Date Submitted: April 16, 2019

Proceeding name: Nelson Hydro 2019 Rural Rate Application

Are you currently registered as an intervener or interested party: No

Name (first and last): Jay Doyle

City: Nelson

Province: British Columbia

Email: [redacted]

Phone number: [redacted]

Comment:
I am a customer of Nelson Hydro and do not agree with the differential rate for Rural Residential customers nor any increase in rate for 2019 I wish to submit a covering letter, response to the 2019 application and an analysis of the Cost of Service report published in December 2018 on which the 2019 application is based. However this system only permits one document. I have brought them all together as one document.

16th April 2019

To whom it may concern,

Nelson Hydro rate increase for Rural customers in 2019

I disagree with the proposed change in rate for Rural customers of Nelson Hydro for four significant reasons:

Firstly it is based on a flawed Cost of Service Report (published in December 2018 and now with two amendments including one that has not been made available for examination). The Cost of Service Report (Report) is flawed for the following significant reasons:

- All generated power (lowest cost) is allocated to Urban customers whilst purchased power (higher cost) is mainly allocated to Rural customers yet all customers access the pooled power.
- It does not permit the inclusion of Other Revenue even though the expenses that generate the Other Revenue are included as expenses.
- The Report does not reconcile to the City of Nelson Financial Statements 2017 that have been audited and published. The Report shows a deficit but the publish Financial Statements indicate a surplus – the same operation has such different operating results reported to the Public.

Secondly it does not include the following (all figures shown in $000's):

- Revenue from sales is understated – add Revenue omitted $445
- Other Revenue is understated compared to previous years – add estimate of $600
- Expenses are understated in supporting documents – add Depreciation ($1,200) & Others ($15)
- Interest needs to be adjusted (reduced) by $249

Thirdly there is a significant surplus in 2019 after all expenses, allocation to reserves and dividends have been met in the order of $580 after the rates (Urban and Rural) have been applied with no details regarding how this will be utilised. If the rate changes are factored out the surplus becomes $322. Clearly there is no need for a rate increase in any class of customer.

Fourthly the information provided as an attachment to the Application identifies an expected surplus for 2018. Whilst the surplus needs to be adjusted for expenses not detailed in the supporting documentation the result is still a surplus in the order of $755. There is no information provided in the Application regarding how this surplus will be utilised.

The documents provided by Nelson Hydro on the 10th April 2019 provide an example of problem with information. The correspondence refers to information that is not provided and also to an amendment to the Cost of Service Report 2018 that is not provided.

This was drawn to the attention of the BCUC by a member of the public but at the date of writing these omissions have not been corrected. How a member of the public can become informed given the quality of the information provided is a challenge that the BCUC needs to address.

Following this cover letter are two documents that provide details of how these conclusions were drawn. I would be prepared to discuss them with BCUC staff if required. It was not easy to understand the strange thinking that developed the costing models and there seem to be many more questions still to be resolved but I consider the overall conclusions are correct.

In summary I concluded the following based on the information provided by Nelson Hydro:

1. **The request for any rate change does not appear to be warranted in 2019 as Nelson Hydro makes a significant surplus after all expenses contrary to the assertions in the Application and the Supplemental.**

2. **Nelson Hydro had a surplus in 2018 but has not indicated the impact of that performance on rates for 2019. Given the size of the surplus this is another reason why there should not be a rate increase in 2019.**

3. **The bulk of the surplus generated is provided by the Urban Commercial class of customers and an analysis excluded their performance would reduce the Urban RCC Ratio.**

4. **The Application is riddled with inconsistent information and constitutes a "TRUST ME" presentation in support of an unnecessary and differential rate increase.**

5. **Provision of correct information in support of any amendments to rates should be a basic expectation that is not fulfilled in this Application or Supplemental.**

Given the above and the attached information I request the BCUC reject the Application for rate increases from Nelson Hydro.

Yours,

Jay

Nelson Hydro

Comments on the Rate Application 2019

Introduction

An application to increase all Rural classes by 2.94% effective 1st April 2019 (effective rate of 2.03% for 2019) was submitted to the BCUC on 8th March 2019 (Application) with supplemental information provided on the 10th April 2019 (Supplemental). It was requested that this rate be effective on an interim and refundable basis from 1st April 2019.

The BCUC has agreed to the rate adjustment on an interim and refundable basis.

Consideration of Information provided

The Application includes detailed information to support the request to increase the Rural rates. In summary the information forecasts Energy and Revenue (at new rates) on page 2 as follows:

Table 1	**Urban 2019**	**Rural 2019**	**Total 2019**
Customer Count	6,065	4,549	10,614
	57%	43%	
Energy (000's kWh)	95,399	66,277	161,676
	59%	41%	
Revenue ($000's)	$11,192	$7,484	$18,676
	60%	40%	

However the spreadsheet in Appendix B attached to the Application showing Operating Revenue for the period 2015 to 2019 shows different metrics.

Table 2	**Urban 2019**	**Rural 2019**	**Total 2019**
Revenue	10,927	7,304	18,231
	60%	40%	
Other Revenue	343	160	503
	68%	32%	
Total Revenue	**11,270**	**7,464**	**18,734**
	60%	40%	

Some of the information mentioned in the text of the Supplemental was not found and has been requested – Revised Appendix B and others. At time of writing this has still not been posted onto the BCUC website and consists of the revised Appendix B that shows Revenue without the rate increase and an amendment to the Cost of Service Report for which no details were provided in the covering letter.

The Customer and Energy metrics in the Supplemental are the same as the Application but the Revenue from Energy sales is drawn from Appendix B and is the same as that shown in Table 2 above. This seems to support Appendix B but does not really address why there is a difference from the page 2 information.

The Revenue estimates was subjected to a reasonableness test. The process was to use the Customer numbers times Basic Charge plus Energy used times Rate for that Class of customer. For Residential customers this was easy but for Commercial customers the information required was not complete so the lowest Rate was applied – the effect would be to underestimate Revenue.

The approach used:

Basic – fixed charge times number of customers

Energy – kWh times rate for that class of customer

The results based on the Application (page 2) information is as follows:

	Total Urban	Total Rural	Grand Total
Original			
Basic	$ 770	$ 518	$ 1,287
Energy	$ 10,107	$ 7,116	$ 17,223
Revenue	$ 10,877	$ 7,634	$ 18,511
Difference	**$ 315**	**$ (150)**	**$ 166**

This suggests that Urban Revenue is understated by $315 (expected as there is a significant revenue from Urban Commercial customers) and Rural Revenue is overstated by $150 (which should not be possible given the methodology).

The same calculations using the Supplementary information provides:

	Total Urban	Total Rural	Grand Total
Supplemental			
Basic	$ 770	$ 518	$ 1,287
Energy	$ 10,107	$ 7,116	$ 17,223
Revenue	$ 10,877	$ 7,634	$ 18,511
Difference	**$ (50)**	**$ 330**	**$ 280**

This suggests that Urban Revenue is slightly overstated (this is impossible given the approach used) and Rural Revenue is understated by $330 (this should be expected). These results demonstrate that the Revenue is unlikely to be correct and the approach utilised by Nelson Hydro needs clarification.

Perhaps a better way to demonstrate the issue is to consider the easiest class of customer to calculate (Municipal) and the information provided in both the Application and Supplemental documents.

Municipal	Application	Supplemental	Difference
Customers	86	86	Same
Energy 000's kWh	4,907	4,907	Same
Revenue $000's	$364	$284	$81 Less
Rate 2019	$0.1010	$0.1010	Same
Revenue Estimate	$496	$496	(4,907 times $0.1010)
Unexplained difference	$132	$141	

It seems that Revenue for Energy sales is based on some other calculation than kWh times Rate but nothing in the document explains how they are actually calculated. Given this result they are suspect.

The results for estimating Revenue should be consistent and not change every time a document is printed. These differences are concerning and suggests issues of data quality and consistency in the documentation provided to the BCUC.

It is unclear if the page 2 amount of $18,676 includes Other Revenue, it implies that the Revenue is from power purchases from customers and there is no mention of Other Revenue. If it does not then additional Revenue, above that shown in Appendix B, is expected ($445).

Other Revenue ($503) seems too low when compared to previous years ($906 2017, $799 2018). The value used in the Cost of Service Report was based on a revised total for 2017 - $1,405 i.e. up from the Appendix B total of $906.

Appendix B does not seem to detail Depreciation (c$1,200) or Interest (c$250) to be paid during the year. In addition minor adjustments brought into the COS Report like use of office accommodation (c$15) are not in Appendix B totals. A total apparent understatement of Expenses of c$1,365.

It would seem that Other Income is now included when determining performance but this was not the approach taken in the Cost of Service Report where it was excluded. Now consider:

Table 3	**Urban 2019**	**Rural 2019**	**Total 2019**
Revenues			
Revenue	10,927	7,304	18,231
Other Revenue	343	160	503
Total Revenue	**11,270**	**7,464**	**18,734**
Expenses			
Operating	2,795	2,280	5,075
Power Purchases	1,667	5,032	6,699
Debt Service	328	171	498
Total Expenses	**4,789**	**7,483**	**12,431**
Operational Surplus	**6,481**	**(19)**	**6,302**

This Table is presented in the Application and shows the Rural customers barely breaking even with no contribution towards Allocation to Reserves or Dividend.

This is the fundamental presentation that supports the increase in rates plus a further application (not yet presented) to address the apparent shortfall in performance.

It is incorrect for two significant reasons:

Firstly it is based on a flawed Cost of Service Report. The Cost of Service Report is flawed for the following reasons:

- All generated power (lowest cost) is allocated to Urban customers whilst purchased power (higher cost) is mainly allocated to Rural customers. This puts a disproportionate amount of cost into the Rural customers column.
- It does not permit the inclusion of Other Income even though the expenses that generate the income are included as expenses. Table 3 above clearly shows it included in the Application.
- The Cost of Service Report does not reconcile to the City of Nelson Financial Statements that have been audited and published. It shows a deficit but the publish Financial Statements indicate a surplus – how can the same operation have such different operating results.

Secondly it does not include the following:

- Revenue from sales is understated – add Revenue omitted $445
- Other Revenue is understated – add estimate of $600
- Expenses are understated – add Depreciation ($1,200) and others ($15)
- Interest needs to be adjusted (reduced) by $249

These amendments have been included in the table below:

Table 4	**Urban 2019**	**Rural 2019**	**Adjustment 2019**	**Total 2019**
Revenues				
Revenue	10,927	7,304	446	18,677
Other Revenue	343	160	600	1,103
Total Revenue	**11,270**	**7,464**	**1,046**	**19,780**
Expenses				
Operating	2,795	2,280	1,215	6,448
Power Purchases	1,667	5,032	-	6,699
Debt Service	328	171	(249)	250
Total Expenses	**4,789**	**7,483**	**966**	**13,397**
Operational Surplus	**6,481**	**(19)**	**79**	**6,382**

This presentation is still based on the flawed Cost of Service Report but now contains totals for the whole of Nelson Hydro that seem more reasonable. It shows an Operating Surplus of $6,382.

There is no explanation why there are differences in the information provided in the supporting documents and the Application. One should be the same as the other so why provide faulty data.

Also the average consumption for a Rural Residential customer seems suspect. The Application states the average consumption is 1,133 kWh (page 4) but it is unclear how this was calculated. On page 2 the following information is provided:

Residential Rural Consumption	57,148 kWh
Residential Rural Customers	4,209
Average consumption during 2019	1,358 kWh

Clearly the result of the calculation has been included in the Application incorrectly.

Application of the Cost of Service

The complete Cost of Service Model is hard to replicate, has never been provided for analysis and has been amended from the original twice (once to correct a basic accounting error that was not identified during preparation of the Financial Statements or during the External Audit).

However based on adjustments to correct the flaws detailed above it is possible to determine an alternative view of performance that more closely approximates reality.

The different values for revenue in the application and the COS Report (All in $000's) are:

Table 5	**Actual 2017**	**Revised (as above)**	**Appendix B 2019**
Revenue	18,354	18,677	18,230
Other revenue	1,405	1,103	503
Total	**19,759**	**19,780**	**18,733**

The forecasted revenue seems unclear so for the purposes of discussion this paper will Table 4 above as the value of Revenue and Other Revenue. The revised presentation including the proposed 2019 rates is shown below:

Table 6	**Urban 2019**	**Rural 2019**	**Total 2019**
Revenues			
Revenue	11,192	7,485	18,677
Other Revenue	730	373	1,103
Total Revenue	**11,922**	**7,858**	**19,780**
Expenses			
Electricity	4,868	3,250	8,118
Transmission	450	1,050	1,500
General	1,400	930	2,330
Depreciation	565	635	1,200

Debt	150	100	250
Total Expenses	**7,433**	**5,965**	**13,398**
Operational Surplus	**4,490**	**1,893**	**6,382**
Reserves	1,727	1,150	2,877
Dividend	1,702	1,134	2,836
Community	54	36	90
Total Allocations	**3,483**	**2,320**	**5,803**
Result is a surplus for the year	**1,007**	**(427)**	**580**

NB: The split for Transmission (Urban $450 and Rural $1,050) is suspect.

The analysis shows an Operational Surplus for both Urban and Rural customers that funds both the allocation to reserves and the dividend providing a $580 surplus overall.

This analysis includes the rate increases for all customers and generates a surplus that the application does not identify and thus it is uncertain how it should be applied. The surplus does bring into question if a rate adjustment is required at all.

The analysis already includes the expected increase in expenses so the issue to consider is if the change in rate generates more or less than the expected surplus.

Table 7	**Urban 2019**	**Rural 2019**	**Total 2019**
Annual rate change	1.0%	2.03%	
Uplifted revenue $000's	$11,192	$7,485	$18,677
Remove increase $000's	$11,081	$7,338	$18,419
Increase due to rate change $000's	$111	$147	$258

The projected surplus is $580 of which $258 is due to the rate increase. It seems the rate increase is not required.

In addition Appendix B of the Application shows an expected surplus in 2018. The surplus of $2,205 needs to be adjusted for Depreciation (say $1,200) and Interest (say $250) but that stills leaves a projected surplus for 2018, estimated in March 2019, in the order of $755.

There is no mention in the Application how this surplus will be used at all or indeed any information on the movement of the Accumulated Result of Nelson Hydro.

It is difficult to follow the detailed workings of the models used by Nelson Hydro and it does not help that figures change without explanation between the different documents provided.

The reality is that with or without the increase both Rural and Urban customers are within the range of acceptable performance. That is an RCC of between 90% and 105% (measure shown in the COS Report).

Using the estimates for Revenue and Expenses (including Dividend and Allocation to Reserves) the following table can be constructed:

Table 6	Urban Customers	Rural Customers	Adjusted Statement of Operations
	$000's	$000's	$000's
Total Revenue	11,922	7,858	19,780
Cost of Service	10,915	8,285	19,200
Result	1,007	(427)	580
RCC Ratio	109.2%	94.8%	103.0%
Comment	Within	Within	Within

NB: The surplus for the year has not been regarded as an allocation.

Each category of customer is within the acceptable range and the surplus can be allocated to Reserves to increase the cost of service if required. This presentation includes the proposed increase in rates.

If the proposed increase in rates was removed it is likely the outcome will be similar. A rough test to determine the impact of no change in rate using the revenue in Table 5 reduced by the rate change but with the same level of Expenses, Allocation to Reserves and Dividend is shown below:

Table 7	Urban Customers	Rural Customers	Adjusted Statement of Operations
	$000's	$000's	$000's
Total Revenue	11,811	7,712	19,522
Cost of Service	10,915	8,285	19,200
Result	896	(573)	322
RCC Ratio	108.2%	93.1%	101.7%
Comment	Within	Within	Within

Both classes of customer are within the desired range.

The major factor impacting the performance of the Urban Customers is the higher revenue from Urban Commercial but no discussion is available from Nelson Hydro as the Application is focused on Rural rates and performance.

Cost of Service Report

This report is considered in a separate document and is considered unreliable.

Conclusions

- **The request for any rate change does not appear to be warranted in 2019 as Nelson Hydro makes a significant surplus after all expenses contrary to the assertions in the Application and the Supplemental.**

- **Nelson Hydro had a surplus in 2018 but has not indicated the impact of that performance on rates for 2019. Given the size of the surplus this is another reason why there should not be a rate increase in 2019.**

- **The bulk of the surplus generated is provided by the Urban Commercial class of customers and an analysis excluded their performance would reduce the Urban RCC Ratio.**

- **The Application is riddled with inconsistent information and constitutes a "TRUST ME" presentation in support of an unnecessary and differential rate increase.**

- **Provision of correct information in support of any amendments to rates should be a basic expectation that is not fulfilled in this Application or Supplemental.**

Nelson Hydro

Cost of Service Study 2017

Introduction

The report "*Nelson Hydro 2017 Actual Rural Cost of Service Study*" was published in December 2018. An amendment was presented with the BCUC application and is dated February 2019. Another amendment was mentioned in correspondence dated 10th April 2019 but has not been provided. All reference to the "Report" refer to these documents.

The conclusion from the Report can be summarized as:

"Nelson Hydro will need to adjust and should 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 shareholder. This rate adjustments could be done over time to avoid larger bill impacts to the customers."

The table below has been extracted from the two Reports and demonstrates this key issue:

Table 1	**2017 COS Allocation**	**2017 Actual Revenues**	**RCC Ratio**	**Compare 90% - 100%**
	$000's	**$000's**	**%**	**Range**
Residential - Urban	$4,608	$4,939	107.2%	Within
Commercial – Urban	$4,105	$5,801	141.3%	High
Streetlights – Urban	$90	$71	78.9%	Low
Total	**$8,937**	**$10,811**	**121.0%**	**High**
Residential – Rural	$8,274	$6,258	75.6%	Low
Commercial – Rural	$1,234	$1,255	101.7%	Within
Streetlights - Rural	$43	$30	70.0%	Low
Total	**$9,417**	**$7,543**	**80.0%**	**Low**
Outcome	**$18,354**	**$18,354**		

There is another customer class not detailed on this table. The Municipal class is presumed to be included within Commercial Urban but this cannot be confirmed given the information available. In addition there is some evidence which suggests the Streetlights revenue is actually $121. It is difficult to determine revenue and costs assigned due to inconsistencies or lack of detail in the information provided within the Report.

The table shows that Residential – Rural customers do not cover the expense of service provision as defined within the Report and thus the conclusion that these rates should increase. (The same logic would indicate a reduction in Commercial – Urban rates is warranted but this is not mentioned).

To support this conclusion the Report provides information that shows Cost per kWh in cents. This table (shown on page ii and Page 35) clearly shows that Residential Rural fails to cover costs allocated. An analysis was conducted and shows that there are fundamental errors in the table and insufficient information generally within the Report regarding allocation of costs.

The following analysis will demonstrate the poor performance of Rural customers is an incorrect conclusion as it is based on faulty or inconsistent allocation of costs and inappropriate assumptions.

Basis of Cost allocation within Report

The values in the Report are based on the financial performance for 2017. The audited Financial Statements 2017 contain two tables that are central to the Report. The Financial Statements 2017 are prepared on a consolidated basis that nets out transactions between members of the consolidated group that is the Corporation of the City of Nelson (City of Nelson).

The presentation in the Financial Statements Note 19 do not include intra group transfers – that is when Nelson Hydro has transactions with other members of the City of Nelson group. These entries are netted out on consolidation thus Revenue in Nelson Hydro is offset against the expenditure for that service in the other columns in Note 19. The result is that the cost of provision is left in Nelson Hydro and there is no sale recorded. When only Nelson Hydro operations are being considered the Revenue needs to be reinstated.

As such the Financial Statements 2017 need to be adjusted to reflect these internal transactions and to determine actual performance. Electricity consumed by different members of the consolidated group, costs of occupation of property and water charges are examples of adjustments that need to be made.

The operations of Nelson Hydro seem to have resulted in a Loss ($483) rather than the Surplus detailed in the published Financial Statements. A summary of each version of performance is shown below:

Table 2	**Consolidated Statement of Operations (Extract)**	**Segmented Information Note 19 (Audited)**	**Statement of Operations used in Report**	**Adjusted Statement of Operations**
	$000's	**$000's**	**$000's**	**$000's**
Sales	18,354	18,354	18,354	18,354
Other income	-	1,120	-	1,405
Total Revenue	**18,354**	**19,473**	**18,354**	**19,759**
Expenses	11,328	12,694	13,650	13,650
Dividend	2,700	2,700	2,700	2,700
Reserves	3,614	3,614	3,892	3,892
Total	**17,642**	**19,008**	**20,242**	**20,242**
Result	**712**	**465**	**(1,888)**	**(483)**
	Surplus	**Surplus**	**Loss**	**Loss**

NB Note 19 information segment includes all the operating activities related to generation, distribution and supply of electricity.

There is no mention of Sales to Municipal or how they are treated. The Statement of Operations used in the Report does not include the Other Income ($1,405) but does include the associated expenses incurred generating that income. If that income is included the Result is a Loss ($483).

The purpose of the Statement of Operations used in the Report is to identify the values that need to be allocated to the customer classes to ensure that costs of production can be matched to revenue received. They are the shown in Table 1 above but oddly the Cost of Service (Expenses, Dividend and Reserves, Result) does not match the detail in Table 2.

The correct value to use as a comparator should total $20,242 as this represents the cost of sales plus Dividend and allocation to Reserves actually shown in the Report. There is no explanation for this difference of $1,888.

In addition the cost of Nelson Hydro services to the rest of the City of Nelson needs to be considered. On consolidation this amount should be offset and it is unclear if this has occurred. If not then a revision to the revenue for urban customers is required. This is basic costing and financial accounting.

The spreadsheets provided as part of the BCUC 2019 submission provides sales information which does not match the amounts in Table 1 but does agree to the total. Given that the spreadsheet is presented as a critical document this anomaly is disturbing. The audited Note 19 results show a sales total of $18,354 (and so does the spreadsheet) but they are prepared under different conventions as the Note 19 information should be presented net of intra group transfers and the spreadsheet includes all sales to all parties i.e. including intra group transfers.

The Report mentions several consolidation changes: Water ($658), Occupation costs ($13), a Loss on Disposal ($87) and an Energy Export adjustment ($285). It also makes no adjustment or reference to electricity provided to Municipal.

The Report sets aside the Other Revenue but is silent in regard to any expenses incurred in creating that revenue. Each of the Other Revenue items is directly linked to the core business of Nelson Hydro but not all are linked to generation and distribution of electricity.

The proper treatment is either to eliminate the associated costs of Other Revenue OR to retain both the Other Revenue and the associated expenses. It is incorrect to remove Other Revenue but to leave the associated expenses included for comparison against sales of electricity revenue.

The Adjusted Statement of Operations (Table 2 above) includes all revenue and all expenses and now shows a Loss of $483. This means the Dividend was not funded with surplus funds. It also reflects a very different result from that apparently presented in the audited and published Financial Statements.

It is unclear where the COS expense shown in Table 1 are sourced as there is no explanation of how the expenses of $18,354 is derived. The allocations to Customer classes are thus suspect.

The allocation of Revenue is restated as follows:

Table 3	**Urban Customers**	**Rural Customers**	**Adjusted Statement of Operations**
	$000's	**$000's**	**$000's**
Revenue	10,808	7,546	18,354
Other revenue	800	605	1,405
Total	**11,608**	**8,151**	**19,759**
Table 1	**10,811**	**7,543**	**18,354**

This allocation is based on the distribution of sales into classes with no adjustment in respect to internal sales. The Other Revenue category has been allocated in according to the detail in the spreadsheet and the balance in proportion to volumes of power purchases.

The allocation of expenses is restated as follows:

Table 4	Urban Customers	Rural Customers	Adjusted Statement of Operations
	$000's	**$000's**	**$000's**
Expenses	7,764	5,889	13,650
Dividend	1,590	1,110	2,700
Reserves	2,292	1,600	3,892
Total	**11,645**	**8,600**	**20,242**
Table 1	**8,937**	**9,417**	**18,354**

The allocation of Expenses requires further explanation and this is detailed in Appendix A. The fundamental change is the bringing together of all power generation and purchase of power and then allocating this cost in proportion to power consumption detailed in the Report. The income from power sales and credits for Energy Exports are not deducted from expenses but are included in Other Revenue.

Another major cost factor is the cost of Distribution (Urban $413 and Rural $1,056) which is not explained well in the Report. Any reduction for Rural customers will improve the RCC Ratio detailed in Table 5. For the purposes of this paper the Report allocations have been used.

Now table 1 can be presented with the modifications (acceptable RCC is between 90% and 105%):

Table 5	Urban Customers	Rural Customers	Adjusted Statement of Operations
	$000's	**$000's**	**$000's**
Revenue	**11,608**	**8,151**	**19,759**
Cost of Service	**11,645**	**8,600**	**20,242**
Result	**(37)**	**(449)**	**(483)**
RCC Ratio	**100%**	**94.8%**	**97.6%**
Comment	**Within**	**Within**	**Within**

Table 6	Urban Customers	Rural Customers	Adjusted Statement of Operations
	$000's	**$000's**	**$000's**
Revenue	**11,608**	**8,151**	**19,759**
Less: Expenses	**7,764**	**5,889**	**13,650**
Less: Reserve	**2,292**	**1,600**	**3,892**
Contribution to Dividend	**1,552**	**662**	**2,217**
Dividend	**1,590**	**1,110**	**2,700**

NB: This shows that Rural customers contribute fully to the Reserve but only partially to the Dividend

These results do not support any differential rate changes although they do show Rural Customers with an RCC closer to the lower limit however the Urban Residential performance is masked by the very high contribution from Urban Commercial.

- The key assumption change is the treatment of generated and purchased power.
- The key operational issue is the high cost of Distribution for Rural Customers.
- The key financial issue is the Dividends not funded from operations.

Discussion

Information should be made open and transparent so that it can be considered by all stakeholders. There a number of core issues that drive allocation and decision making that are not very clear. The following should be applied:

- Residential Urban and Residential Rural be considered the same class of customer with identical rates as has been the case for some considerable time as there is no justification for any change.
- All power (generated and purchased) to be considered a single resource and costs allocated based on consumption.
- Each year Nelson Hydro should present meaningful Financial Statements and operational information that cover all its operations and support consideration of rate applications.
- The operations of Nelson Hydro should recover all costs with a combination of power sales, services and other income. Each year the allocation by way of Dividend and Allocation to Reserves should consume the surplus from operations or be used to smooth results.
- Over time the Capital Reserves should be adequate to support the operations of Nelson Hydro.
- The benefits flowing to the City of Nelson from the operations of Nelson Hydro are not clearly disclosed and should be provided. They include discounted power ($30), a water fee ($658 but should be $580) and Dividends ($2,700).
- The Water fee ($658) is based on the purchase cost of the power generated by the water but does not consider the cost of generating that power and thus the value is overstated by c$78. It would be cheaper for Nelson Hydro to purchase power. Price for water needs to be reduced.
- It is not clear why the urban and rural power usage is so different. This needs to be reviewed as it is possible that some residential customers are actually commercial.

The allocation of generated power distorts the entire Report analysis. At times during the year Nelson Hydro sells power – this suggests adequate power for both Rural and Urban customers. Alternatively it could suggest that some power purchases are not required.

Conclusion

There is no merit in the suggestion that there should be different rates for Residential customers based on location (Urban and Rural). The current contribution from both groups of customers is within the range 90% to 105% of costs. The major contributor to the bottom line is the Urban Commercial class.

Rural customers contribute fully to the allocation to Reserves and partially to the Dividend to the City of Nelson. The Report suggests they do not contribute to either.

The City of Nelson benefits from an electricity supply that is discounted but not declared in the benefits it receives from the operations of Nelson Hydro. It also gains a benefit from its sale of water to Nelson Hydro. Both provide benefits to Urban consumers.

The current operations of Nelson Hydro after payment of expenses, allocation to reserves and payment of a dividend to the City of Nelson result in a loss whilst the published financials suggest a surplus.

Appendix A

Allocation of Revenues & Expenses

Revenue

The Report and the Revised Report provide details of consumption and the revenue from each class of customer. This information forms the base and is not adjusted by deemed sales to the City of Nelson that were previously eliminated on consolidation.

Table 7	**Statement of Operations used in Report**	**Corrections**	**Adjusted Statement of Operations**
	$000's	**$000's**	**$000's**
Revenue	18,354		18,354
Intra Group sales	-		-
Total	**18,354**		**18,354**
Other Revenue			
Sales to Fortis		88	
Sale of Services		536	
3rd Party Revenue		161	
Investments		93	
Grants		242	
Total		**1,120**	**1,120**
Energy Export		285	285
Revised Total Revenue	**18,354**	**1,405**	**19,759**

The Other Revenue has been brought into consideration as it is a direct consequence of operations. It could be excluded and then brought in at the bottom line and the impact would be identical. All the expenses incurred in generating the Other Income are included within Expenses.

All the income is a valid part of Nelson Hydro operations and should be included in the determination of the consumer rates and overall performance.

Expenses

The Report expenses have not been adjusted in total – just the allocation between urban and rural.

- **Electricity** – all power costs are totaled then allocated according to consumption.
  This includes own generation, purchased power, water but not sales revenue.
- **Distribution** – all transmission costs are totaled then allocated per the Report
- **Other expenses** – are totaled then allocated by consumption.
- **Depreciation and Interest** are allocated as per the Report.

Table 8	Urban Customers	Rural Customers	Adjusted Statement of Operations
	$000's	**$000's**	**$000's**
Expenses			
Electricity	4,787	3,465	8,252
Distribution	413	1,057	1,470
General	1,822	830	2,652
Depreciation	598	433	1,031
Interest	143	105	248
Total Expenses	**7,764**	**5,886**	**13,650**

So the same Revenue and Expense information can presented as follows:

Table 10	Urban Customers	Rural Customers	Adjusted Statement of Operations
	$000's	**$000's**	**$000's**
Revenue	**10,808**	**7,546**	**18,354**
Expenses	**7,764**	**5,886**	**13,650**
Surplus	**3,044**	**1,660**	**4,704**
Dividends	**1,590**	**1,110**	**2,700**
Reserves	**2,292**	**1,600**	**3,892**
Gross result	**(838)**	**(1,050)**	**(1,888)**
Other Income	**800**	**605**	**1,405**
Result	**(38)**	**(445)**	**(483)**

NB: These results are within the 90 to 110% range.

Appendix B

Comparison of Average Cost of Service Rates

The information used in this analysis is extracted from the following sources:

Sales $000's	Report page I	Sales mWh	Report page 6
Usage of Power	Report page 19	Expenses	Report page 20
Cents per kWh	Report page 35 (and page ii)		

The following table shows the Revenue (Sales), allocation of Expenses and conversation to Cents per kWh used in the analysis on page ii. The figures in red are provided and the figures in black have been calculated based on the information in the Report.

Extract from COS Report page ii	Urban	Urban	*Urban*	*Urban*	Rural	Rural	*Rural*	*Rural*	*All*
Cents per kWh	Residential	Commercial	*Streetlights*	*Total*	Residential	Commercial	*Streetlights*	*Total*	*Total*
Original Presentation									
Revenue	*11.0*	*11.8*	*11.4*	*11.5*	*10.6*	*13.0*	*11.4*	*11.0*	*11.3*
Generation	2.6	2.6		*1.1*	0.0	0.0		0.0	*0.7*
Power Purchases	1.8	1.7		*1.8*	7.5	7.1		*7.5*	*4.2*
Distribution	3.7	2.6		*0.4*	4.8	4.1		*1.5*	*0.9*
General	2.1	1.6		*2.7*	1.7	1.3		*2.0*	*2.4*
Reserves and Dividend				*3.9*				*3.8*	*3.9*
Total	10.2	8.5	*0.0*	*9.9*	14.0	12.5	*0.0*	*14.8*	*12.1*
Other Income									
Result	0.8	3.3		1.5	(3.4)	0.5		(3.8)	(0.8)

Clearly there is an error in Urban – Generation. Otherwise the numbers seem reasonable and represent a good indicator.

The Table below shows the allocation of Revenue and Expenses ($000's):

Extract from page 6	Urban	Rural	Total
	Total	Total	
Revenue	$ 10,806	$ 7,548	$ 18,354
Other Revenue			
Generation	$ 1,001	$ 141	$ 1,142
Power Purchase	$ 1,675	$ 5,150	$ 6,825
Distribution	$ 413	$ 1,057	$ 1,470
General	$ 2,563	$ 1,368	$ 3,931
	$ 5,653	**$ 7,715**	**$ 13,368**
Allocation to Reserves	**$ 2,128**	**$ 1,486**	**$ 3,614**
Dividend	**$ 1,590**	**$ 1,110**	**$ 2,700**
Result	**$ 1,435**	**$ (2,763)**	**$ (1,328)**

The Result is a Loss for Rural customers congruent with the previous table and comments.

The Expenses were calculated using the following approach:

Extract from COS Report page 20	Urban	Rural	Common	Total
Wages & Benefits				
Generation	$ 151	$ -	$ -	**$ 151**
Distribution	$ 180	$ 278	$ 16	**$ 474**
General	$ 191	$ -	$ 1,358	**$ 1,549**
	$ 522	**$ 278**	**$ 1,374**	**$ 2,174**
Supplies & Services				
Generation	$ 2	$ -	$ 331	**$ 333**
Power Purchases	$ 1,675	$ 5,150	$ -	**$ 6,825**
Distribution	$ 193	$ 749	$ 54	**$ 996**
General	$ 206	$ 13	$ 884	**$ 1,103**
	$ 2,076	**$ 5,912**	**$ 1,269**	**$ 9,257**
Water Licence	$ 658	$ -	$ -	**$ 658**
Depreciation	$ 662	$ 282	$ 87	**$ 1,031**
Interest	$ 164	$ 84	$ -	**$ 248**
	$ 1,484	**$ 366**	**$ 87**	**$ 1,937**
Total Expenses	**$ 4,082**	**$ 6,556**	**$ 2,730**	**$ 13,368**

An unusual allocation is the item marked in red – Generation – Common $331. It implies that there are common expenses relating to the generation of power but the previous table shows that all generated power is allocated to Urban customers and none is allocated to Rural customers. Apparently they do not use any power that is generated but only purchased power!

There may be an explanation and for the purpose of this analysis is it assumed this allocation is correct.

Please note at this stage the Table above does not include:

- Allocations to Reserve or Dividends.
- An adjustment is required as detailed in the amendment to the Report.
    - The effect will be to:
        - Increase Other Revenue by $285;
        - Increase Purchased Power by $285; and
        - Increase Allocation to Reserves by $278.

The next step is the bringing together the Expenses in the same format as the Table on page ii of the Report and to allocate the Common Expenses to the Urban and Rural classes of customers.

The Table can be then reorganized as follows:

Allocation of Common	Urban	Rural	Common	Total
	57.55%	**42.45%**		**100.00%**
Power provision				
Generation	$ 151	$ -	$ -	**$ 151**
Generation	$ 2	$ -	$ 331	**$ 333**
Power Purchases	$ 1,675	$ 5,150	$ -	**$ 6,825**
Water Licence	$ 658	$ -	$ -	**$ 658**
Based on Power consumed	$ 190	$ 141	$ (331)	**$ -**
	$ 2,676	**$ 5,291**	**$ -**	**$ 7,967**
Transmission				
Distribution	$ 180	$ 278	$ 16	**$ 474**
Distribution	$ 193	$ 749	$ 54	**$ 996**
Based on Power consumed	$ 40	$ 30	$ (70)	**$ -**
	$ 413	**$ 1,057**	**$ -**	**$ 1,470**
Other				
General	$ 191	$ -	$ 1,358	**$ 1,549**
General	$ 206	$ 13	$ 884	**$ 1,103**
Depreciation	$ 662	$ 282	$ 87	**$ 1,031**
Interest	$ 164	$ 84	$ -	**$ 248**
Based on Power consumed	$ 1,340	$ 989	$ (2,329)	**$ -**
	$ 2,563	**$ 1,368**	**$ -**	**$ 3,931**
Total Expenses	**$ 5,653**	**$ 7,715**	**$ -**	**$ 13,368**

This now agrees with the Table provided on Report page 6. Changes due to the Amendment Report are not yet included. The Allocation to Reserves and Dividend is to be done using the proportion of power purchased.

Concerns with the information presented:

- All Generation power is allocated to Urban and none is allocated to Rural. The impact is a massive cost to Rural that does not seem to be reasonable.
- The cents per kWh seems to be acceptable at the total level but the Report did not provide any information regarding how the numbers were calculated at the class of customer level.
- The Report provides different presentation of numbers as it progresses and it is very difficult to follow.

Conclusion

The basis of calculation of the Report has been determined (a $285 adjustment to expenses is required).

Appendix C

Restating the Cost of Service Result (based on original Report)

The Revised presentation is shown below:

Revised	***Urban***	***Rural***	***All***
Cents per kWh	***Total***	***Total***	***Total***
Revised presentation			
Revenue	*11.5*	*11.0*	*11.3*
Generation	*0.7*	*0.7*	*0.7*
Power Purchases	*4.4*	*4.3*	*4.4*
Distribution	*0.4*	*1.5*	*0.9*
General	*2.7*	*2.0*	*2.4*
Reserves and Dividend	*4.1*	*3.9*	*4.0*
Total	***12.3***	***12.5***	***12.4***
Other Income	*0.8*	*0.9*	*0.9*
Result	**(0.0)**	**(0.6)**	**(0.3)**

This shows a more appropriate allocation of expenses expressed as Cents per kWh.

The table below shows the allocation of Revenue and Expenses:

Revised	**Urban**	**Rural**	**Total**
	Total	**Total**	
Revenue	$ 10,806	$ 7,548	$ 18,354
Other Revenue	$ 800	$ 605	$ 1,405
Generation	$ 662	$ 480	$ 1,142
Power Purchase	$ 4,125	$ 2,985	$ 7,110
Distribution	$ 413	$ 1,057	$ 1,470
General	$ 2,563	$ 1,368	$ 3,931
	$ 7,764	$ 5,889	$ 13,653
Allocation to Reserves	$ 2,292	$ 1,600	$ 3,892
Dividend	$ 1,590	$ 1,110	$ 2,700
Result before Other Revenue	$ (840)	$ (1,051)	$ (1,891)

The most significant change is the more equitable allocation of Generated Power and Purchased Power. All other allocations remain the same as the Report. Once Other Revenue is included the result is as follows:

	Urban	Rural	Total
	Total	Total	
Result before Other Revenue	$ (840)	$ (1,051)	$ (1,891)
Other Revenue	$ 800	$ 605	$ 1,405
Result	**$ (40)**	**$ (446)**	**$ (486)**

The apparent serious underperformance of Rural Customers does not exist as both classes satisfy the RCC test.