	
F=D*E	Coincident Peak (CP) at Meter (kW)	10,224	13,133	23,356	9,199	1,531	10,730	160	55	215	
	Demand Allocation Factors										
G	Coincident peak (CP)	52.21%	89.23%	68.09%	46.98%	10.40%	31.28%	0.82%	0.37%	0.63%	
H	Non-coincident peak (NCP)	50.70%	88.68%	66.78%	48.66%	11.02%	32.73%	0.63%	0.30%	0.49%	¶

Positions of the Parties

BCOAPO notes that, with respect to using a 1CP allocator for the demand-related costs of "Power Purchases", Nelson Hydro acknowledged that a portion of the demand-related costs is based on the highest demand in the year (wire charges) and a portion is based on the maximum monthly demand. [328] BCOAPO notes that Nelson Hydro's proposal to use a 1CP allocation factor is based on the fact that wires charges, which are the majority of the demand power purchases, are billed on the maximum peak demand for the year. [329] BCOAPO states that, while this may be the case, about 40 percent of the demand costs are based on the monthly peaks. [330] When BCOAPO asked Nelson Hydro to perform the allocation using a twelve coincident peak (12CP) allocation factor, Nelson Hydro was not able to as it did not prepare 12CP demand allocators. [331] BCOAPO concludes that this is an example of an instance where a simplified approach is used due to a lack of available data. [332]

[326] Exhibit B-12, IR 58.1.

[327] Table derived from Exhibit B-15, BCOAPO IR 66.3 Attachment 1, Exhibits 3 and 4 in each of the Tabs: COS (Urban), COS (Rural) and COS (Common)

[328] BCOAPO Final Argument, p. 42.

[329] BCOAPO Final Argument, p. 42; Exhibit B-9, BCOAPO IR 31.3 and IR 31.3.1.

[330] Exhibit B-15, BCOAPO IR 70.2.

[331] Exhibit B-9, BCOAPO IR 31.3.2.

[332] BCOAPO Final Argument, pp. 42–43.

BCOPAO also notes that FBC used different load profiles for its small commercial and its commercial customer classes.[333] For the purposes of its COSA, Nelson Hydro used FBC's non-coincident peak values for FBC's "Commercial" customer class (as opposed to FBC's "Small Commercial" class or some weighting of the two) even though Nelson Hydro has significantly more customers that would fit under the Small Commercial class as opposed to the Commercial customer class definition and one-third of its Commercial sales are to "Small" Commercial customers.[334] BCOAPO submits that if the load profile for FBC's small commercial customer had been used, the coincident peak allocation factor for commercial class would increase by about one percent [from 10.40 percent to 11.46 percent] and the non-coincident peak allocation factor for commercial class would increase by about 1.9 percent [from 11 percent to 12.9 percent].[335]

In BCOAPO's view, these two issues both illustrate the fact that the simplifying assumption adopted by Nelson Hydro will impact the accuracy of the COSA results. [336]

Panel Determination

The Panel accepts Nelson Hydro's use of the single coincident peak allocation method for demand-related costs associated with the generation (including power purchase) and transmission functions and the use of the non-coincident peak allocation method for demand-related costs associated with the distribution function.

The use of the coincident peak allocation method is appropriate for costs such as generation where sufficient capacity must be provided by Nelson Hydro to service all customers at the time of system peak demand. There is no evidence in this proceeding that using multiple coincident peaks would provide a more accurate allocation, and no intervener recommends this.

The use of the non-coincident peak allocation method is appropriate for certain distribution costs where the capacity is provided to meet the peak of local customers whether or not it aligns with the system peak.

The Panel accepts Nelson Hydro's use of load and coincidence factors from FBC's 2009 COSA. However, **the Panel directs Nelson Hydro to recalculate the COSA using the load and coincidence factors of the Small Commercial class from FBC's 2009 COSA to estimate the load and coincidence factors for its own Commercial Class**.

As the Panel finds in section 2.6.4 below, Nelson Hydro's commercial customers are more similar to FBC's small commercial customers than to FBC's general commercial customers. For consistency, in addition to adopting the customer allocation weighting used for FBC's small commercial customers, Nelson Hydro should use the load and coincidence factors used for FBC's Small Commercial customers as well.

2.6.3 Energy Allocation Factors

The energy allocation factors are used to allocate the energy-related portion of generation, power purchase, and general costs.

[333] BCOAPO Final Argument, p. 44.
[334] Exhibit B-4, BCUC IR 9.2.
[335] Exhibit B-9, BCOAPO IR 25.5.
[336] BCOAPO Final Argument, pp. 44–45.

Nelson Hydro states that energy-related costs are allocated to customer classes based on the total kWh sales to each customer class. Nelson Hydro notes that the allocation ratios were developed based on actual sales for 2019.[337] BCUC summarized the energy allocation factors in the following table:

Table 14: Energy Allocation Factors[338]

	Residential			Commercial			Streetlight		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
kWh Sales at the Meter	44,779,250	57,521,589	102,300,839	46,201,801	7,687,558	53,889,359	658,284	225,716	884,000
Energy Allocation Factors	48.86%	87.91%	65.13%	50.42%	11.75%	34.31%	0.72%	0.34%	0.56%

Panel Determination

The Panel accepts Nelson Hydro's allocation of energy-related costs between customer classes based on the relative kWh sales of each customer class to the total kWh sales of all customers.

The Panel notes that there was no opposition to this approach, it is straightforward and appears to be typical utility practice.

2.6.4 Customer Allocation Factors

InterGroup states that customer-related costs are allocated to customer classes based on both the actual number of customers in each class and a "weighted" number of customers.[339]

InterGroup explains that common industry practice is to allocate the costs that do not vary with the type of customers or the consumption of electricity as customer-related costs.[340] However, for some costs, a "weighted" customer count is used, typically for costs that vary somewhat with the type of customer or its consumption of electricity. For example, metering device costs are different for commercial customers than residential customers as commercial customers typically require more expensive meters. A weighted number of customers is used to allocate costs of meters and line transformer assets, and related costs.[341]

Nelson Hydro states that most of the utilities reviewed use a customer weighting of 1.0 for residential and 3.0 for commercial customers and confirmed that it also used those weightings.[342] In IR responses, Nelson Hydro provided additional details regarding the weighting factors used by other utilities, which have been summarized in the BCUC table below:

[337] Exhibit B-1, Appendix 8-1, Section 4.4.2, p. 17.

[338] Table derived from Exhibit B-15, BCOAPO IR 66.3 Attachment 1, Exhibits 3 in each of the Tabs: COS (Urban), COS (Rural) and COS (Common).

[339] Exhibit B-1, Appendix 8-1, p. 17.

[340] Exhibit B-1, Appendix 8-1, p. 17.

[341] Exhibit B-1, Appendix 8-1, Section 4.4.3, pp. 17–18.

[342] Exhibit B-1, Appendix 8-1, Section 4.4.3, pp. 17–18; Exhibit B-4, BCUC IR 22.1.

Table 15: Customer Weighting Factors[343]

Utility	Weighting Factor
Yukon Energy and Yukon Electrical (Yukon utilities)	No weighting factor used
Newfoundland and Labrador Hydro	- Residential: 1 - General service customers with demand <100kW: 4.77 - Larger general service customers: 8.42
FortisBC Inc. (FBC)	- Residential: 1 - Small commercial: 1.8 - Commercial and large commercial: 2.8
BC Hydro	- Residential: 1 - Small general service: 2 - Large general service: 6
Northwest Territories Power Corporation	- Residential: 1 - Commercial: 3
Qulliq Energy Corporation	- Residential: 1 - Commercial: 3

Nelson Hydro admitted that there is no uniform weighting factor and states that it is impossible to develop a precise weighting factor.[344] Nelson Hydro added that the weighting factor of 1.0 for residential and 3.0 for commercial is widely used for small utilities without any detailed cost analysis.[345] Nelson Hydro cites Northwest Territories Power Corporation and Qulliq Energy Corporation as examples of small utilities using a weighting factor or 1.0 to 3.0 in their most recent cost of service studies. Thus, in Nelson Hydro's view, it is reasonable for Nelson Hydro to use such a weighting factor, considering it is also close to the factor used by FBC.[346]

In response to a BCOAPO IR, Nelson Hydro provided a side-by-side comparison of FBC and Nelson Hydro's Small Commercial and General Service definitions in the table below:

Table 16: FBC and Nelson Hydro's Small Commercial and General Service Customer Comparison[347]

	Nelson Hydro Rural	Fortis BC
Small Commercial	Applicable to Rural Customers Applicable to small non-residential customers of loads up to 25 KVA where no Demand Meter is installed	Applicable to Commercial Customers whose electrical Demand is generally not more than 40 kW and can be supplied through one meter. Where there is more than one service to the same location and they are of the same voltage and phase classification and they were connected prior to January 5, 1977, the electrical energy and Demands registered for such services will be combined and billed at this rate.
General Service	Applicable to Rural Customers with greater than 25 KVA with Demand Meter	Applicable to Commercial Customers whose electrical Demand is generally greater than 40 kW but less than 500 kW and can be supplied through one meter. Where there is more than one service to the same location and they are of the same voltage and phase classification and they were connected prior to January 5, 1977, the electrical energy and Demands registered for such services will be combined and billed at this rate.

[343] Exhibit B-4, BCUC IR 22.2; Exhibit B-12, BCUC IR 59.1 and IR 59.4.

[344] Exhibit B-4, BCUC IR 22.2.1.

[345] Exhibit B-4, BCUC IR 22.2.1.

[346] Exhibit B-4, BCUC IR 22.2.1; Exhibit B-12, BCUC IR 59.4.

[347] Exhibit B-9, BCOAPO IR 25.2.1.

As shown in the table above, FBC has two commercial classes that overlap with Nelson Hydro's Commercial class: Small Commercial Service and Commercial service.

Nelson Hydro states that FBC's average monthly usage for Small Commercial Service customers was 1,817 kWh in the 2017 COSA and 1,886 kWh in the 2009 COSA, while FBC's average monthly usage for the Commercial Service customers was 30,704 kWh in the 2017 COSA and 16,042 kWh in the 2009 COSA.[348] In comparison, Nelson Hydro's Rural Small Commercial customers' monthly average usage is 1,165 kWh, while Nelson Hydro's Rural General Service customers' monthly average usage is 9,002 kWh.[349]

Nelson Hydro notes that using any weighting factor lower than 3.0 for commercial customers would increase the cost to the residential class and add support to its proposals in respect of increasing the rates for Rural residential customers.[350]

The BCUC summarized the resulting customer allocation factors for both number of customer and weighted number of customers, as proposed by Nelson Hydro, in Table 17:

Table 17: Customer Allocation Factors[351]

	Residential			Commercial			Streetlight		
	Urban	**Rural**	**Total**	**Urban**	**Rural**	**Total**	**Urban**	**Rural**	**Total**
kWh Sales at the Meter	44,779,250	57,521,589	102,300,839	46,201,801	7,687,558	53,889,359	658,284	225,716	884,000
Number of customers	5,080	4,203	9,283	1,010	329	1,339	23	35	58
Weigthed number of customers	5,080	4,203	9,283	3,030	987	4,017	23	35	58
Customer Allocation Factors									
Number of customers (CUS -1)	83.10%	92.03%	86.92%	16.52%	7.20%	12.54%	0.38%	0.77%	0.54%
Weigthed number of customers (CUS -2)	62.46%	80.44%	69.49%	37.26%	18.89%	30.07%	0.28%	0.67%	0.43%

Positions of Parties

No interveners commented on Nelson Hydro's use of a customer weighting of 1.0 for residential and 3.0 for commercial customers.

Panel Determination

The Panel accepts Nelson Hydro's allocation of customer-related costs to customer classes based on both the actual number of customers in each class and the "weighted number of customers", the latter to allocate costs of meters, line transformer assets and related costs. However, the Panel does not accept Nelson Hydro's proposal to use a weighting of 3.0 for its commercial customers to allocate those costs. **Instead, the Panel directs Nelson Hydro to recalculate its COSA with a weighting of 1.8 for its commercial customers when allocating costs of meters, line transformers and related costs**.

[348] Exhibit B-4, BCUC IR 3.2.

[349] Exhibit B-4, BCUC IR 3.2.

[350] Exhibit B-12, BCUC IR 59.2.1 and IR 59.4.

[351] Table derived from Exhibit B-15, BCOAPO IR 66.3 Attachment 1, Exhibits 3 and 6 in each of the tabs: COS (Urban), COS (Rural) and COS (Common).

The Panel agrees with Nelson Hydro that there is no uniform commercial customer weighting factor, and it is impossible to develop a precise weighting factor.[352] The commercial customer weighting factors in evidence in this proceeding range from 1.8 (for FBC's small commercial customers) to 8.42 (for Newfoundland and Labrador Hydro's large general service customers).

The 2019 COSA states that utilities "typically" use more expensive meters for their commercial customers than for their residential customers. [353] However, 22.8 percent of Nelson Hydro's commercial customers have no meter at all, [354] and 63.8 percent of them do not have demand meters.[355] Only 13.4 percent of Nelson Hydro's commercial customers have demand meters. On the basis of this evidence alone, the Panel is reluctant to conclude that the allocation of customer costs to commercial customers should be weighted significantly higher than to residential customers.

The Panel accepts that the allocation factor based on "weighted number of customers" is used by Nelson Hydro to also allocate costs of line transformers and related costs, but Nelson Hydro provides no evidence of how these costs differ between residential and commercial customers.

FBC has been used as a comparator to Nelson Hydro in other aspects of the COSA, and the Panel is satisfied that it is appropriate to use FBC again in this circumstance. FBC uses a weighting of 1.8 for its Small Commercial Service customers and 2.8 for its Commercial Service. The Panel does not consider that Nelson Hydro can justify using a "weighted number of customers" as high as 3.0 for its commercial customers, when none of FBC's relevant classes of commercial customers uses a weighting that high.

The only consistent aspect of Nelson Hydro's evidence of commercial customer weightings is that classes of larger commercial customers (measured by usage or demand) appear to have larger weightings than classes of smaller commercial customers.

Considering FBC as the appropriate comparator, the Panel finds that FBC's weighting of 1.8 for its Small Commercial Service customers is a more suitable proxy for Nelson Hydro's commercial customers than FBC's weighting of 2.8 for its Commercial Service customers for the following reasons:

- The Panel has accepted earlier in this decision Nelson Hydro's approach of keeping all commercial customers in one class.
- Nelson Hydro's Rural Commercial customers use an average of 1,947 kWh[356]/month, much closer to FBC's Small Commercial Service customer average consumption of 1,886 kWh/month than it is to FBC's Commercial Service customer average consumption of 16,042 kWh/month.

For the foregoing reasons, the Panel finds that the appropriate weighting for Nelson Hydro's commercial customers is 1.8, the same figure used by FBC for its Small Commercial Service customers. The Panel observes

[352] Exhibit B-4, IR 22.2.1.

[353] Exhibit B-1, Appendix 8-1, Section 4.4.3, p. 17.

[354] The 75 customers on the Rural Flat Commercial Service rate have no meters out of 329 Rural commercial customers.

[355] The 210 customers on the Rural Small Commercial rate have no demand meters out of 329 Rural customers.

[356] 1,947 kWh = 7,688,000 kWh of Rural Commercial Sales/ 329 customers / 12 months - Numbers are taken from Table 7 in Section 2.6.1.

that a weighting factor of 1.8 for Nelson Hydro's commercial customers would be similar to the weighting factor of 2.0 used by BC Hydro for its small commercial class.

Nelson Hydro notes that using any weighting factor lower than 3.0 for commercial customers would increase the cost to the residential class and add support to its proposals in respect of increasing the rates for Rural residential customers.[357] The Panel acknowledges this, but observes it is not seeking in this proceeding either to increase or to decrease rates for Rural residential customers, merely to determine a just, reasonable and not unduly discriminatory or unduly preferential allocation of costs to Rural ratepayers.

2.7 Overall COSA Determination

Positions of the Parties

Nelson Hydro acknowledges that it failed to comply with earlier BCUC directives to file a COSA but believes it has now satisfied the direction of the BCUC. Nelson Hydro submits that it hopes that the comprehensiveness of its Application evidences its renewed and increased emphasis on its regulatory obligations, and notes that it has dedicated "a tremendous amount of financial and staff resources for a utility of its size to ensure the development of a robust record in this proceeding."[358]

Nelson Hydro submits that the COSA should be approved as filed, adding that the COSA "was thoroughly explored and analyzed in this proceeding and no significant issues or material deficiencies were discovered."[359] Nelson Hydro further submits that the COSA demonstrates the current rates for its Rural customers are insufficient to recover their cost of service or to produce a fair return to the City, and as a result, adjustments to the Rural residential rates are required. [360]

RCIA submits that Nelson Hydro is a single, public utility that chose to extend service to Rural customers and it is unfair to set rates that differentiate its customers based either on geography or on their status as owners of Nelson Hydro.[361] The RCIA submits that no other BC utilities have argued that customers who also own part of the utility (for example, FBC customers who are also shareholders of FortisBC Inc.) should have preferential access to the power produced by the utility's assets, relative to other utility customers who are not owners. Such treatment would not meet the Bonbright principle of no undue discrimination.[362] RCIA submits that the BCUC should not grant the approvals for the COSA or the proposed rate changes to the Rural residential rate sought by Nelson Hydro because they would result in unfair treatment of Nelson Hydro's Rural ratepayers.[363]

BCOAPO submits that, while the Panel should approve Nelson Hydro's COSA, the Panel should direct Nelson Hydro make changes to its COSA to improve the overall accuracy and incorporate the identified improvements into its next COSA filing.[364] BCOAPO believes the use of simplifying assumptions used in the COSA makes a range of 90 to 110 percent more appropriate than the 95 to 105 percent proposed by Nelson Hydro.[365]

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[357] Exhibit B-12, BCUC IR 59.2.1 and IR 59.4.
[358] Nelson Hydro Final Argument, p. 2.
[359] Nelson Hydro Final Argument, p. 3.
[360] Nelson Hydro Final Argument, p. 12.
[361] RCIA Final Argument, p. 17.
[362] RCIA Final Argument, p. 10.
[363] RCIA Final Argument, p. 17.
[364] BCOAPO Final Argument, p. 50.
[365] BCOAPO Final Argument, p 51.

Ms. Faust submits that the Application and proposed rate increase for the Rural Residential class should be rejected as Rural customers are being charged an unfair allocation of costs.[366]

Overall, Mr. Okros submits that the Application should be rejected by the Panel because it is unfair and unjust.[367]

In reply, Nelson Hydro submits that the evidentiary record supports approval of the COSA as filed.[368] Nelson Hydro submits that this record has established that these requests are fair, just, and reasonable when taking into account the statutory context of both the UCA and the *Community Charter*.[369]

Panel Determination

The Panel approves Nelson Hydro's 2019 COSA subject to Nelson Hydro amending the 2019 COSA in accordance with the Panel's directives and determinations in this decision.

As noted in the sections 2.1 to 2.6 above, the Panel accepts some aspects of the 2019 COSA but not all aspects. Some aspects of the 2019 COSA with which the Panel disagrees, such as the assignment of generation and power purchase costs, are likely to have a material effect on the ultimate allocation of costs between the Rural and Urban customer classes, and consequently on Rural customers' rates.

The Panel directs Nelson Hydro to recalculate its 2019 COSA in a manner compliant with the directions and determinations set out in this decision and to submit the modified 2019 COSA as a compliance filing within 30 days after the issuance of this decision (Modified 2019 COSA). The Panel directs Nelson Hydro to include in its compliance filing a working electronic spreadsheet to show the calculations in the Modified 2019 COSA.

The Panel acknowledges the considerable effort and cost that went into the preparation of the 2019 COSA, and confirms that Nelson Hydro has now satisfied the BCUC's Directive 4 of Order G-124-18 to file a COSA.

The Panel directs Nelson Hydro to use the Modified 2019 COSA as the basis for its subsequent revenue requirement applications.

2.8 Letters of Comment

The letters of comment received in this proceeding are summarized in Appendix A of this decision. Some letters of comment raised matters that are outside the scope of this proceeding, such as Nelson Hydro's service reliability and City governance, others raised the issue of affordability of rates, which is outside the BCUC's jurisdiction to consider.

Of the letters of comment that are relevant to the scope of this proceeding, eight supported Nelson Hydro's Application. Of the letters that were not in support of Nelson Hydro's Application, which comprised the majority, the issues included Rural customers paying the same as Urban customers but receiving lesser service, and

[366] Faust Final Argument, p. 14.
[367] Okros Final Argument, p. 3.
[368] Nelson Hydro Reply Argument, p. 31.
[369] Nelson Hydro Reply Argument, p. 31.

Nelson Hydro's dividend going to the benefit of Urban residents. As Nelson Hydro submits, it is unsurprising that the letters of comment "generally expressed opposition to the requested rate increase."[370]

The Panel is satisfied that the letters of comment did not bring up any relevant issues that were not canvassed in this proceeding, and that the findings and determinations in this proceeding are appropriately based on the purpose of the 2019 COSA, which is to "determine an equitable allocation of Nelson Hydro's costs between its Rural and Urban customers and between the Residential, Commercial and Streetlight classes of Rural customers" as set out in section 2.1 above.

3.0 Capital Structure and Earned Return

This section of the decision addresses Nelson Hydro's capital structure and earned return, including a discussion of the Fair Return Standard, risk, debt to equity ratio, rate of ROE and interest rate. Typically, capital structure and earned return matters are considered by the BCUC in revenue requirements proceedings or in standalone proceedings focussing solely on those issues. However, in this instance, previous decisions by the BCUC established the possibility of considering these matters as part of a COSA application.

In Order G-274-19, the BCUC directed Nelson Hydro to submit as part of its 2020 rate application a "fully reasoned calculation and approach to determining the City's 'allowed return'", as was requested by the BCUC in 2017 and directed again by the BCUC in 2018. This filing must include detailed supporting calculations on the issues including, but not limited to: an assessment of Nelson Hydro's credit rating and risk profile, its ability to attract capital at reasonable costs, and any impact to its financial integrity. Nelson Hydro must also include a discussion on how any future application for an allowed return will impact and/or reconcile with the current method of the dividend transfer. Consistent with this BCUC directive, Nelson Hydro asserts that one of the intentions for its COSA was for the BCUC to have the ability to review and examine "a fully reasoned calculation and approach to determining the City's "allowed return,"[371] so a comprehensive examination of Nelson Hydro's cost of capital is required.

Nelson Hydro retained InterGroup to prepare the ROE Report to satisfy the BCUC's directive and analyze the setting of an appropriate return for Nelson Hydro.[372] InterGroup's analysis concluded that an appropriate after-tax ROE for the Rural portion of Nelson Hydro would be between 9.25 percent and 9.50 percent.[373] Based on information provided in the ROE Report, Nelson Hydro proposes a 9.25 percent ROE as a fixed value on the actual equity component of the Rural portion's mid-year rate base.[374]

3.1 Fair Return Standard

Section 59 of the UCA requires the BCUC to ensure that the rates charged by a utility are not unjust, unreasonable, unduly discriminatory or unduly preferential and include an opportunity to earn a fair and reasonable return. Specifically, section 59 (5)(b) of the UCA states:

[370] Nelson Hydro Final Argument, p. 16.

[371] Nelson Hydro 2017 Rate Application Reasons for Decision and Order G-119-17 dated August 8, 2017, p. 22.

[372] Exhibit B-1, Section 6.2, p. 47.

[373] Exhibit B-1, Section 6.2, p. 49.

[374] Exhibit B-1, Section 9.4, p. 68; Exhibit B-18, BCUC IR 93.1.

> [A] rate is "unjust" or "unreasonable" if the rate is… insufficient to yield a fair and reasonable compensation for the service provided by the utility, or a fair and reasonable return on the appraised value of its property.[375]

The BCUC has a duty to approve rates that will provide a reasonable opportunity to earn a fair return on invested capital. The Fair Return Standard is fundamental to cost of equity proceedings and has three requirements to be met for a fair and reasonable return on capital:

a) The comparable investment requirement – a reasonable return on capital, should be comparable to the return available from the application of the invested capital to other enterprises of like risk;

b) The financial integrity requirement - a reasonable return on capital, should enable the financial integrity of the regulated enterprise to be maintained; and

c) The capital attraction requirement - a reasonable return on capital, should permit incremental capital to be attracted to the enterprise on reasonable terms and conditions

All three standards should be met, and none ranks higher in priority to the others. Consistent with previous decisions and the "regulatory compact", in the BCUC 2013 Generic Cost of Capital (GCOC) Stage 1 Decision the BCUC confirmed that it has a duty to approve rates that meet this standard, and to provide a reasonable opportunity for the utility to earn a fair return on invested capital.[376] In assessing the Fair Return Standard, the utility must also be assessed based on the standalone principle.[377]

The standalone 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.[378]

The allowed return on a utility's invested capital is a combination of two factors when determining a fair return:

1. The percent of its invested capital that is held as equity relative to the percent held as debt, that is, its capital structure; and
2. The rate of return allowed on the equity portion of the capital structure.[379]

The combination of the equity ratio and the allowed return thereon should be adequate to attract capital on reasonable terms and conditions.[380]

Previous BCUC Decisions Regarding Cost of Capital and the Fair Return Standard

[375] https://www.bclaws.ca/civix/document/id/complete/statreg/96473_01#section59
[376] 2013 GCOC Stage 1 Decision, p. 12.
[377] 2013 GCOC Stage 1 Decision, p. 12.
[378] 2013 GCOC Stage 1 Decision, pp. 96, 100.
[379] Order G-158-09 Decision p. 2.
[380] Order G-158-09 Decision p. 15.

Prior to 1994, the ROE and capital structures of public utilities in BC for rate-setting purposes were typically established as part of the periodic revenue requirement applications the utilities would file with the BCUC.[381] In Order G-35-94 dated June 10, 1994, the BCUC annually set the ROE for utilities in BC based on the benchmark ROE for Terasen Gas Inc.(TGI)[382] using a formula that ties the utilities' rates of ROE to the forecast yield on long-term Canada (30 year) bonds for the forthcoming year.[383]

In 2009, the TGI, Terasen Gas (Vancouver Island) Inc., and Terasen Gas (Whistler) Inc. (collectively the "Terasen Utilities") Return on Equity and Capital Structure Decision (2009 Terasen Utilities Decision) and Order G-158-09[384] set the ROE for TGI and addressed the issue: what impact should the BCUC's determination have on the remaining utilities in BC that may be affected.[385] TGI pointed out that BC Hydro and BC Transmission Corporation have their ROE set with reference to the most comparable investor-owned utility, which by virtue of size and geography has defaulted to TGI.[386] FBC submitted that the BCUC determined in 1994 that the use of a benchmark was in the public interest, and that there is no evidence to suggest that the benchmark concept should be abandoned in BC.[387] FBC identified a number of advantages that flow from a benchmark ROE for utilities including, among others, greater consistency with respect to ROE determinations for individual utilities from a common base.[388]

In 2013, the BCUC initiated Stage 1 of the GCOC proceeding (2013 GCOC Stage 1 Proceeding) to review and determine the ROE and capital structure for a benchmark low-risk utility and a deemed capital structure and deemed ROE for small utilities, particularly those utilities without short-term debt.[389] In the 2013 GCOC Stage 1 Proceeding, the BCUC determined the cost of capital for the benchmark utility (Benchmark), FortisBC Energy Inc. (FEI) (Benchmark Utility). GCOC Stage 1 Decision and Order G-75-13 dated May 10, 2013, outlined that FEI's ROE is 8.75 percent and its common equity component is 38.5 percent.[390] In the same order, the BCUC directed the approved common equity component and the ROE for FEI will continue to serve as the benchmark cost of capital for any other utility in BC that uses a Benchmark Utility to set rates.[391] The BCUC believed that one of the main reasons to establish a Benchmark Utility is to provide a stable point of reference against which other utilities can be measured and compared to over the longer term.[392]

In the 2013 GCOC Stage 2 Proceeding, the BCUC established the cost of capital for other public utilities by comparing to the Benchmark. The BCUC compared and assessed whether there are any differences in circumstances between the Benchmark and each utility, particularly with respect to risk, using the following method:

1. Assess the risks for each utility as compared to FEI, the Benchmark; and

[381] 2009 Decision and Order G-158-09, Appendix B, p. 1.
[382] Order G-33-07, Fortis applied to acquire Terasen Gas Inc on March 1, 2007.
[383] 2009 Decision and Order G-158-09, p. 2.
[384] Dated December 16, 2009.
[385] 2009 Decision and Order G-158-09, p. 78.
[386] 2009 Decision and Order G-158-09, p. 78.
[387] 2009 Decision and Order G-158-09, p. 79.
[388] 2009 Decision and Order G-158-09, p. 79.
[389] 2013 GCOC Stage 1 Decision, p. 1.
[390] Order G-75-13, Directives 1 and 2.
[391] Order G-75-13, Directive 5.
[392] 2014 GCOC Stage 2 Decision, p. 3.

2. Quantify the risk of each utility as compared to the Benchmark in:
    a) Allowed equity thickness (equity component in capital structure); and
    b) Allowed equity risk premium.[393]

If there are differences, the BCUC would determine how these differences should be reflected in the debt/equity ratio and equity risk premium.[394] If there are no significant differences, the equity/debt ratio and risk premium should be the same as those of the Benchmark.[395] In addition, the BCUC noted that the Fair Return Standard is applicable in assessing a public utility's capital structure and allowed ROE in the 2013 GCOC proceedings.

3.2 Risk

The assessment of risks has significant bearing on the application of the Fair Return Standard and the determination of an appropriate common equity ratio for regulatory purposes.[396] This section will include a discussion of risk faced by Nelson Hydro and compare its risk to those of other utilities regulated by the BCUC**.**

The evidentiary record explored risk factors faced by Nelson Hydro as a whole and its Rural portion, with the parties providing varying views on how Nelson Hydro compares with the Benchmark Utility, FEI, and other smaller sized utilities.

InterGroup assessed Nelson Hydro's business risk using a modified version of the risk matrix from the GCOC Stage 1 Decision provided below.

[393] 2014 GCOC Stage 2 Decision, pp. 3–4.
[394] 2014 GCOC Stage 2 Decision, p. 3.
[395] 2014 GCOC Stage 2 Decision, p. 3.
[396] Order G-158-09 and Decision p. 17.

Risk Matrix included in GCOC Stage 1 Review[28]

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]

Nelson Hydro provided more details in regard to Business Development Risk and Future Construction Risk. Nelson Hydro states both FEI and itself are generally low Business Development Risk, and given the similarity, it is difficult to draw any conclusion as to which utility may have a lower risk.[397] Nelson Hydro also explains that Future Construction Cost risk is high for Hydro utilities, as any need to rebuild the plant in the future comes at a very high capital cost and by comparison, thermal utilities can replace generating units at a comparatively lower cost.[398] However, Nelson Hydro did not explore comparisons to thermal energy systems' default ROE and capital structure as it states these utilities have higher risk premiums, so if a valid comparison had been done, it is possible Nelson Hydro would be seeking a higher ROE.[399]

InterGroup states that based on its assessment, Nelson Hydro would qualify for an excellent credit rating as it has a strong capital structure (debt:equity ratio), effectively no currency or interest rate risk, has strong financial policies and oversight, excellent liquidity, and strong management and governance.[400] However, Nelson Hydro submits that its rating would be "significantly diminished" if its operations were truly spun-off as an independent utility from the City, and acquired a typical utility capital structure (e.g. 60 percent debt:40 percent equity) as this would increase the leverage, cash-flow pressures and liquidity compared to its current condition.[401] In Nelson Hydro's view, it should be assessed as a whole [Urban and Rural] for the lowest risk situation.[402] Nelson Hydro notes if an assessment were done on just the Rural service area, the risk premium would be expected to be well above 0.5 percent due to its small scale, different reliance on the stable cost provided by hydro generation, added regulatory uncertainty (external regulator), and less load diversity.[403]

InterGroup also analyzed the capital structure and ROE approved for small size utilities and provided the following comparison table in its report:

Table 18: Comparison of Capital Structure and ROE for Small Sized Utilities[404]

Table 1: Capital Structure and ROE Approved for Small Size Utilities in Stage 2 of GCOC

	Debt/Equity Ratio	Benchmark ROE [after-tax]	Risk Premium	After-Tax ROE	Rate Base, $000	Estimated after-tax ROE, $000 [6]	Number of Customers
PNG N.E. (Fort St. John / Dawson Creek Division) [1]	59%/41%	8.75%	0.50%	9.25%	$74,700	$2,833	20,325
PNG WEST [2]	53.5%/46.5%	8.75%	0.75%	9.50%	$144,303	$6,375	20,346
FortisBC Energy (Whistler) Inc.[3]	58.5%/41.5%	8.75%	0.75%	9.50%	$42,000	$1,656	3,000
Nelson Hydro [4]	85%/15%	8.75%	0.50% - 0.75%	9.25% - 9.50%	$40,578	$3,190 - $3,276	10,614
Nelson Hydro - Rural [4]	85%/15%	8.75%	0.50% - 0.75%	9.25% - 9.50%	$14,000	$1,100 - $1,130	4,549
FortisBC [5]	60%/40%	8.75%	0.40%	9.15%	$1,341,452	$49,097	139,459

[397] Exhibit B-6, RCIA IR 24.1.
[398] Exhibit B-15, BCOAPO IR 47.1.
[399] Exhibit B-4, BCUC IR 43.1.
[400] Exhibit B-1, Appendix 6-1, p. 6.
[401] Exhibit B-4, BCUC IR 40.5.1.
[402] Exhibit B-4, BCUC IR 43.3.
[403] Exhibit B-4, BCUC IR 43.3.
[404] Exhibit B-1, Appendix 6-1, p. 9.

InterGroup's analysis concluded that an appropriate after-tax ROE for the non-municipal portion of Nelson Hydro would be between 9.25 percent and 9.50 percent based on the approved 8.75 percent benchmark ROE and a basis point analysis of a risk premium between 50 basis points and 75 basis points.[405] InterGroup found that Nelson Hydro in size is closer to FortisBC Energy (Whistler) Inc. (FEW), for which the BCUC approved risk premium of 75 basis points and an after-tax ROE of 9.50 percent. Nelson Hydro states that the 2013 GCOC Stage Proceeding shows that FEW has similar risks as FEI except for being higher risk in the size of utility, geographic and service area, customer profile, delivery rates, and security of supply.[406] Nelson Hydro states that it also faces similar higher risks to FEI.[407] In regards to FEW's equity Ratio of 41.5 percent compared to Nelson Hydro's 85 percent, Nelson Hydro states that in each case, the equity level is the lowest level of equity reasonably achievable by each utility given its operations, risks and structure.[408]

Nelson Hydro states that it is proposing to adopt the lowest-risk premium used by the BCUC for operations of similar size and scale, (e.g. FEW and Pacific Northern Gas (North East)-Fort St, John-Dawson Creek) (PNG(NE)-FSJ-DC).[409] Nelson Hydro states that beyond size, it faces all of the usual risks faced by Canadian electrical utilities, such as the country and industry risk.[410] Nelson Hydro notes its regulatory risk is exacerbated by having two different regulators.[411] Nelson Hydro states that it has operating efficiency risk, reliability, environmental, safety, and infrastructure risks and diversity risk that comes from it selling "no material other products."[412] Nelson Hydro comments that its financial risks relate to access to financing, which is limited; exposure to price increases from its one supplier; and potential capital spending instability.[413] Nelson Hydro states that it does not have material currency risk, other than for international purchases, little interest rate risk, and has strong financial policies, oversight, management and governance.[414] Nelson Hydro submits in the case of each risk noted, that its exposure is more than the Benchmark Utility due to its limited size.[415] Nelson Hydro states that if it were to receive any return lower than a 50 basis-point premium over the Benchmark rate, then it would be treated as the equivalent to FEI, which Nelson Hydro submits is not comparable, given FEI is larger than Nelson Hydro with significant added benefits of load diversity, etc.[416]

Nelson Hydro further states that it does not benefit from the risk deferrals of flow-through accounts, such as FBC, which maintains a set of these flow-through accounts where variances that are not considered to be under FBC's control are directly flowed-through to customers in future periods.[417] In addition, Nelson Hydro notes, unlike FBC, it does not propose any incentive adders or other performance bonuses, which could increase the ROE above the targeted level.[418] In regards to climate change risk, Nelson Hydro states that it does not expect these risks are materially different for Nelson Hydro than FBC within the Nelson geographical area. However, as

[405] Exhibit B-1, p. 49.
[406] Exhibit B-15, BCOAPO IR 37.1.
[407] Exhibit B-15, BCOAPO IR 37.1.
[408] Exhibit B-15, BCOAPO IR 37.2.
[409] Exhibit B-4, BCUC IR 40.3.
[410] Exhibit B-6, RCIA IR 1.6.
[411] Exhibit B-6, RCIA IR 1.6.
[412] Exhibit B-6, RCIA IR 1.6.
[413] Exhibit B-6, RCIA IR 1.6.
[414] Exhibit B-6, RCIA IR 1.6.
[415] Exhibit B-6, RCIA IR 1.6.
[416] Exhibit B-4, BCUC IR 40.3.
[417] Exhibit B-6, RCIA IR 21.2; Exhibit B-9, BCOAPO IR 14.1.
[418] Exhibit B-6, RCIA IR 21.2.

a bigger utility with the ability to raise outside capital, FBC will likely face less financial risk than Nelson Hydro in facing these challenges. [419]

InterGroup agrees that a fair ROE is not divorced from assessment of the capital structure as part of assessing financial risk, but states there are multiple other forms of risk, including those where Nelson Hydro faces higher risk than relatively comparable utilities.[420] These higher risk factors are stated as Nelson Hydro owning its generation, its non-taxable status, and it being smaller and less diverse.[421] Nelson Hydro explains that owning its hydraulic generation brings risks related to failures, major unplanned reinvestment, the potential to cause or be claimed to have caused damages, performance risks, and changes to the costs of capital.[422] Nelson Hydro states by comparison, the buyer of wholesale power does not face most of these risks.[423]

Nelson Hydro also explains that a taxable utility has a buffer in its financial outcomes, which a non-taxable utility does not as a taxable entity, which requires $1 in return and has a tax rate of 25 percent would set rates to earn $1.25.[424] If an event occurred that caused a $1 adverse impact (e.g. lower load, higher maintenance costs), Nelson Hydro states that it would only suffer a financial loss of $0.80 and the government tax revenues would be reduced by the other $0.20.[425] For a non-taxable utility, an event that caused the $1 adverse impact would affect net income by the full $1, resulting in the non-taxable utility being riskier as outcomes vary more for the same events.[426]

InterGroup also notes, despite Nelson Hydro's low debt levels, the company's financial flexibility is far more restricted than any of the comparable utilities since Nelson Hydro cannot raise debt in the same manner as the private utilities due to its municipal finance status.[427]

Nelson Hydro states that it does not have the ability to complete the full ratings exercise performed by any of the major credit ratings agencies.[428] However, Nelson Hydro does state that it is unlikely to default on debt or run into financial difficulty given the service it provides and the fact it has almost no debt, but it would also have to have the City Council reject raising rates and let Nelson Hydro fail financially.[429] As for a standalone operation for the Rural Service area, InterGroup states that such an operation would not presently have financial integrity as the Rural service area operates with little to no margin or ability to fund reinvestment under all calculations prepared by Nelson Hydro.[430]

Nelson Hydro states that, even with no debt, it would be unlikely to attract capital as a standalone utility for the Rural area as a lender would not be willing to lend to an operation, which Nelson Hydro submits, is not earning

[419] Exhibit B-6, RCIA IR 23.1.
[420] Exhibit B-9, BCOAPO IR 14.1.
[421] Exhibit B-9, BCOAPO IR 14.1.
[422] Exhibit B-14, RCIA IR 52.1.
[423] Exhibit B-14, RCIA IR 52.1.
[424] Exhibit B-14, RCIA IR 52.2; Exhibit B-17, RCIA IR 58.1.
[425] Exhibit B-14, RCIA IR 52.2.
[426] Exhibit B-17, RCIA IR 58.1; Exhibit B-14, RCIA IR 52.2.
[427] Exhibit B-9, BCOAPO IR 14.1.
[428] Exhibit B-4, BCUC IR 40.5.
[429] Exhibit B-4, BCUC IR 40.2.
[430] Exhibit B-A, Appendix 6-1, p. 7.

any return and barely able to cover costs.[431] However, Nelson Hydro states that it is not competing with other utilities to attract capital.[432]

Nelson Hydro also submits that Rural customers should not benefit due to Nelson Hydro's non-taxable status.[433] Nelson Hydro states that the benefit of it not paying income taxes is intended to accrue to municipalities, not to extraterritorial power users. However, to mitigate rate impacts, the City Council has accepted that this credit be applied to Rural customers for this Application.[434]

Positions of Parties

BCOAPO states that it is also useful to compare Nelson Hydro with the Boralex Ocean Falls Limited Partnership (Boralex) as it has a small rate base ($22M) and small customer base (less than 700).[435] BCOAPO argues that Boralex (which has an approved ROE of 9.5 percent and an approved equity ratio of 46.5 percent) should be used for referencing Nelson Hydro's proposed ROE.[436] BCOAPO notes that given Boralex's smaller size, its isolated and remote location, and the fact that its two industrial customers account for almost 25 percent of its sales, Nelson Hydro's ROE should be less than that approved for Boralex and closer to that of FBC.[437] BCOAPO submits that, based on the relative risks facing the two companies, an equity ratio for Nelson Hydro of less than 46.5 percent when combined with the requested ROE of 9.25 percent would meet the Fair Return Standard.[438]

In response, Nelson Hydro did not comment on its risk in relation to Boralex but submits that in contrast to the investor owned utilities, Nelson Hydro is regulated by and must comply with the Municipal Liability Regulations (MLR) under the *Community Charter* as part of the City. Therefore, Nelson Hydro explains it cannot raise "equity" through sale of shares and does not have the liberty to seek debt to finance its capital projects. [439]

3.3 Debt to Equity Ratio

This section will discuss the use of Nelson Hydro's actual debt to equity ratio, as well as the potential use of a deemed debt to equity ratio.

Nelson Hydro's Actual Debt to Equity Ratio

Different capital structures split risk differently between debt and equity holders, making the equity in one firm potentially more risky than equity in another.[440] InterGroup submits that Nelson Hydro is properly financed by a capital structure of roughly 85 percent equity and 15 percent debt and there is little reason to utilize an alternative deemed structure.[441] InterGroup considers the uniqueness of Nelson Hydro as a municipally-owned utility makes it reasonable for Nelson Hydro to use its existing debt to equity ratio.[442] InterGroup states that

[431] Exhibit B-4, BCUC 40.8.
[432] Exhibit B-12, BCUC IR 70.3.
[433] Exhibit B-12, BCUC IR 74.1.
[434] Exhibit B-1, Appendix 6-1, p. 8; Exhibit B-12, BCUC IR 74.1.
[435] BCOAPO Final Argument, p. 17.
[436] BCOAPO Final Argument, p. 17.
[437] BCOAPO Final Argument, p. 17.
[438] BCOAPO Final Argument, p. 18.
[439] Nelson Hydro Reply Argument, pp. 4–5.
[440] 2013 GCOC Stage 1 Proceeding, Exhibit A2-3, The Brattle Group Report, p. 38.
[441] Exhibit B-1, Appendix 6-1, p. 8.
[442] Exhibit B-1, Appendix 6-1, p. 8.

Nelson Hydro's actual capital structure is heavily skewed to equity as this is a feature of the municipal ownership, which challenges and limits excessive borrowing for municipalities.[443] InterGroup states that Nelson Hydro is a department of the City and has no opportunity to attract capital from any party other than the City.[444] Nelson Hydro states, due to its status as a department of the City, it does not have, and would not be able to access, a third-party credit rating.[445]

Nelson Hydro states that its borrowing cannot compromise the City's overall ability to borrow for other necessary civic purposes.[446] Accordingly, financing is not determined specifically for Nelson Hydro, but rather, as a component of overall municipal operations as only the City can obtain long-term borrowing.[447] Nelson Hydro explains that local governments can incur long-term debt, as long as it meets the conditions of the MLR and section 180 of the *Community Charter*, which typically requires approval of the electorate.[448]

Nelson Hydro states that there are three limitations placed on its ability to borrow:[449]

1. Section 2(a)(ii) of the MLR prevents municipalities, such as Nelson from incurring a liability if the "total annual servicing cost of the aggregate liabilities is greater than 25 percent of annual revenues."

   While Nelson Hydro states that applying the MLR borrowing thresholds to a single department of the City would not present an accurate picture of borrowing capacity, it confirms the City had a Liability Servicing Limit of $12,089,511 in 2019, of which $1,665,350 was utilized, leaving $10,424,161 in liability servicing capacity available.[450]

2. The Municipal Finance Authority (MFA) requires that the City and, by extension, Nelson Hydro, demonstrate that revenues are sufficient to cover the cost of the borrowing, including principal repayment.

   Nelson Hydro states, "The City is required to demonstrate that the revenues that will be raised (whether that is fees or taxation) can cover the debt servicing costs (principal and interest). If the debt was for a Rural asset that was being funded by debt then it would be the Rural rate revenues that would need to be sufficient to cover the debt service costs."[451]

3. All long-term borrowing needs electoral approval per Section 180 of the *Community Charter*.[452]

   Nelson Hydro states that long-term borrowing (borrowing exceeding 5 years) by the City must be approved by the City's electorate, the Regional District of Central Kootenay Board of Directors and the Inspector of Municipalities, except in the case of a limited number of specific statutory exceptions.[453] Nelson Hydro submits that the electorate tends to be risk adverse when local governments borrow and considering the borrowing would be to serve Rural customers' assets, this would make it even more

[443] Exhibit B-1, Appendix 6-1, p. 8.
[444] Exhibit B-1, Appendix 6-1, p. 6.
[445] Exhibit B-1, Section 6.2, p. 48.
[446] Exhibit B-1, p. 39.
[447] Exhibit B-1, p. 39; Exhibit B-12, BCUC IR 71.2.
[448] Exhibit B-12, BCUC IR 71.2.
[449] BCOAPO Final Argument, p. 11.
[450] Exhibit B-9, BCOAPO IR 6.5; Exhibit B-15, BCOAPO IR 42.1.
[451] Exhibit B-19, BCOAPO IR 89.4.
[452] Exhibit B-4, BCUC IR 11.2.
[453] BCOAPO Final Argument, p. 9; Nelson Hydro Final Argument, p. 4.

> unlikely that the Nelson electorate would approve this level of borrowing as they will take all the risks for repayment of those debts.[454]

InterGroup notes that Nelson Hydro has very little debt (interest costs make up less than three percent of revenue, outstanding debt makes up less than 15 percent of net book value) so traditional utility assessments of risks of repayment do not apply and Nelson Hydro cannot diversify its risks to the same extent as larger utilities which have assets, geography and economic bases that are less concentrated.[455]

Deemed Debt to Equity Ratio

The 2017 Decision states, "In the [BCUC'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."[456] The 2017 Decision further states:

> A utility's actual debt to equity ratio is a matter of fact. However, in some jurisdictions (mostly in Canada) regulators have chosen to rely on a deemed capital structure. 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 BCUC 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.[457]

Nelson Hydro states, if the BCUC were to use a deemed capital structure for its Rural operations, the premise would be that despite Nelson Hydro investing more than 85 percent of the capital in the form of equity, it should or could have found more debt and should not be compensated with a return on the rate base that is actually financed by equity.[458] Nelson Hydro submits that this would be unfair and prejudicial since there is no way it could raise 35 to 45 percent of capital from new debt as the Municipal legal and practical restrictions that apply would not allow this to occur.[459] Notwithstanding its objections, Nelson Hydro has provided its ROE calculations based on hypothetical capital structures set out in Table 19.

[454] Exhibit B-4, BCUC IR 11.2.
[455] Exhibit B-1, p. 49; Appendix 6-1, p. 5.
[456] Nelson Hydro 2017 Rate Application Reasons for Decision and Order G-119-17 dated August 8, 2017, p. 9.
[457] Nelson Hydro 2017 Rate Application Reasons for Decision and Order G-119-17 dated August 8, 2017, p. 8.
[458] Exhibit B-4, BCUC IR 41.4.
[459] Exhibit B-4, BCUC IR 41.4.

Table 19: Return on Equity based on Deemed Capital Structures[460]

	$000	Rural 2019 - 100% COSA [BCOAPO 66.3. attachment]	Rural 2019 - assuming 60% Debt/ 40% Equity	Rural 2019 - assuming 57.5% Debt/ 42.5% Equity	Rural 2019 - assuming 53.5% Debt/ 46.5% Equity	Rural 2019 - assuming 50% Debt/ 50% Equity
		A	B	C	D	E
1	Net Book Value - Mid-year Balance	15,313	15,313	15,313	15,313	15,313
2	Estimated Working Capital Requirements	700	700	700	700	700
3=1+2	Total Mid-Year Rate Base	16,013	16,013	16,013	16,013	16,013
4	Mid-Year Debt/ Deemed Debt	2,047	9,608	9,208	8,567	8,007
5=3-4	Equity/Deemed Equity	13,966	6,405	6,806	7,446	8,007
6	Return on Equity	9.25%	9.25%	9.25%	9.25%	9.25%
7=5*6	Required Return on Equity at 9.25%	1,292	592	630	689	741
8	Average Cost of Debt	4.11%	4.11%	4.11%	4.11%	4.11%
9=4*8	Cost of Debt	84	395	378	352	329
10=7+9	Total Return on Rate Base	1,376	987	1,008	1,041	1,069
11	Actual ROE for 2019 from Rural service area	-205	-205	-205	-205	-205
12	Incremental Revenues from Rural residential after full rate adjustments [target 95% RCC)	1,177	849	866	894	918
13=11+12	**Total Return on Equity from Rural [after phase-in]**	**972**	**644**	**661**	**689**	**713**
14=13/A5	**Effective Return on Actual Equity**	**7.0%**	**4.6%**	**4.7%**	**4.9%**	**5.1%**
15=13+9	Total Return on Rate Base	1,056	1,038	1,039	1,041	1,042
16=15/3	Effective WACC from Rural with 95% RCC for Rural Res [after phase-in]	6.6%	6.5%	6.5%	6.5%	6.5%

Nelson Hydro notes that these scenarios would not allow for it to recover the required principal payments on debt, which would restrict the City from borrowing as it could not demonstrate that rates would be sufficient to service the new debt.[461] The alternative would be for municipal taxes to cover this new debt, which would likely not be approved by the electorate.[462] Nelson Hydro also states that there would be no coherent way to price the hypothetical new debt but for the purposes of the table, has used the average cost of debt at 4.11 percent based on the 2019 COSA.[463]

Positions of Parties

Nelson Hydro submits that it is unable to say what its cost of debt would be with less equity because it cannot easily replace such equity with debt and there is no other source of capital available.[464] Nelson Hydro notes that "Running numbers with lower equity is entirely hypothetical … it was shown that the impact was small and that under such scenarios the Rural ratepayers are still significantly underpaying."[465] Nelson Hydro further explains that while other utilities sometimes have deemed equity ratios because utilities can and should achieve a lower level of equity than they actually record, but may choose not to, simply to increase their earnings, this is not the case with Nelson Hydro as its higher equity ratio is not about profiting from its Rural customers.[466]

BCOAPO submits that the BCUC should approve a deemed debt ratio of 50 percent if the recognition of the increased financial flexibility that will be gained through Nelson Hydro's rate design proposal is to be made by deeming an appropriate debt/equity structure, with the assumption that the approved ROE and capital structure are to be retained for at least the three-year phase in period for the rate design proposals. In BCOAPO's view, this is reasonable as it represents a level of debt that exceeds the requirements of the MLR midway through the

[460] Exhibit B-12-1, BCUC IR 71.6.
[461] Exhibit B-12-1, BCUC IR 71.6.
[462] Exhibit B-12-1, BCUC IR 71.6.
[463] Exhibit B-12-1, BCUC IR 71.6.
[464] Nelson Hydro Final Argument, p. 24.
[465] Nelson Hydro Final Argument, p. 24.
[466] Nelson Hydro Final Argument, pp. 23–24.

phase-in period and, correspondingly, the lowest average level of equity that Nelson Hydro could operate at over that period.[467]

BCOAPO is of the view that should the BCUC not account for the increased financing flexibility that Nelson Hydro's rate design proposals will provide by establishing a deemed debt/equity, then the equity ratio used for determining future Rural rates should be set at the 2019 actual equity ratio of 87.1 percent.[468]

In response, Nelson Hydro argues that BCOAPO "provides no evidence to support its assertions that that [sic] Nelson Hydro could achieve the proposed deemed debt to equity ratio. BCOAPO's assertion that the BCUC should take "flexibility" into account in determination of the appropriate ROE and capital structure for Nelson Hydro does not have merit."[469] Nelson Hydro submits if it does not acquire the borrowing approvals under municipal legislation, it simply cannot borrow those funds.[470] Nelson Hydro submits that achievable debt targets should be based on the percentage of Nelson Hydro's Rural assets as a percentage of the City's overall assets.[471] Nelson Hydro also clarifies that "BCOAPO's argument relies on the fact that BCOAPO has determined that more can be borrowed once Rural residential rates are high enough to generate a surplus. This is not a surplus but rather a reduction in the proposed ROE that the City would receive."[472]

In Sur-Replies, in response to Nelson Hydro's Reply Argument, "*Nelson Hydro also believes that achievable debt targets should be based on the percentage of Nelson Hydro's Rural assets as a percentage of the City's overall assets."*[473] BCOAPO notes that this is the first time Nelson Hydro has put forth this particular position during this proceeding and that there is no evidence on the record that explains how the achievable debt targets for the Rural Area would be determined under such an approach or why such an approach is an appropriate choice. BCOAPO also submits that this statement "contradicts Nelson Hydro's actual evidence which states that the debt ratio should be based on actual debt, not 'achievable debt targets'".[474] BCOAPO submits that the BCUC should not attach any weight or give any consideration to this statement in Nelson Hydro's reply.[475]

Nelson Hydro states its above statement is in reference to potentially achievable future debt targets – after the full phase-in has been completed.[476] Nelson Hydro states that it has been clear that its actual debt to equity ratio should be utilized in determining the appropriate ROE figure, while the debt to equity issue could be structured in the future to meet City Council's legislative and operational requirements, and potentially alleviate some rate pressure on Rural ratepayers.[477]

[467] BCOAPO Final Argument, pp. 15–16.
[468] BCOAPO Final Argument, p. 16.
[469] Nelson Hydro Reply Argument, p. 4.
[470] Nelson Hydro Reply Argument, p. 5.
[471] Nelson Hydro Reply Argument, p. 5.
[472] Nelson Hydro Reply Argument, p. 6.
[473] Nelson Hydro Reply Argument, p. 5.
[474] BCOAPO Sur-Reply, p. 3.
[475] BCOAPO Sur-Reply, p. 3.
[476] Nelson Hydro Response to Sur-Reply, p. 2.
[477] Nelson Hydro Response to Sur-Reply, pp. 2–3.

3.4 Rate of Return on Equity and Interest Rate

Rate of Return on Equity

Nelson Hydro proposes a 9.25 percent ROE as a fixed value on the actual equity component of the Rural portion's mid-year rate base.[478] Nelson Hydro states that under the rate base/return model, the dividend will be replaced with ROE and amortization expense will be added.[479]

Fixed Return versus Risk Premium

Nelson Hydro is seeking a 9.25 percent allowed ROE as a fixed value and not as a risk premium based on the Benchmark and that this rate adjustment be phased-in over a three-year period.[480]

Nelson Hydro states that it seeks a fixed ROE percentage despite other utilities using a risk premium over the Benchmark given that "Nelson Hydro will not be earning anywhere near the target ROE during the phase-in period. Small changes arising from periodic updates to the Benchmark will not affect the need for the phase-in. "[481] Nelson Hydro submits "as the target is reached a few years into the future, adjustments can be made for changes in the benchmark level."[482]

Phase in of Earned Return

Nelson Hydro states that it "does not seek to achieve the 9.25 percent ROE immediately, understanding that although this ROE level is justified, achieving this figure too quickly could result in rate shock for the Rural residential ratepayers."[483] Nelson Hydro notes that while the ROE being targeted over the noted period is 9.25 percent, it will not achieve this return on the Rural assets until the year when the full phase-in is complete and at that time, refinements to the ROE to reflect updated capital markets may be merited.[484]

Debt Interest Rate

Nelson Hydro submits that it is unable to say what its cost of debt would be with less equity as it cannot easily replace equity with debt and there are no other sources of capital available.[485] However, Nelson Hydro states, since 1970, all long-term borrowing for local governments must be issued by the MFA and the 2019 COSA used an average cost of debt at 4.11 percent.[486]

Positions of Parties

All Interveners in the proceeding commented on Nelson Hydro's proposed ROE for the Rural service area at 9.25 percent. RCIA does not oppose the proposed rate of return but opposes all the other approvals sought by Nelson Hydro, while Faust and Okros do not approve of any of Nelson Hydro's requests.[487]

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[478] Exhibit B-1, Section 9.4, p. 68; Exhibit B-18, BCUC IR 93.1.
[479] Exhibit B-4, BCUC IR 44.1.
[480] Exhibit B-12, BCUC IR 73.1; Exhibit B-1, Section 9.4, p. 68.
[481] Exhibit B-12, BCUC IR 73.1.1.1.
[482] Exhibit B-12, 73.1.1.1
[483] Final Argument, p. 24.
[484] Exhibit B-4, BCUC IR 42.2.1.
[485] Final Argument, p. 24.
[486] Exhibit B-12, BCUC IR 71.6; Exhibit B-18, BCUC IR 92.1; Exhibit B-6, RCIA IR 1.7.
[487] RCIA Final Argument, p. 17; Nelson Hydro Reply Argument, p. 2.

BCOAPO submits that the BCUC should approve a 50 percent equity ratio and a ROE of 9.25 percent.[488]

In response, Nelson Hydro submits that the record in the proceeding supports approval of a ROE of 9.25 percent.[489]

BCOPAPO submits that the ROE be based on a 50-basis-point premium over the Benchmark ROE for the purposes of setting 2022 rates for Nelson Hydro's Rural area.[490] BCOAPO notes that both the ROE and equity ratio should be updated in accordance with the decision in Stage 1 of the BCUC's current GCOC proceeding when that becomes available, and Nelson Hydro should use those updated figures in any subsequent applications it makes.[491] BCOAPO does not comment on Nelson Hydro's interest rate.

RCIA, Ms. Faust and Mr. Okros did not comment on any matters related to the fixed versus premium return, the phased-in return or the proposed interest rate for the cost of debt.

3.5 Overall Panel Determination

The Panel finds that an ROE based on a 50-basis-point premium above the Benchmark Utility rate currently yielding an ROE of 9.25 percent on a deemed equity component of 50 percent is appropriate for Nelson Hydro's Rural operations and will allow Nelson Hydro an opportunity to earn a fair return on its invested capital in its Rural operations. For clarity, the Panel makes no finding on the appropriate capital structure and earned return for the Urban portion of Nelson Hydro's utility operations, as this is beyond the jurisdiction of the BCUC.

The Panel agrees with the BCUC decision accompanying Order G-158-09 that when determining a fair return, the allowable return on a utility's invested capital is a combination of the debt-to-equity ratio of the capital structure and the rate of return allowed on the equity portion of the capital structure. The Panel also considers, as the BCUC did in its decision accompanying Order G-158-09, that the assessment of risks has significant bearing on the application of the Fair Return Standard and the determination of an appropriate common equity ratio for regulatory purposes. The Panel finds that the assessment of risks must be reflected in both the capital structure, as well as the rate of ROE.

The Panel will first discuss the risk associated with Nelson Hydro, followed by a discussion of the capital structure, rate of ROE and interest rates. As part of its discussion on the rate of ROE, the Panel will discuss the issues of non-taxable status, fixed rate of ROE versus a risk premium applied to the Benchmark Utility fixed rate of ROE, and finally the phasing in of the allowed rate of ROE.

Risk

The Panel finds that Nelson Hydro faces greater risk than the Benchmark Utility and as a result, warrants a higher equity component in its capital structure than the Benchmark, as well as a premium over the benchmark rate of ROE.

[488] BCOAPO Final Argument, p. 19.
[489] Nelson Hydro Reply Argument, p. 31.
[490] BCOAPO Final Argument, p. 19.
[491] BCOAPO Final Argument, p. 19.

The assessment of risk is a key factor when determining the appropriate capital structure of a utility. The Panel agrees that Nelson Hydro faces higher risks than the Benchmark Utility. These higher risks include the size of utility, geographic and service area, customer profile, delivery rates, and security of supply. The Panel notes that the comparison of risks between Nelson Hydro and FEI, as submitted by Nelson Hydro, demonstrates that Nelson Hydro has greater risk than FEI. However, the Panel is not persuaded that the relative difference in risk for Nelson Hydro and its Rural operations is that much higher than that of the Benchmark Utility so as to warrant an equity component more than double in size of the Benchmark utility (i.e. 85 percent versus 38.5 percent).

The Panel considers it useful to compare the relative risk of Nelson Hydro to other utilities regulated by the BCUC, such as FEW[492], PNG(NE) -FSJ-DC, and Boralex. The BCUC has previously determined that each of these utilities has greater risk than the Benchmark Utility, which is reflected in both a higher equity component as well as a premium above the benchmark rate of ROE. The Panel notes two of these utilities are gas distribution utilities, with the third, Boralex, being an electric utility. With these comparisons, the Panel considers that Boralex is the most similar to Nelson Hydro given that it is a relatively small electric utility that also owns its generation resources.

Capital Structure

The Panel finds that a deemed debt to equity ratio of 50 percent/50 percent is appropriate for Nelson Hydro's Rural operations for the purpose of setting rates. The Panel considers the deemed equity component of 50 percent is appropriate because 1) Nelson Hydro faces higher risk than the Benchmark Utility and therefore should have a higher deemed equity than the Benchmark Utility, as discussed above; and 2) Nelson Hydro is able to achieve an actual debt level of 50 percent. As stated above, risk is a key factor in determining the appropriate capital structure, however, Nelson Hydro's ability to achieve that capital structure must also be considered. The Panel will next examine the City's ability to raise debt.

The Panel accepts that the City is somewhat constrained by its ability to raise debt to support Nelson Hydro. Nelson Hydro asserts that its proposed 85 percent equity component is the lowest achievable level for Nelson Hydro. Further, Nelson Hydro asserts that a debt greater than actual (15 percent of capital structure) is not achievable. However, the Panel notes that Nelson Hydro states in its sur-reply that it "believes that achievable debt targets should be based on the percentage of Nelson Hydro's Rural assets as a percentage of the City's overall assets" and that "this statement is in reference to potentially achievable future debt targets – after the full phase-in has been completed."[*Emphasis added*]. Nelson Hydro further states that the debt-to-equity issue could be structured in the future to meet City Council's legislative and operational requirements and potentially alleviate some rate pressure on Rural ratepayers. Given these statements, it appears to the Panel that there may be circumstances within which it is possible for Nelson Hydro to raise a greater amount of debt than current levels of approximately 15 percent of the Nelson Hydro rate base for its Rural operations.

Nelson Hydro states, "The City is required to demonstrate that the revenues that will be raised (whether that is fees or taxation) can cover the debt servicing costs (principal and interest). If the debt was for a Rural asset that was being funded by debt then it would be the Rural rate revenues that would need to be sufficient to cover the debt service costs." Further, Section 2(a)(ii) of the MLR prevents municipalities such as the City from incurring a liability if the "total annual servicing cost of the aggregate liabilities is greater than 25 percent of annual

[492] Per Order G-21-14 directive 1, FEW was amalgamated into FEI on February 26, 2014.

revenues." Given this, the Panel will explore whether Rural revenues may be sufficient to cover debt service costs resulting from a deemed debt component greater than 15 percent.

The Panel notes that Nelson Hydro states, "the City of Nelson had a Liability Servicing Limit of $12,089,511 in 2019, of which $1,665,350 was utilized, leaving $10,424,161 in liability servicing capacity available." Therefore, it is clear to the Panel there is capacity to increase borrowings, subject to meeting the other constraints related to debt servicing. Nelson Hydro states that its 2019 annual revenue for the Rural operations is $7,592,000,[493] consequently the estimated ceiling for annual total debt serving cost is $1,898,000 (25 percent x $7,592,000). A total annual debt servicing payment in the amount of $1,898,000, while assuming a five-year loan period at an interest rate of 4.11 percent, would yield a total loan principal amount of $8,423,512 based on annual payments.[494] The Panel notes this amount is approximately 52 percent of the rate base for Rural operations as estimated by Nelson Hydro.[495]

Therefore, the Panel is not persuaded that 15 percent is the maximum level of debt (and correspondingly 85 percent is the lowest level of equity) that can reasonably be achieved for the Rural operations of Nelson Hydro. Notwithstanding the submission made by Nelson Hydro, the Panel considers that a higher debt ratio in the amount of 50 percent is theoretically achievable. The Panel notes that BCOAPO proposed a 50 percent/50 percent debt to equity ratio. The Panel also considers that the determinations it has made to the cost allocations in previous sections of this decision will likely result in increases in both the estimated rate base for Nelson Hydro's Rural operations, as well as the annual estimate of revenues for same. Consequently, the Panel anticipates a debt ratio of 50 percent will continue to be theoretically achievable.

The Panel acknowledges that the BCUC, in its Decision accompanying Order G-119-17, stated, "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 [BCUC] 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." [*Emphasis added*]. The Panel notes that, pursuant to section 75 of the UCA, it is not bound by previous decisions made by the BCUC. Additionally, the Panel finds in this proceeding that the City can theoretically achieve a higher debt level, and therefore a deemed capital structure with a higher debt component would not unfairly restrict Nelson Hydro from earning a fair return on its assets. This additional evidence available to the Panel regarding Nelson Hydro's theoretically achievable debt level distinguishes the circumstances in this proceeding from those in the proceeding that led to Order G-119-17.

In consideration of the risk of Nelson Hydro's Rural operations and the City's ability to raise debt, the Panel determines that a debt-to-equity ratio of 50 percent/50 percent is appropriate for the estimated rate base of Nelson Hydro's Rural operations.

[493] Exhibit B-15, BCOAPO IR 66.3 Attachment, Table 4.

[494] Present Value Calculation = $8,423,512; Pmt = $1,898,000, I/Y = 4.11 percent, N = 5.

[495] 52 percent = $8,423,512 / $16,103,000 Rural 2019 Mid-Year Rate Base (Exhibit B-15, BCOAPO IR 66.3 Attachment, Table 4).

Rate of Return on Equity

The Panel finds that an ROE based on a 50-basis-point premium above the Benchmark Utility rate yielding an ROE of 9.25 percent is appropriate for Nelson Hydro's Rural operations. The Panel considers that level of ROE represents a fair reflection of the risks associated with Nelson Hydro's Rural operations.

The Panel considers it reasonable to compare the ROE to that of Boralex as argued by BCOAPO. The Panel agrees that given Boralex's smaller size, its isolated and remote location, and the fact that its two industrial customers account for almost 25 percent of its sales, the ROE for Nelson Hydro's Rural operations should be less than that approved for Boralex (9.50 percent, based on a 75-basis-point premium above the benchmark utility[496]). The Panel notes that interveners generally supported Nelson Hydro's proposed ROE of 9.25 percent, and that there were no submissions made for a different ROE percentage.

The Panel considers that the earned return derived from the combination of the equity component higher than FEW and Boralex with the ROE 25 basis points below both that of FEW and Boralex is reasonable and provides for an earned return that meets the Fair Return Standard.

The Panel acknowledges that the City does not pay income taxes. The Panel notes Nelson Hydro's submission that "Rural customers should not benefit due to Nelson Hydro's non-taxable status." The Panel interprets this submission to mean that Nelson Hydro's Rural customers should have a 'deemed' level of income taxes included in its cost of service, or that its allowed rate of ROE should be on a theoretical "before-tax" basis. The Panel disagrees with Nelson Hydro. The Panel considers increasing the cost of service for a 'theoretical" cost (income tax in this case) would result in an earned return in excess of the Fair Return Standard rendering rates that are excessive and accordingly, unfair, unjust and unreasonable. Rather, the Panel finds it appropriate to exclude 'deemed' income taxes in the calculation of the cost of service for the Nelson Hydro Rural operations and to determine the rate of ROE without making an adjustment for such taxes.

Fixed Rate of Return on Equity versus a Risk Premium Applied to the Benchmark Utility Rate of Return

The Panel sees no reason to deviate from the BCUC's current practice of setting the rate of ROE for utilities in BC using a premium over the Benchmark Utility and finds this to be appropriate for Nelson Hydro's Rural operations.

The Panel is not persuaded that using a fixed rate of ROE is appropriate. The Panel notes that Nelson Hydro is a participant in the BCUC's GCOC proceeding currently underway, in which the BCUC will be assessing the merits of continuing to use one or more benchmark utilities in setting rates of return and capital structure for the public utilities it regulates.

Phasing in of the Allowed Rate of Return on Equity

The Panel determines that rates should be set based on the approved rate of ROE and the approved deemed capital structure effective the date the approved COSA and rate design go into effect, which is discussed in section 4 below. Nelson Hydro has proposed to phase-in its rate of ROE over three years. The Panel considers that such an approach would result in rates during the phase-in period to be insufficient to allow Nelson Hydro

[496] Boralex Ocean Falls Limited Partnership Application for Approval of Rates and Terms and Conditions for Service to British Columbia Hydro and Power Authority Decision and Order G-270-20 dated October 27, 2020.

to earn a fair return thus being in contravention of the Fair Return Standard, unless some form of deferral mechanism is used. Nelson Hydro has not requested the use of such a mechanism. Accordingly, the Panel denies Nelson Hydro's request to phase-in the allowed ROE. **Nelson Hydro is further directed to recalculate its COSA using the approved rate of return on equity and the approved deemed capital structure**.

Interest Rate

The Panel finds that Nelson Hydro's proposed use of the interest rate of 4.11 percent for the cost of debt in accordance with the municipal spending authority is appropriate for the purpose of setting rates for its Rural operations. No interveners commented or presented evidence in opposition to the use of this debt rate. Since all long-term borrowing must be issued by the MFA, and this was the debt rate used for the 2019 COSA, the Panel considers it a reasonable cost of debt for Nelson Hydro.

4.0 Rate Design

The 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 those for the Urban area (about 3 percent higher) and Streetlight rates for the Rural area are higher by about 10 percent.[497] The current rates are effective as of April 1, 2019 and the Rural rates are shown in Table 20

Table 20: Nelson Hydro Rural Rates Effective April 1, 2019[498]

	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

Nelson Hydro used the following rate design objectives in formulating the proposed rate adjustments:[499]

- Moving towards 100 percent RCC ratios for each rate class over long-term and striving to maintain a 95 to 105 percent range of reasonableness for RCC ratios. Based on Nelson Hydro's COSA, Rural Residential

[497] Exhibit B-1, Section 9.1, p. 61.

[498] Exhibit B-1, Section 9.1, p. 61, Table 9-1.

[499] Exhibit B-1, Section 9.3, p. 62.

customer rates should increase. Nelson Hydro is proposing to adjust Rural Residential class rates in this Application.

- In order to minimize rate impacts to customers, Nelson Hydro is proposing a three-year "phase-in" rate adjustment for Rural residential customers. Nelson Hydro notes that these rate adjustments will apply on top of any future rate adjustments based on annual rate applications.[500]

The proposed rate design would result in a rate differential between Nelson Hydro's Rural Residential and Urban Residential customer classes. Nelson Hydro notes that, as the BCUC had previously set out, such a differential must be supported by a COSA, which is part of this Application and supports the differential sought.[501]

The COSA results show that the Residential Rural customers RCC ratio is below the 95 percent to 105 percent zone of reasonableness.[502] Table 21 below shows that Rural residential rates should be increased by 18.2 percent to get RCC ratios of at least 95 percent:[503]

Table 21: Revenue-Cost Coverage Ratios and Required Rate Adjustments

	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)**

In the Application, Nelson Hydro proposes a range of reasonableness of 95 percent to 105 percent, but in the longer term is targeting 100 percent cost recovery.[504] No rate adjustments are proposed for Rural commercial as class revenues are very small.[505]

Nelson Hydro is proposing to adjust and adopt rate increases for the Rural Residential class to achieve a fair rate level to bring the class RCC within the range of reasonableness, including return to the shareholder.[506] 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 percent [applied to both fixed and variable rates] for total compounded rate increase of 18.17 percent over three years as shown in Table 22 below.

[500] Exhibit B-1, Section 9.3, p. 62, footnote 163.
[501] Exhibit B-1, Section 9.3, p. 63.
[502] Exhibit B-1, Section 9.4, p. 68.
[503] Exhibit B-1, Section 9.4, p. 68.
[504] Exhibit B-1, Section 8.3, p. 59.
[505] Exhibit B-1, Section 9.4, p. 68.
[506] Exhibit B-1, Section 9.4, p. 68.

Table 22: Required Rate Adjustments for Rural Residential Class[507]

Date	Rate Adjustment
September 1, 2021	5.72%
September 1, 2022	5.72%
September 1, 2023	5.72%
Compounded	18.17%

Nelson Hydro states that an appropriate comparative or benchmark rate in setting rates for Nelson Hydro's Rural Residential class is the rates of other regulated utilities in the province.[508] Nelson Hydro states that its current rates are significantly lower than FBC residential rates and, over the course of the proposed phase-in period, the proposed rate changes would bring Nelson Hydro's Rural residential within range of the FBC rates.[509] Table 23 below compares Nelson Hydro Rural residential and FortisBC bills after the proposed phase in with full rate increase for the bi-monthly consumption levels ranging from 1,000 kWh to 5,500 kWh.[510]

Table 23: Bill Comparison – Nelson Hydro Rural Residential versus FBC[511]

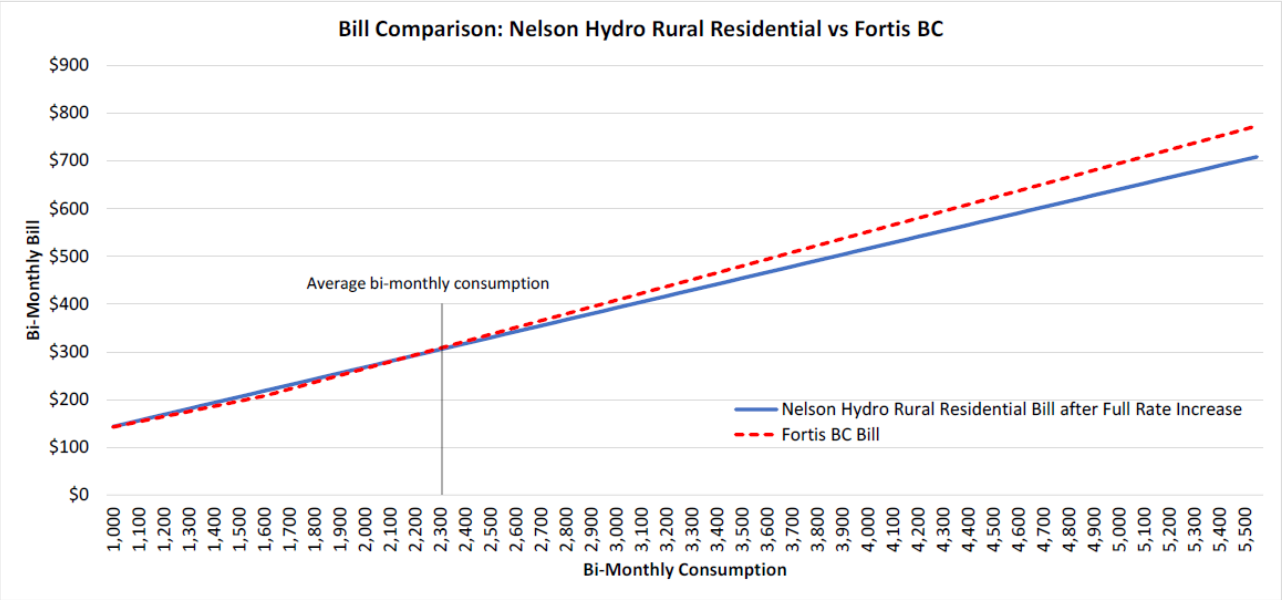

Table 23 shows that the customers with average or below consumption would pay bills similar to FBC current bills, while customers with higher consumption levels would still pay less than FBC customers.[512]

[507] Exhibit B-1, Section 9.4, p. 69, Table 9–3.
[508] Exhibit B-1, Section 9.3, p. 64.
[509] Exhibit B-1, Section 9.3, p. 64.
[510] Exhibit B-1, Section 9.3, p. 66.
[511] Exhibit B-1, Section 9.3, p. 66.
[512] Exhibit B-1, Section 9.3, p. 66.

Positions of Parties

Nelson Hydro submits that the proposed rate adjustment is fair, just and reasonable.[513] Nelson Hydro notes that the requested rate increase to Rural residential rates will bring these rates to 95 percent RCC in accordance with the COSA after they are entirely phased in over a three-year period. [514] However, Nelson Hydro notes that it will under-earn during the three-year phase-in period and that the 95 percent RCC ratio results in about $0.4 million under recovery.[515] Nelson Hydro submits that following full implementation of the proposed rate adjustment, Nelson Hydro's Rural Residential ratepayers would still typically be paying rates lower than ratepayers of other BC energy public utilities.[516]

Nelson Hydro states that its current Rural residential rates are significantly lower than FBC's residential rates and the proposed rate changes, over the course of the proposed phase-in period, would bring Nelson Hydro's Rural residential within range of the current FBC rates.[517] Nelson Hydro submits that this comparison demonstrates that its Rural residential ratepayers are receiving value from the services it provides and the rates of other regulated utilities in BC are the appropriate comparison for Nelson Hydro's Rural rates.[518] Nelson Hydro submits that the requested rate increase seeks to ensure Rural rates adequately cover the cost of service so that Nelson Hydro can invest in systems operations, integrity, security and required maintenance.[519]

As noted above, RCIA submits that the BCUC should not grant the proposed rate changes to the Rural residential rate sought by Nelson Hydro because they would result in unfair treatment of Nelson Hydro's Rural ratepayers.[520]

BCOAPO submits that Nelson Hydro has, in good faith, construed its obligation to act in the best interests of the community by structuring its rate design such that the maximum financial benefits possible flow to its Urban ratepayers.[521] BCOAPO submits that a better balance is achievable and could include a rate design that does not so sharply and differentially impact Rural ratepayers.[522] With respect to Nelson Hydro's proposed rate increase, BCOAPO believes the Panel should seriously consider a longer phase-in period should it approve Nelson Hydro's Application.[523] BCOAPO submits that, based on this statement the 18.2 percent increase (if enacted all at once), would clearly cause "rate shock".[524] BCOAPO states that Nelson Hydro has assumed general rate increases of 2.5 percent per annum for 2022 and 2023, coupled with the proposed COSA/RDA rate increase of 5.72 percent, which equal a compounded annual rate increase of 8.36 percent.[525] BCOPAO submits that where there is clear evidence of a defined period of time with similarly defined rate increases, it is certainly within the BCUC's discretion to take a broader view of what constitutes rate shock – one that truly considers affordability in a reasoned manner. In cases like this, BCOAPO submits that the BCUC should consider lower thresholds when

[513] Nelson Hydro Final Argument p. 13.
[514] Nelson Hydro Final Argument, p. 24.
[515] Final Argument, p. 24; Exhibit B-4, BCUC IR 42.2.1.
[516] Nelson Hydro Final Argument p. 13.
[517] Nelson Hydro Final Argument p. 14.
[518] Nelson Hydro Final Argument p. 15.
[519] Nelson Hydro Final Argument p. 18.
[520] RCIA Final Argument, p. 17.
[521] BCOAPO Final Argument, p. 50.
[522] BCOAPO Final Argument, p. 50.
[523] BCOAPO Final Argument, p. 51.
[524] BCOAPO Final Argument, p. 48.
[525] BCOAPO Final Argument, p. 49.

determining what constitutes rate shock and as a result, Nelson Hydro should be ordered to phase in the rate impacts of its COSA and Rate Design over a longer period of time.[526] BCOAPO believes the use of simplifying assumptions within the COSA makes a range of 90 to 110 percent RCC ratio more appropriate.[527]

Ms. Faust submits that the proposed rate increases are unfair, unjust, unwarranted and should not be approved.[528] Ms. Faust submits that the basis of the request for rate redesign is dependent on the premise that Nelson Hydro can arbitrarily assign a larger portion of purchased power to Rural customers, charge Rural customers a premium for both generated and purchased power, and assign 58 percent of O&M costs to Rural customers who make up 47 percent of the customer base.[529]

Mr. Okros submits that the results of Nelson Hydro's policies discriminate against the Rural customers and the Panel must reject the rate increases sought.[530]

In response, Nelson Hydro notes that its proposal took necessary measures to avoid rate shock, including a phase in of rate changes over a three-year period, as well as a cap on RCC ratio at this time at 95 percent.[531] Nelson Hydro also notes it may need a deferral account to capture the revenue loss resulting from the changes in rate implementation dates and if a longer phase-in period is required.[532] Nelson Hydro submits that the evidentiary record supports approval of the requested Rural residential phased-in rate increase.[533]

Panel Determination

The Panel makes no determination to approve Nelson Hydro's rate design proposal.

In section 2.7 above, the Panel directed Nelson Hydro to recalculate its COSA after making the changes directed in section 2 of this decision. Until these changes are made, the Panel does not know whether changes to the rates for Nelson Hydro's Rural customers are justified. Therefore, it is premature to consider approval of the proposed rate design changes, the purpose of which is to implement a rate increase for Nelson Hydro's Rural customers, until the Panel has reviewed the results of the Modified 2019 COSA.

Further, the Panel is concerned that Nelson Hydro's phased approach to making the requested rate design changes would not constitute a just and reasonable rate. For rates to be just and reasonable, Nelson Hydro must have an opportunity to earn a fair return, and Nelson Hydro acknowledges that its proposed rate design changes would not allow it to earn a fair return until its rate adjustments were fully implemented on September 1, 2023.

The Panel considers that any changes to the rates of Nelson Hydro's Rural customers that arise as a result of the COSA should be made prospectively once the COSA is finalized, and that the changes should be aligned with the changes that Nelson Hydro makes on January 1 as a result of a revenue requirements proceeding. Therefore, the earliest date on which the rate design changes could be made is January 1, 2023.

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[526] BCOAPO Final Argument, p. 49.
[527] BCOAPO Final Argument, p. 51.
[528] Faust Final Argument, p. 1.
[529] Faust Final Argument, p. 1.
[530] Okros Final Argument, p. 1.
[531] Nelson Hydro Reply Argument, p. 23.
[532] Nelson Hydro Reply Argument, p. 23.
[533] Nelson Hydro Reply Argument, p. 31.

5.0 Summary of Directives

This summary is provided for the convenience of readers. In the event of any difference between the Directives in this Summary and those in the body of the Decision, the wording in the Decision shall prevail.

	Directive	**Page No.**
1.	The Panel directs Nelson Hydro to recalculate the COSA using a revenue requirement that accounts fully for other revenues received that are related to the provision of electricity service.	13
2.	The Panel directs Nelson Hydro to recalculate its COSA with generation assets and costs assigned 100 percent to common assets and costs.	26
3.	The Panel directs Nelson Hydro to recalculate its COSA with power purchase costs assigned 100 percent to common costs.	30
4.	The Panel directs Nelson Hydro to functionalize transmission assets and costs separately from distribution assets and costs.	36
5.	The Panel directs Nelson Hydro to revise its COSA to functionalize its customer billing costs and its customer service representatives costs to separate distribution sub-accounts.	37
6.	The Panel directs Nelson Hydro to recalculate the COSA classifying its power purchase costs to demand, energy and customer using FBC's total charges for Nelson Hydro's power purchases for both Rural and Urban customers, which the Panel previously directed to be assigned to common costs.	40
7.	The Panel directs Nelson Hydro to recalculate its COSA with 92 percent of transmission assets classified to demand and eight percent of transmission assets classified to energy.	41

	Directive	Page No.
8.	The Panel directs Nelson Hydro to recalculate its COSA with transmission costs, including amortization expense, classified on the same basis as its transmission assets, as directed above.	42
9.	The Panel directs Nelson Hydro to recalculate its COSA with its distribution assets, other than streetlight assets, classified based on the aggregate classification of FBC's distribution assets, ensuring that no Nelson Hydro distribution assets other than streetlight assets be directly assigned.	44
10.	Nelson Hydro is directed to recalculate its COSA with its distribution assets other than streetlight assets classified 47.9 percent to demand and 52.1 percent to customer.	45
11.	The Panel directs Nelson Hydro to recalculate its COSA with distribution costs, including amortization expense, classified on the same basis as its distribution assets, other than streetlight assets, as directed above.	45
12.	The Panel directs Nelson Hydro to recalculate its COSA with the accumulated amortization of each function classified separately, based on the average classification factors of the associated plant in service.	46
13.	The Panel directs Nelson Hydro to recalculate the COSA using the load and coincidence factors of the Small Commercial class from FBC's 2009 COSA to estimate the load and coincidence factors for its own Commercial Class.	54
14.	The Panel directs Nelson Hydro to recalculate its COSA with a weighting of 1.8 for its commercial customers, when allocating costs of meters, line transformers and related costs.	57

	Directive	Page No.
15.	The Panel directs Nelson Hydro to recalculate its 2019 COSA in a manner compliant with the directions and determinations set out in this decision and to submit the modified 2019 COSA as a compliance filing within 30 days after the issuance of this decision (Modified 2019 COSA). The Panel directs Nelson Hydro to include in its compliance filing a working electronic spreadsheet to show the calculations in the Modified 2019 COSA. The Panel directs Nelson Hydro to use the Modified 2019 COSA as the basis for its subsequent revenue requirement applications.	60
16.	Nelson Hydro is further directed to recalculate its COSA using the approved rate of return on equity and the approved deemed capital structure.	79

5.1 Summary of Directives for the Next COSA

This summary is provided for the convenience of readers. In the event of any difference between the Directions in this Summary and those in the body of the Decision, the wording in the Decision shall prevail.

	Directive	Page No.
1.	The Panel directs that in its next COSA, Nelson Hydro includes power purchase costs in the generation category and not as a separate item as shown in Table 6 above.	35
2.	The Panel directs Nelson Hydro in its next COSA to provide a cost-of-service justification for the rates for its different commercial rate classes.	50

DATED at the City of Vancouver, in the Province of British Columbia, this 19th day of July 2022.

Original signed by:

R. I. Mason
Panel Chair / Commissioner

Original signed by:

A. K. Fung, QC
Commissioner

Original signed by:

T. A. Loski
Commissioner

ORDER NUMBER
G-196-22

IN THE MATTER OF
the *Utilities Commission Act*, RSBC 1996, Chapter 473

and

Nelson Hydro
Cost of Service Analysis and Rate Design Application

BEFORE:
R. I. Mason, Panel Chair
A. K. Fung, QC, Commissioner
T. A. Loski, Commissioner

on July 19, 2022

ORDER

WHEREAS:

A. On November 27, 2020, Nelson Hydro filed a Cost of Service Analysis (COSA) and Rate Design Application with the British Columbia Utilities Commission (BCUC) (Application);

B. Nelson Hydro is owned and operated by the City of Nelson and is excluded from regulation under the *Utilities Commission Act* (UCA) to the extent it is serving customers within its municipal boundaries. Accordingly, the BCUC's review of the Application pertains solely to Nelson Hydro's non-municipal, or Rural, ratepayers;

C. In the Application, Nelson Hydro requests approval of the following:

   i. Proposed return on equity for the Rural service area at 9.25 percent on Nelson Hydro's actual debt to equity ratio to be used for future rate applications;

   ii. Nelson Hydro's Policies approved by City Council relating to the non-municipal portion of the utility (i.e. the Allocation Factors Policy, Generation Rates Policy, Debt Policy, and Deferral Account Policy);

   iii. The COSA (2019 COSA); and

   iv. Proposed rate changes to Rural residential rates effective September 1, 2021 (to be phased in over a three-year period with follow-up adjustments effective September 1, 2022 and September 1, 2023);

D. By Orders G-346-20, G-117-21, G-224-21, G-278-21, G-332-21, and G-387-21, the BCUC established and amended a regulatory timetable for review of the Application, which included intervener registration, three rounds of BCUC and intervener information requests (IR), and written process for final arguments and Sur-Replies;

E. In response to IR No. 2, Nelson Hydro subsequently withdrew the approval sought for Nelson Hydro's Policies approved by the City Council relating to the non-municipal portion of the utility; and

F. The BCUC has considered the evidence and arguments filed in the proceeding and makes the following determinations.

NOW THEREFORE pursuant to sections 58 to 61 of the UCA, for the reasons provided in the Decision issued concurrently with this order, the BCUC orders as follows:

1. The 2019 COSA is approved subject to the directives and determinations set out in the Decision issued concurrently with this Order.

2. Nelson Hydro is directed to recalculate the 2019 COSA in a manner compliant with the directions and determinations set out in the Decision issued concurrently with this Order and to submit to the BCUC the modified 2019 COSA with a working electronic spreadsheet to show the calculations as a compliance filing within 30 days after the issuance of this Order.

3. Nelson Hydro's return on equity is set at a 50-basis point premium above the benchmark as established by Order G-75-13 on a deemed debt to equity ratio of 50 percent/50 percent.

4. Nelson Hydro must comply with all other directives and determinations outlined in the Decision issued concurrently with this Order.

DATED at the City of Vancouver, in the Province of British Columbia, this 19th day of July 2022.

BY ORDER

Original signed by:

R. I. Mason
Commissioner

Summary of Letters of Comment

The following are the major themes indicated throughout the letters of comment received by the BCUC during the proceeding:

Affordability

The majority of the letters of comment from Rural residents opposed the rate increase as many Rural residents live on fixed incomes. Some letters submitted that Rural residents were former City of Nelson residents but were forced to moved out due to the rising housing prices and lack of affordability in the city. Some letters commented that utilities' rates were rising faster than inflation as one resident submitted, "the requested rate increase [18.17 percent] is in the vicinity of 3X the Canadian inflation rate."[534]

Rate Differential

Rural Residents made note that there was no way to check the accuracy of the financial information and estimates used by Nelson Hydro and many doubted if Nelson Hydro's spending is being reported correctly. Rural residents questioned the fairness of paying different rates for the same or lesser service and the allocation methods within the COSA. One resident submitted, "rural customers receive vastly inferior service from Nelson Hydro compared to urban customers."[535]

Reliability

Rural residents submitted that there had been too many outages and their current rates are not being spent to keep the system reliable. Rural residents also noted inconsistent vegetation management practices as one resident submitted that "Had these trees been maintained or cleared over the past few decades, it is unlikely we would be facing such massive post storm costs and increased costs now."[536]

Transparency

Rural residents submitted there is no explanation on what makes up the allocations and numbers to customer classes and there were no efforts made by Nelson Hydro to reduce costs. Residents submitted, "Nelson Hydro needs to clearly demonstrate that it has evaluated every alternative and then justify why the proposed differential rate increase is the best option for moving forward."[537] Rural residents also wrote that the motivations of management were unclear.

[534] Exhibit E-10, McBride Letter of Comment.
[535] Exhibit D-10, Murphy Letter of Comment.
[536] Exhibit E-13, Haynes Letter of Comment.
[537] Exhibit E-21, Coburn Letter of Comment.

Subsidizing City Services

Rural residents noted that Nelson Hydro's dividend payments go back to the Urban service area to pay for City services, thereby Rural residents are paying for city services they do not use. A Rural resident submitted that "Rural Nelson has certainly provided the city of Nelson with revenue that has been used to fund various ventures within city limits."[538]

Governance

Rural residents stated that there was not enough oversight and noted there was a lack of representation of Rural customers at Nelson Hydro as it is run by the City Council. A resident submitted that the rate increase is "taxation without representation" because the rural customers don't choose city councillors who are making these decisions that impact us."[539]

In Favour

Eight letters of comment were received in favour of the Nelson Hydro's proposal. An Urban resident submitted "the proposed rate design is an appropriate phased approach to achieve equity between rural and urban residential and commercial Nelson Hydro customers."[540]

[538] Exhibit E-61, LeFebour letter of Comment.
[539] Exhibit E-74, Cheshire Letter of Comment.
[540] Exhibit E-82, Ryan Letter of Comment.

IN THE MATTER OF
the *Utilities Commission Act*, RSBC 1996, Chapter 473

and

Nelson Hydro
Cost of Service Analysis and Rate Design Application

EXHIBIT LIST

Exhibit No.	Description
COMMISSION DOCUMENTS	
A-1	Letter dated December 22, 2020 – Appointing the Panel for the review of Nelson Hydro Cost of Service Analysis and Rate Design Application
A-2	Letter dated December 22, 2020 – BCUC Order G-346-20 establishing a regulatory timetable
A-3	Letter dated January 27, 2021 – BCUC request Nelson Hydro to file supporting COSA spreadsheets
A-4	Letter dated February 16, 2021 – BCUC Information Request No. 1 to Nelson Hydro
A-5	Letter dated March 1, 2021 – BCUC Order G-57-21 amending the regulatory timetable
A-6	Letter dated April 15, 2021 – BCUC request Nelson Hydro to file feeder loading study
A-7	Letter dated April 21, 2021 – BCUC Order G-117-21 establishing a further regulatory timetable
A-8	Letter dated April 27, 2021 – BCUC response regarding Feeder Loading Study availability
A-9	Letter dated May 25, 2021 – BCUC Information Request No. 2 to Nelson Hydro
A-10	Letter dated June 7, 2021 – BCUC Order G-178-21 establishing an Amended Regulatory Timetable
A-11	Letter dated July 26, 2021 – BCUC Order G-224-21 establishing an Amended Regulatory Timetable
A-12	Letter dated August 10, 2021 – BCUC clarification request on interim rates to Nelson Hydro's
A-13	Letter dated August 11, 2021 – BCUC Information Request No. 3 to Nelson Hydro

Exhibit No.	Description
A-14	Letter dated September 22, 2021 – BCUC request to Nelson Hydro for clarification to BCUC Information Request No. 3 Question 97.1
A-15	Letter dated September 22, 2021 – BCUC Order G-278-21 establishing an amended Regulatory Timetable
A-16	Letter dated September 27, 2021 – BCUC establishing a deadline for Letters of Comment
A-17	Letter dated November 12, 2021 – BCUC establishing an amended Regulatory Timetable
A-18	Letter dated December 9, 2021 – BCUC Order G-363-21 regarding interim rates with Reasons for Decision
A-19	Letter dated December 21, 2021 – BCUC Order G-387-21 amending the Regulatory Timetable
A-20	Letter dated January 5, 2022 – BCUC Order G-1-22 amending the Regulatory Timetable
COMMISSION STAFF DOCUMENTS	
A2-1	Letter dated February 16, 2021 – BCUC Staff submitting Nelson Hydro 2020 Virtual Open House Presentation dated December 10, 2020
APPLICANT DOCUMENTS	
B-1	**NELSON HYDRO** - Cost of Service Analysis and Rate Design Application dated November 27, 2020
B-2	Letter dated February 3, 2021 – Nelson Hydro submitting supporting spreadsheets
B-3	Letter dated February 26, 2021 – Nelson Hydro submitting an extension request
B-4	Letter dated March 15, 2021 – Nelson Hydro submitting responses to BCUC Information Request No. 1
B-5	Letter dated March 26, 2021 – Nelson Hydro submitting responses to BCUC Information Request No. 1 – Addendum
B-6	Letter dated March 30, 2021 – Nelson Hydro submitting responses to RCIG Information Request No. 1

Exhibit No.	Description
B-7	Letter dated March 30, 2021 – Nelson Hydro submitting responses to Newell Information Request No. 1
B-8	Letter dated March 30, 2021 – Nelson Hydro submitting responses to Faust Information Request No. 1
B-9	Letter dated March 30, 2021 – Nelson Hydro submitting responses to BCOAPO Information Request No. 1
B-10	Letter dated April 21, 2021 – Nelson Hydro submitting Feeder Loading Study
B-11	Letter dated June 3, 2021 – Nelson Hydro submitting extension request to file responses to BCUC and Intervener Information Requests No. 2
B-12	Letter dated June 22, 2021 – Nelson Hydro submitting responses to BCUC Information Request No. 2
B-12-1	Letter dated July 7, 2021 – Nelson Hydro submitting correction to BCUC Information Request No. 2 Question No. 71.6
B-13	Letter dated July 6, 2021 – Nelson Hydro submitting responses to Faust Information Request No. 2
B-14	Letter dated July 6, 2021 – Nelson Hydro submitting responses to RCIA Information Request No. 2
B-15	Letter dated July 6, 2021 – Nelson Hydro submitting responses to BCOAPO Information Request No. 2 with Attachment
B-16	Letter dated August 18, 2021 – Nelson Hydro submitting clarification on interim rates
B-17	Letter dated August 30, 2021 – Nelson Hydro submitting responses to RCIA Information Request No. 3
B-18	Letter dated August 30, 2021 – Nelson Hydro submitting responses to BCUC Information Request No. 3
B-18-1	Letter dated September 29, 2021 – Nelson Hydro submitting Revised response to BCUC Information Request No. 3 Question 97.1 as requested

Exhibit No.	Description
B-19	Letter dated August 30, 2021 – Nelson Hydro submitting responses to BCOAPO Information Request No. 3
B-20	Letter dated September 3, 2021 – Nelson Hydro submitting response regarding further process
B-21	Letter dated September 16, 2021 – Nelson Hydro submitting reply regarding further process

INTERVENER DOCUMENTS

C1-1	**RESIDENTIAL CONSUMER INTERVENOR GROUP (RCIG) -** Letter dated January 25, 2021 Request to Intervene by Sam Mason, Midgard Consulting
C1-2	Letter dated February 23, 2021 – RCIG submitting Information Request No. 1 to Nelson Hydro
C1-3	Letter dated May 25, 2021 – RCIA Information Request No. 2 to Nelson Hydro
C1-4	Letter dated August 16, 2021 – RCIA Information Request No. 3 to Nelson Hydro
C1-5	Letter dated September 13, 2021 – RCIA submission on further process
C1-6	Letter dated January 20, 2022 – RCIA will not be submitting a Sur Reply
C2-1	**OKROS, DAVID (OKROS) -** Letter dated January 25, 2021 Request to Intervene
C3-1	**FORTISBC INC. (FBC) -** Letter dated February 4, 2021 Request to Intervene by Diane Roy
C4-1	**NELSON AND DISTRICT CHAMBER OF COMMERCE (NELSON-DISTRICT)** – Letter dated February 3, 2021 Request to Intervene by Tom Thomson
C5-1	**REMOVED – NOW EXHIBIT D-14**
C6-1	**BRITISH COLUMBIA OLD AGE PENSIONERS' ORGANIZATION, ACTIVE SUPPORT AGAINST POVERTY, DISABILITY ALLIANCE BC, COUNCIL OF SENIOR CITIZENS' ORGANIZATIONS OF BC, AND TENANTS RESOURCE AND ADVISORY CENTRE (BCOAPO ET AL)** – Submission dated February 9, 2021 Request to Intervene by Leigha Worth and Irina Mis
C6-2	Letter dated February 23, 2021 – BCOAPO submitting Information Request No. 1 to Nelson Hydro
C6-3	Letter dated May 25, 2021 – BCOAPO Information Request No. 2 to Nelson Hydro

Exhibit No.	Description
C6-4	Letter dated August 16, 2021 – BCOAPO Information Request No. 3 to Nelson Hydro
C6-5	Letter dated September 13, 2021 – BCOAPO submission on further process
C6-6	Letter dated November 10, 2021 – BCOAPO submitting request for extension to file Final Argument
C7-1	**FAUST, RAMONA (FAUST)** – Submission dated February 9, 2021 Request to Intervene
C7-2	Letter dated February 23, 2021 – Faust submitting Information Request No. 1 to Nelson Hydro
C7-3	Letter dated May 25, 2021 – Faust Information Request No. 2 to Nelson Hydro
C7-4	Letter dated January 2, 2022 – Faust submitting extension request for Final Argument Sur Reply
C8-1	**NEWELL, THOMAS (NEWELL)** – Submission dated February 9, 2021 Request to Intervene
C8-2	Letter dated February 24, 2021 – Newell submitting Late Information Request No. 1 to Nelson Hydro

INTERESTED PARTY DOCUMENTS

D-1	**REMOVED** now Exhibit C4-1
D-2	**MACPHERSON, WILLIAM (MACPHERSON)** – Submission dated January 25, 2021 Request for Interested Party Status
D-2-1	Macpherson, W. – Letter of Comment dated February 5, 2021
D-3	**FOLKARD, L. (FOLKARD-L)** – Submission dated January 25, 2021 Request for Interested Party Status
D-3-1	Folkard-L. – Letter of Comment dated January 30, 2021
D-4	**FOLKARD, SHEILA (FOLKARD-S)** – Submission dated January 25, 2021 Request for Interested Party Status
D-4-1	Folkard-S. – Letter of Comment dated January 25, 2021
D-4-2	Folkard-S. – Additional Letter of Comment dated April 8, 2021
D-5	**NYSTROM, B. (NYSTROM)** – Submission dated January 29, 2021 Request for Interested Party Status

Exhibit No.	Description
D-5-1	Nystrom – Letter of Comment dated January 28, 2021
D-6	**POWELL, T. (POWELL)** – Submission dated January 30, 2021 Request for Interested Party Status
D-7	**REMOVED** now Exhibit C7-1
D-8	**WOODS, C. (WOODS)** – Submission dated February 2, 2021 Request for Interested Party Status
D-8-1	Woods – Letter of Comment dated February 1, 2021
D-8-2	Woods – Additional Letter of Comment dated March 24, 2021
D-9	**LOJPUR, J. (LOJPUR) –** Submission dated February 2, 2021 Request for Interested Party Status
D-9-1	Lojpur – Letter of Comment dated April 14, 2021
D-10	**MURPHY, J. (MURPHY) –** Submission dated February 4, 2021 Request for Interested Party Status
D-10-1	Murphy – Letter of Comment dated February 8, 2021
D-11	**YANKE, M. (YANKE) –** Submission dated February 10, 2021 Request for Interested Party Status
D-11-1	Yanke, M. – Letter of Comment dated March 2, 2021
D-11-2	Yanke, M. – Letter of Comment dated October 13, 2021
D-12	**BEERBOWER, J. (BEERBOWER)** - Submission dated February 14, 2021 Request for Interested Party Status
D-12-1	Beerbower – Letter of Comment dated March 3, 2021
D-13	**WEIR, D. (WEIR)** - Submission dated February 17, 2021 Request for Interested Party Status
D-14	**ZINKAN, CHARLIE (ZINKAN)** – Submission dated February 18, 2021 change of status from Intervener to Interested Party
D-14-1	Zinkan – Letter of Comment dated February 25, 2021
D-15	**HOWROYD, A. (HOWROYD)** - Submission dated February 19, 2021 Request for Interested Party Status
D-15-1	Howroyd, A. – Letter of Comment dated February 17, 2021

Exhibit No.	Description
D-16	**CLARE, C. (CLARE)** - Submission dated February 18, 2021 Request for Interested Party Status
D-16-1	Clare, C. – Letter of Comment dated February 25, 2021
D-16-2	Clare, C. – Additional Letter of Comment dated March 4, 2021
D-17	**REGIONAL DISTRICT OF CENTRAL KOOTENAY (RDCK)** - Submission dated February 22, 2021 Request for Interested Party Status by Stuart Horn
D-18	**MARTIN, M. (MARTIN) -** Submission dated February 24, 2021 Request for Interested Party Status
D-19	**BALLANCE, P. (BALLANCE) -** Submission dated February 24, 2021 Request for Interested Party Status
D-20	**HAWKINS, D. (HAWKINS)** - Submission dated February 25, 2021 Request for Interested Party Status
D-20-1	Hawkins – Letter of Comment dated March 24, 2021
D-21	**BAILEY, B. (BAILEY)** - Submission dated March 2, 2021 Request for Interested Party Status
D-22	**BEAULAC, E. (BEAULAC)** - Submission dated March 2, 2021 Request for Interested Party Status
D-23	**CLEMENT, B. (CLEMENT)** - Submission dated March 2, 2021 Request for Interested Party Status
D-23-1	Clement, B. – Letter of Comment dated March 3, 2021
D-24	**IWANIK, L. (IWANIK)** - Submission dated March 2, 2021 Request for Interested Party Status
D-24-1	Iwanik, L. – Letter of Comment dated February 26, 2021
D-25	**MARSH, I. (MARSH)** - Submission dated March 2, 2021 Request for Interested Party Status
D-25-1	Marsh – Letter of Comment dated March 3, 2021
D-26	**O'FALLON, S. (O'FALLON)** - Submission dated March 2, 2021 Request for Interested Party Status
D-26-1	O'Fallon, S. – Letter of Comment dated February 28, 2021
D-27	**POPOFF, W. (POPOFF)** - Submission dated March 2, 2021 Request for Interested Party Status
D-28	**SULLIVAN, A. (SULLIVAN)** - Submission dated March 2, 2021 Request for Interested Party Status

Exhibit No.	Description
D-29	**HILL, K. (HILL) -** Submission dated March 9, 2021 Request for Interested Party Status
D-29-1	Hill – Letter of Comment dated March 4, 2021
D-30	**HOWARD, P. (HOWARD) -** Submission dated March 9, 2021 Request for Interested Party Status
D-30-1	Howard – Letter of Comment dated March 4, 2021
D-31	**JESSEN, M. (JESSEN)** - Submission dated March 9, 2021 Request for Interested Party Status
D-31-1	Jessen- Letter of Comment dated March 4, 2021
D-32	Vallentyne, S. (Vallentyne) - Submission dated April 6, 2021 Request for Interested Party Status
D-32-1	Vallentyne, S. – Letter of Comment dated April 1, 2021
D-33	**COLUMBIA INSTITUTE OF RENEWABLE ENERGY SOCIETY (CIRES)** – Submission dated May 5, 2021 Request for Interested Party Status

LETTERS OF COMMENT

E-1	Urech, J. – Letter of Comment dated January 18, 2021
E-2	Beattie, K. – Letter of Comment dated January 20, 2021
E-3	Reese, T. – Letter of Comment dated January 20, 2021
E-4	Haynes, K. – Letter of Comment dated January 21, 2021
E-5	Balfour Recreation Commission – Letter of Comment dated January 22, 2021
E-6	Dooley, P. – Letter of Comment dated January 23, 2021
E-7	White, D. – Letter of Comment dated January 25, 2021
E-8	Postnikoff, C. – Letter of Comment dated January 28, 2021
E-8-1	Postnikoff, C. – Additional Letter of Comment dated February 11, 2021
E-8-2	Postnikoff, C. – Additional Letter of Comment dated April 11, 2021
E-8-3	Postnikoff, C. – Additional Letter of Comment dated August 6, 2021

Exhibit No.	Description
E-8-4	Postnikoff, C. – Additional Letter of Comment dated September 24, 2021
E-9	Hart, S. – Letter of Comment dated January 26, 2021
E-10	McBride, D. – Letter of Comment dated January 30, 2021
E-11	Ellison, S. – Letter of Comment dated January 26, 2021
E-12	Arnott, B. – Letter of Comment dated February 2, 2021
E-13	Haynes, S. – Letter of Comment dated February 1, 2021
E-14	Irvine, R. – Letter of Comment dated January 16, 2021
E-15	Edgar, J. – Letter of Comment dated February 3, 2021
E-16	Laird, M. – Letter of Comment dated January 25, 2021
E-17	O'Dowd-Kuhn – Letter of Comment dated February 1, 2021
E-18	Russell-Ames – Letter of Comment dated February 1, 2021
E-19	Chapman, M. – Letter of Comment dated February 10, 2021
E-20	Burton, C. – Letter of Comment dated January 29, 2021
E-20-1	Burton, C. – Additional Letter of Comment dated February 27, 2021
E-21	Coburn, N. and K. – Letter of Comment dated February 9, 2021
E-22	Doyle, J. – Letter of Comment dated February 10, 2021
E-22-1	Doyle, J. – Additional Letter of Comment dated February 17, 2021
E-23	Gagnon, P. - Letter of Comment dated February 10, 2021
E-24	Hamilton, B. - Letter of Comment dated February 11, 2021
E-25	Wrangler, D. - Letter of Comment dated February 12, 2021
E-26	Wiseman, R. and Lino, M. – Letter of Comment dated February 16, 2021
E-27	REMOVED now Exhibit D-15-1
E-28	Gehr, H. and Wright, A. – Letter of Comment dated February 18, 2021
E-29	Frye, R. and Porter, E. – Letter of Comment dated February 16, 2021

Exhibit No.	Description
E-30	Smienk, J. – Letter of Comment dated February 22, 2021
E-31	Taylor, L. – Letter of Comment dated February 19, 2021
E-32	Swenson, J. – Letter of Comment dated February 20, 2021
E-33	MacPherson, C. – Letter of Comment dated February 17, 2021
E-34	Farrell, L. – Letter of Comment dated February 22, 2021
E-35	LePape, K. – Letter of Comment dated February 22, 2021
E-36	Witt, S. – Letter of Comment dated February 22, 2021
E-37	Corrie, V. – Letter of Comment dated February 23, 2021
E-38	Reid, P. – Letter of Comment dated February 24, 2021
E-39	Gulayets, J. – Letter of Comment dated February 22, 2021
E-40	Weese, G. – Letter of Comment dated February 17, 2021
E-40-1	Weese, G. – Additional Letter of Comment dated February 24, 2021
E-41	Erickson, M. and W. – Letter of Comment dated February 22, 2021
E-42	Cardinal, B. – Letter of Comment dated February 25, 2021
E-43	Cash, A. – Letter of Comment dated February 25, 2021
E-44	Childs, T. – Letter of Comment dated February 25, 2021
E-45	Jarmson, R. – Letter of Comment dated February 25, 2021
E-46	Barrette, P. – Letter of Comment dated February 25, 2021
E-47	Martin, M. – Letter of Comment dated February 25, 2021
E-48	REMOVED now D-16-1
E-49	Giannetto, R. – Letter of Comment dated February 24, 2021
E-50	REMOVED now D-24-1
E-51	Demers, J. – Letter of Comment dated February 25, 2021
E-52	Sullivan, A. – Letter of Comment dated February 26, 2021

Exhibit No.	Description
E-53	Lucas, T. – Letter of Comment dated February 22, 2021
E-54	Popoff, W. – Letter of Comment dated March 1, 2021
E-55	Bailey, B. – Letter of Comment dated February 27, 2021
E-56	Treijs, E. – Letter of Comment dated February 27, 2021
E-57	REMOVED now D-26-1
E-58	Beaulac, L. – Letter of Comment dated February 28, 2021
E-59	Schlichting, D. – Letter of Comment dated March 1, 2021
E-60	Vishloff, S. – Letter of Comment dated February 27, 2021
E-61	LeFebour, S. – Letter of Comment dated February 27, 2021
E-62	Cheshire, L. – Letter of Comment dated February 28, 2021
E-63	Neufeld, V. – Letter of Comment dated March 1, 2021
E-64	Seeger, M. – Letter of Comment dated February 28, 2021
E-65	Frederiksen, C. – Letter of Comment dated February 28, 2021
E-66	Seeger, H. – Letter of Comment dated February 27, 2021
E-67	Demers, M. – Letter of Comment dated February 27, 2021
E-68	Seeger, A. – Letter of Comment dated February 28, 2021
E-69	Morley, R. – Letter of Comment dated February 26, 2021
E-70	Etelamaki, A. - Letter of Comment dated March 1, 2021
E-71	Dock N Duck – Letter of Comment dated March 1, 2021
E-72	McIntyre, C. – Letter of Comment dated March 1, 2021
E-73	Price, H. – Letter of Comment dated March 2, 2021
E-74	Cheshire, B. – Letter of Comment dated February 28, 2021
E-75	Morrison, S. – Letter of Comment dated March 2, 2021
E-76	Kane, K. – Letter of Comment dated March 2, 2021

Exhibit No.	Description
E-77	Paradis, R. – Letter of Comment dated March 1, 2021
E-78	Malone, A. – Letter of Comment dated February 25, 2021
E-79	Buck, C. – Letter of Comment dated March 2, 2021
E-80	Held, T. – Letter of Comment dated March 3, 2021
E-81	Facchina, L. – Letter of Comment dated March 3, 2021
E-82	Ryan, S. – Letter of Comment dated March 2, 2021
E-83	Thibault, M. – Letter of Comment dated March 2, 2021
E-84	Thomas, A. – Letter of Comment dated March 3, 2021
E-85	Sauter, R. – Letter of Comment dated March 3, 2021
E-86	Marvin – Letter of Comment dated March 3, 2021
E-87	Anton, T. – Letter of Comment dated March 2, 2021
E-88	Foot, K. – Letter of Comment dated March 3, 2021
E-89	Foot, M. – Letter of Comment dated March 3, 2021
E-90	Demers, J. – Letter of Comment dated March 2, 2021
E-91	Gatto, D. – Letter of Comment dated March 4, 2021
E-92	Evanchuk, R. – Letter of Comment dated March 4, 2021
E-92-1	Evanchuk, R. – Additional Letter of Comment dated April 2, 2021
E-92-2	Evanchuk, R. – Additional Letter of Comment dated April 27, 2021
E-92-3	Evanchuk, R. – Additional Letter of Comment dated May 6, 2021
E-92-4	Evanchuk, R. – Additional Letter of Comment dated July 19, 2021
E-92-4-1	Evanchuk, R. – Addendum to Additional Letter of Comment dated July 20, 2021
E-92-5	Evanchuk, R. – Additional Letter of Comment dated October 4, 2021
E-93	McDermott, B. – Letter of Comment dated March 4, 2021
E-94	Carter, J. – Letter of Comment dated March 4, 2021

Exhibit No.	Description
E-95	Duggan, D. – Letter of Comment dated March 3, 2021
E-96	Lucas, B. – Letter of Comment dated March 4, 2021
E-97	Fellowes, T. – Letter of Comment dated March 4, 2021
E-97-1	Fellowes, T. – Additional Letter of Comment dated March 5, 2021
E-98	Goody, M. – Letter of Comment dated March 3, 2021
E-99	Williams, P. – Letter of Comment dated March 4, 2021
E-100	Kennedy, H. – Letter of Comment dated March 4, 2021
E-101	Schmidt, E. – Letter of Comment dated March 4, 2021
E-102	Leighland, C. – Letter of Comment dated March 5, 2021
E-103	Jonker, D. – Letter of Comment dated March 4, 2021
E-104	Krolak, J. – Letter of Comment dated March 4, 2021
E-105	Benamran, N. – Letter of Comment dated March 3, 2021
E-106	Shepherd, K. – Letter of Comment dated March 9, 2021
E-107	Miller, V. – Letter of Comment dated March 12, 2021
E-108	Brochhagen, D. and C. - Letter of Comment dated July 27, 2021
E-109	Denkovski, G – Letter of Comment dated October 7, 2021