

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15, (Schedule B);

AND IN THE MATTER OF an application by Kitchener-Wilmot Hydro Inc. for an order approving just and reasonable rates and other charges for electricity distribution beginning January 1, 2020.

KITCHENER-WILMOT HYDRO INC.

RESPONSES TO PRE-SETTLEMENT CLARIFICATION QUESTIONS

SEPTEMBER 13, 2019

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Appendix A - Pre-Settlement Clarification Questions from SEC

Question:

1. Can you confirm that, if you make the change in 8-Staff-59, the resulting GS>50 rates would be \$183.23 fixed and \$5.0707 variable?

Response:

The response to 8-Staff-59 indicates that if you make those changes, the GS>50 kW rates would be \$183.23 fixed and \$5.3111/kW variable – however, this was using the original revenue requirement in the Application RRWF.

If you make the same change using the updated revenue requirement from the IRR RRWF, we confirm that will result in a \$5.0705 / kW variable rate for the GS>50 class.

There may be further changes if there are additional revisions to the RRWF.

Question:

2. I have concern about your refusal in 1-SEC-1 to provide more information on GridSmartCity, a key element of your productivity planning. It may well be a good thing, but the rules are clear that relevant information must be provided, no matter what confidentiality agreements you have signed. Given that you use GSC for some types of procurement, how that is done is clearly relevant to your rate case. I would like you to provide the requested information as part of the ADR documents, so that we can see what it looks like. Then, if it turns out there is a hearing in this matter, we can assess whether we have to pursue getting these documents on the record.

Response:

The basis for the refusal is that the “main agreements and constating or other governance documents for GridSmartCity Cooperative” have no semblance of relevance to this rate application. The Applicant’s view on this has not changed.

However, if you would like to better understand how operational initiatives, such as joint procurements, work – a relevant resource is publicly available at:

<https://www.gridsmartcity.com/wp-content/uploads/2019/04/2018-19%20GridSmartCity%20Cooperative%20Report.pdf>

To the extent you would like follow-up – we are willing to discuss this further as part of settlement.

Question:

3. Can you please update the table in 4-SEC-20 to be consistent with the RRWF, which has no PILs payable in the scenario with CIS? When you re-do this, can you please explain why the rate base does not increase, and therefore the return, as a result of adding in the CIS? I was, frankly, unable to figure out the impacts set out in this table, as the results appeared non-intuitive.

Response:

The table has been updated below.

The reason that the rate base did not change very much was because the first estimate which includes no CIS installation also assumes that KWHI would not simply reduce its capital by the amount of the CIS capital. Most of the budgeted capital dollars would still be spent although the dollars would not be spent specifically on a CIS.

	2020 estimated NO CIS		2020 estimated AITO/OCS	
	Revenue at Existing Rates	Rebased 2020	Revenue at Existing Rates	Rebased 2020
Revenue Deficiency		2,143,200		2,479,841
Revenue at existing rates	42,054,323	42,054,323	42,079,065	42,079,065
Other Revenue	3,243,900	3,243,900	3,243,900	3,243,900
Total Revenue	45,298,223	47,441,423	45,322,965	47,802,806
OM&A	22,230,600	22,030,100	22,602,400	22,602,400
Amortization	10,343,500	10,343,500	10,783,287	10,783,287
Deemed interest	5,723,424	5,723,424	5,811,314	5,811,314
Total Costs & Expenses	38,297,524	38,097,024	39,197,001	39,197,001

Income before Income Taxes	7,000,699	9,344,399	6,125,964	8,605,805
PILS	153,444	668,260	0	
Net income	6,847,255	8,676,140	6,125,964	8,605,805
Actual Return on Rate Base				
Interest Expense	5,723,424	5,723,424	5,811,314	5,811,314
Net Income	6,847,255	8,475,650	6,125,964	8,605,805
Total Actual Return on Rate Base	12,570,679	14,199,074	11,937,278	14,417,119
Revenue Requirement		47,441,423		47,802,806
Revenue Requirement change				361,383

KWHI, using its pace and prioritize approach, would have accelerated its pole replacements and other high priority capital needs in the absence of the CIS implementation project.

Question:

4. Can you confirm my understanding of 2-EP-2 and other references that the new CIS will not, at the outset, including e-bills, online bank and credit card payments, customer portal, and online OMS? Does that mean you will just not offer those functionalities? Don't some customers have those things already? Also, I understand that it will not include workforce management, but isn't that a function that typically pays for itself in fairly short order?

Response:

The following clarifies KWHI's response to 2-EP-2 and the above question.

The new CIS will include integration to current e-bill application, integration to current online bank and credit card payment facilities via the relevant partners, and integration to KWHI's existing customer web portal (MyAccount).

It will not include a self-service customer portal (that allows payment through KWHI's website via credit or debit card, access/modification of customer account, payment history, current balance, etc.) or outage notification to customers via integration to OMS.

The new CIS will also not include workforce management. This is an additional module that requires extra licensing cost and implementation costs. Workforce management will be evaluated for inclusion in Phase 2. However, as discussed a business case for Phase 2 of the CIS project has not been developed as yet and as such a cost benefit analysis for work force management has not been completed.

Question:

5. I don't understand why you are forecasting a declining ROE for 2019 when your monthly financial reporting to the end of April shows 2019 Net Income 34% above 2018 on a year to date basis. Can you provide further details?

Response:

In April 2018, unbilled revenue was under accrued due to issues with the unbilled revenue report generated by KWHI's legacy CIS. The result was that distribution revenue was therefore understated in 2018. This makes comparisons between the years 2017 and 2018 difficult. The demand kW for the GS>50 customer class are not always reported on the Unbilled revenue report correctly and a manual adjustment must often be made.

O&M expenses were also trending below budget in the first quarter. As at June 2019, the O&M expenses are running at 51% of budget.

Appendix B – Pre-Settlement Clarification Questions from VECC

VECC – 44

Reference: Staff 33 e)

KWHI_IRR_ Load Forecast Model-IR_20190731, Summary Tab) Please confirm that the GS>50 forecast customer count for 2020 of 933 (per the Summary Tab) does not include the five WMPs.

Confirmed.

VECC - 45

Reference: Staff 33 e)

VECC 13 a) & b)

KWHI_IRR_ Load Forecast Model-IR_20190731, Energy and

Summary Tabs

- a) The Energy Tab and the Summary Tab both appear to not include any forecast usage in 2020 for the five WMPs in the GS>50 class. Please confirm whether this is the case. (i.e., VECC 13 confirms that the power purchased values excluded the embedded distributor and the WMPs. The Energy Tab reconciles with the forecast for power purchases while in the Summary Tab adjustments are only made for the Embedded Distributor).

Confirmed See EB-2019-0049_KWHI_PreADR_Load Forecasting Model_20190814.

The summary tab has been updated in this model to reflect the Wholesale Market Participants in the same manner as the Embedded Distributor.

- b) If yes, please provide a revised Load Forecast model that also incorporates the five WMPs and explain the basis for the WMPs' 2020 forecast usage.

See EB-2019-0049_KWHI_PreADR_Load Forecasting Model_20190814. The basis for the WMP's 2020 forecast usage calculation is the same as the other classes. (Geomean of the historic purchases)

- c) It is noted (see Energy Tab – column O) that the total kWh use by WMPs is lower in 2018 than 2017 even though there is one more customer in 2018. Please confirm that this is actually the case and, if so, please explain why the decrease occurred.

Confirmed. The new customer in 2018 was a new customer with an account for only 4 months in 2018 and is an energy storage facility. The existing 4 wholesale market participants had lower consumption in 2018 than in 2017 (average is 6% lower than 2017).

- d) In the Summary Tab, the Total kWh from the Table (excluding the Embedded Distributor) of 1,713,420,493 kWh does not match the Total kWh from the Model (excluding the Embedded Distributor) of 1,732,473,522 kWh. Please reconcile.

Corrected in EB-2019-0049_KWHI_PreADR_Load Forecasting Model_20190814.

VECC - 46

Reference: Staff 33 e)

KWHI_IRR_ Load Forecast Model-IR_20190731, Power Tab

VECC 15 c) and Staff 27 b)

VECC 15 e)

Preamble: It is noted that in the updated Load Forecast model both the Residential and the CDM explanatory variables are still not statistically significant. Furthermore, a 1 kWh increase in the CDM variable only leads to a 0.08 kWh decrease in purchased Power.

It is also noted that in the response to VECC 15 e) the model provided used purchased power less CDM as the dependent variable as opposed to purchased power plus CDM – as originally requested.

- a) Please revise the model provided in response to VECC 15 e) such that in the Power Tab: i) the dependent variable is based on power purchases (adjusted for Street Lighting and Large Use-per the original model) plus CDM and ii) the predicted purchases are based on the result of the regression equation less CDM.

Interrogatory 3-VECC-15e CDM Adjusted Normalized Weather Billed Forecast (GWh)							
Year	Residential	GS<50 kW	GS>50 kW	Large User	Street Lighting	USL	Total
Normalized Weather Billed Energy Forecast (GWh)							
2019 (Normalized)	717.3	252.8	844.6	34.2	7.4	4.1	1,860.4
2020 (Normalized)	732.6	257.6	834.3	35.1	7.3	4.2	1,871.1

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.964532269
R Square	0.930322497
Adjusted R Square	0.92618324
Standard Error	3086642.705
Observations	108

ANOVA					
	df	SS	MS	F	Significance F
Regression	6	1.2848E+16	2.14133E+15	224.7558835	4.42224E-56
Residual	101	9.62264E+14	9.52736E+12		
Total	107	1.38102E+16			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-30445464.38	14478830.41	-2.102757165	0.037972697	-59167569.16	-1723359.609	-59167569.16	-1723359.609
Heating Degree Days	39117.10923	1698.91795	23.02471949	5.59414E-42	35746.91303	42487.30544	35746.91303	42487.30544
Cooling Degree Days	356798.6282	17138.11794	20.81900881	2.52877E-38	322801.2123	390796.0441	322801.2123	390796.0441
Number of Days in Month	3635204.146	428552.6464	8.482514754	1.93314E-13	2785070.975	4485337.317	2785070.975	4485337.317
Spring Fall Flag	-6020146.76	745381.0351	-8.076603075	1.47141E-12	-7498782.228	-4541511.292	-7498782.228	-4541511.292
Number of Peak Hours	80733.84921	20294.39329	3.978135639	0.000130817	40475.23206	120992.4664	40475.23206	120992.4664

VECC - 47

Reference: VECC 14 a) & b)

- a) With respect to VECC 14 b), the actual OPA/IESO reports supporting the CDM saving from programs in 2005-2010 do not appear to have been filed as requested. Please provide.

See the Excel files – Third Tranche CDM Savings and 2006-2010 Final OPA CDM Results Kitchener-Wilmot Hydro Inc.

- b) With respect to the response to VECC 14 a), please explain how the 14,096,523 kWh value for 2018 was derived from the file - EB-2019-0049_KWHI_IR_2018 Participation and Cost Report-20190415.

The value of 14,096,523-kWh comes from the Excel file EB-2019-0049_KWHI_IR_2018 Participation and Cost Report-201904 20190731 on the tab LDC Progress in Column CH, Row 105.

- c) With respect to the response to VECC 14 a) please explain how the first year program impact values for the years 2011, 2012, 2013 and 2014 were derived from the file EB-2019-0049_KWHI_IR_2011-2015 LDC CDM Program Results-20170117.

First year program impacts include results from the 2011 report as well as adjustments made to 2011 values on the 2012 and 2013 reports. KWHI bases its CDM variable on the full year increase from the previous year.

VECC - 48

Reference: Staff 33 e)

KWHI_IRR_ Load Forecast Model-IR_20190731, Energy and

CDM Tabs

- a) Please explain the basis for the allocation the 2020 manual adjustment for CDM and the LRAMVA threshold to customer classes.

The allocation was determined using the totals provided in the 2018 Participation and Cost Report-20190415. Residential was rounded up to 1%.

VECC - 49

Reference: Staff 25

- a) Please explain why, for some of the pole attachment categories, the rate used is not the \$43.63 approved by the Board.

All of the charges have been agreed to by the carriers in pre-existing Pole Attachment contracts, modeled from a 2006 MEARIE Template.

- Tree Trimming is a fixed rate per attachment.
- Duct Rental is a fixed rate per meter for use of KWHI underground duct space.
- Service Drops on Clearance Poles are charged 50% of the current OEB Pole Attachment rate.
- Number of Accessories with existing attachments is an incremental charge for installing additional equipment (i.e. amplifier, power supply) outside the communication space, on the pole with an existing attachment. Overlashes pre 2005 are charged 25% of the current OEB Pole Attachment rate for cables overlashed and approved by the LDC prior to March 7, 2005.

VECC - 50

Reference: Exhibit 3, page 35 – Table 3.4.1-4

- a) Please explain why in 2018 revenues from Streetlighting Capital and Maintenance exceeded costs by roughly \$1.3 M but are for the 2020 forecast are equal to costs.

Table 3.4.1-4 inadvertently included the CDM incentive revenue received in 2018. The amount for the CDM incentive was \$1,299,901. The amount that should have been shown for revenues from Streetlighting Capital and Maintenance is \$830,847, which is equal to the cost.

Exhibit 3, Table 3.4.2-6 explained the variance in Other Income or Deductions as the receipt of the CDM midterm incentive.

As discussed in Exhibit 4 Section 4.5, KESI performs the streetlight maintenance for the Region of Waterloo, City of Kitchener and the Township of Wilmot. It should be noted that on Table 3.4.1-4, the account is mislabeled Streetlight Capital and Maintenance as it does not include capital.

VECC - 51

Reference: KWHI_2019 Cost Allocation Model_20190731, Tabs I6.1 and I8

- a) Following up on VECC 45 (above), please confirm whether for not the energy and loads associated with the five WMPs have been included in the GS>50 data input to the model.

Tab I6.1 Revenue included the Embedded Distributor but not the Wholesale Market Participants.

Tab I8 Demand Data included the Embedded Distributor but not the Wholesale Market Participants or the Class A GS >50 customers.

VECC - 52

Reference: VECC 38 a) & b)

Staff 52

KWHI_IRR_Chapter 2 Appendix 2-Q_20170731

KWHI_2019 Cost Allocation Model_20190731, Tab I4

- a) Please explain why the TS costs in Appendix 2-Q do not include the land costs associated with Stations > 50 kV (Account 1805-1).

KWHI allocated costs to the Embedded Distributors using the same methodology as in 2014. Appendix 2-Q does not list land as an asset class.

- b) If required, please provide a revised version of Appendix 2-Q.

KWHI has allocated the land costs in Appendix 2-Q using the same allocators as the TS (i.e. the Embedded Distributor share of the land costs would be 1.14%). KWHI has recalculated Appendix 2-Q and the difference is \$1,533. See attached file *EB-2019-0049_KWHI_PreADR_VECC-52_Appendix_2-Q*

VECC - 53

Reference: VECC 36 a)

Staff 49 a)

KWHI_2019 Cost Allocation Model_20190731, Tab I5.2

- a) It is not clear from the response to VECC 36 a) precisely how the billing and collecting weighting factors were calculated (i.e., how the costs per customer as shown in the response were calculated). Please provide a more fulsome description and supporting working excel file.

The cost per customer is a SUMPRODUCT of the 3-year average volume multiplied by the estimated cost divided by the number of customers on December 31, 2018. See file EB-2019-0049_KWHI_PreADR_VECC-53

VECC - 54

Reference: Exhibit 8, page 12

- a) With respect to the Retail Service Charges the application uses the 2019 values but notes that they are subject to an adjustment mechanism using the annual adjustment factor applied in the OEB's incentive regulation mechanism. Does KWHI plan to implement the adjustment for 2020? If yes, please explain when and how this adjustment (including any adjustment required to Other Revenues) will be made.

KWHI plans to implement the adjustment when the rates are known. At this time, 2019 rates were used as they are known. Retail Service charges generate revenue of \$44,800. The annual adjustment factor will not make a material difference.

Appendix C – Pre-Settlement Clarification Questions from OEB Staff

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FOR SETTLEMENT PURPOSES ONLY**

OEB Staff Pre-Settlement Clarification Questions

**2020 Electricity Distribution Rates Application
Kitchener-Wilmot Hydro Inc. (Kitchener-Wilmot)
EB-2019-0049**

August 14, 2019

1-Staff-74

Compensation

Ref: 1-Staff-6 Succession Plans

Ref: 4.4.2 Overview of Compensation Strategy

Kitchener-Wilmot stated that it has been increasingly difficult to hire experienced top talent and there are four potential retirements in 2020 that require a senior skill level, such as the control room operator, general crew foreman, VP operations, and fleet maintenance foreman. The remaining potential retirements are also skilled trades, which Kitchener-Wilmot has also said it's difficult to hire.

- a) In the past, has Kitchener-Wilmot hired more junior staff or journeyman for senior positions or skilled trades, respectively, due to the limited pool of experienced top talent and train them? If so, has Kitchener-Wilmot offered the same salary as the retiring staff or a lower level? Please provide a percentage for the lower salary if applicable.

Kitchener-Wilmot Hydro has typically hired more Junior staff for positions such as Control Room Operator (or trades) as these positions fully trained are difficult to recruit for and so they therefore would apprentice and start at the bottom. General Crew Foreman, VP Operations and Fleet Maintenance Foreman positions will most likely be hired from our internal succession plans and will therefore also start at the bottom while in training and progress as they gain experience. It would be very rare that anyone would be hired at the same salary as the retiring staff as although they may have experience, they will still require training and therefore will start at the bottom or at most, half of the full wage rate depending on their experience.

2-Staff-75

In-Service Additions

Ref: 2-Staff-8

Kitchener-Wilmot stated that it has recorded in-service additions according to the OEB's Account Procedures Handbook but the initial interrogatory was asking for the forecasting methodology for in-service additions for the test year.

- a) Please explain how Kitchener-Wilmot forecasts the capital additions in the fixed asset continuity schedule in relation to the proposed capital expenditures.

Using the Capital Budget, KWHI allocates the capital budget into its component parts and places it in the relevant OEB account. KWHI forecasts assets not in service the previous year will be added to assets in service in the current year. In general, no change in Work in Progress is forecast, except in 2020 when it projects that Work in Progress will increase due to the focus being placed on CIS.

2-Staff-76

Information Technology

Ref: 2-Staff-9

Kitchener-Wilmot stated that it evaluated the current technologies available for server infrastructure and decided to move to a hyperconverged infrastructure with built-in data duplication to reduce the requirements for physical storage and significantly improve data recovery during disasters.

- a) Please explain what is “hyperconverged infrastructure with built-in data duplication” and the different capabilities it offers from the existing infrastructure?

Hyper converged infrastructure (HCI) provides compute (server), storage, networking, virtualization, backup, and disaster recovery resources that are all managed by software instead of being separate entities as shown in Figure 1 below (excerpt from Hewlett Packard Enterprise – infrastructure currently being used by KWHI). It also has inline data deduplication (eliminates redundant data) that reduce the amount of physical data storage required in a traditional IT environment. See Figure 2 below that shows data capacity being saved in KWHI’s current environment.

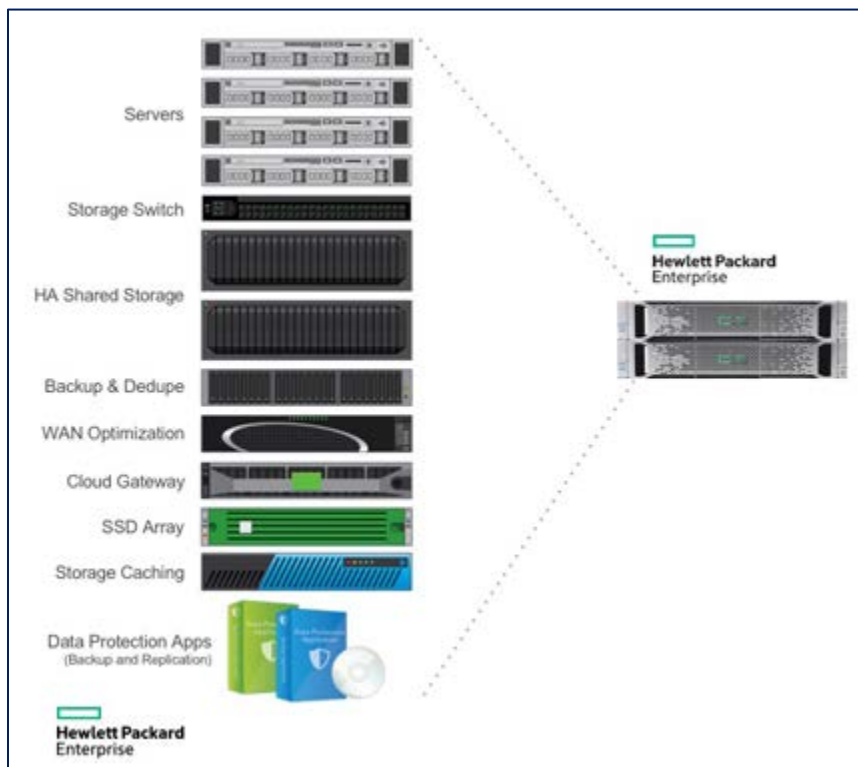
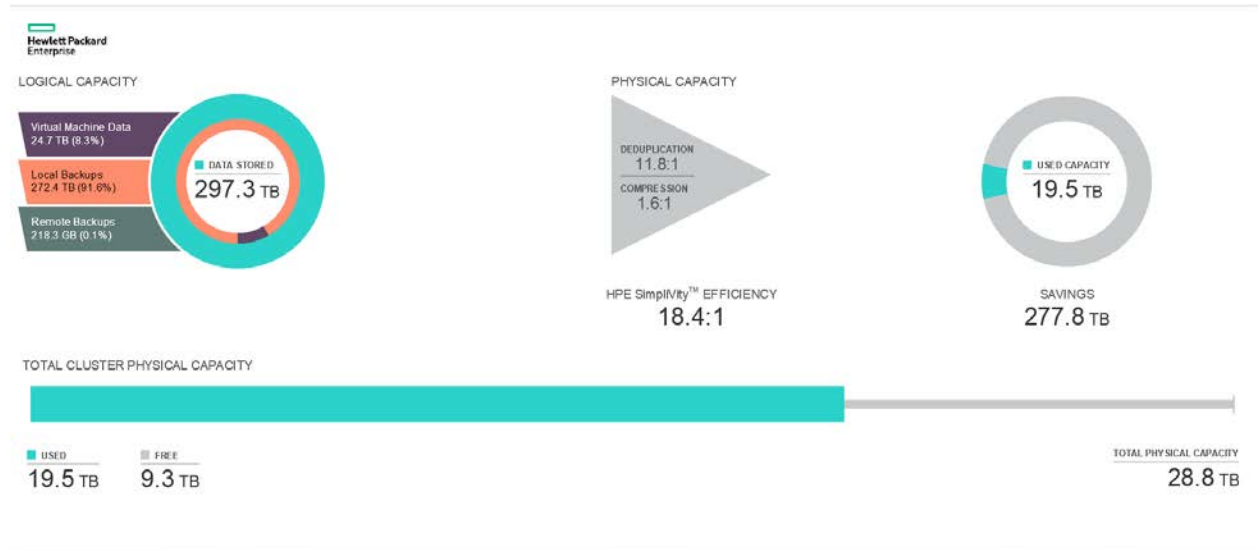


Figure 1 : Hyper Converged IT infrastructure Diagram

The image below shows that KWHI’s current environment using HCI is reducing stored capacity at a rate of approximately 18:1. That is, 297.3TB of logical data available in our

production environment while only 19.5 TB is written to disk using HCI deduplication and compression.



- b) Historically, how often did Kitchener-Wilmot need to exercise the back-up capability due to disasters?

Over the last two-years, KWHI had to retrieve data from its disaster recovery site twice due to corruption of data on file servers. In addition, KWHI has to recover data from its disaster recovery site for routine data recovery requirements (non-disaster).

2-Staff-77

Defective Equipment Outage

Ref: 2-Staff-10

- a) In the foreign interference tables, there was an “overhead primary contact outage” category for 2017 but none for 2016. Was this a new category that was created in 2017 or were there actually no outages in this category in 2016. If there were no outages in this category for 2016, please provide details on the outages for the 2017 “overhead primary contact outages”.

It is not a new category. There were no overhead primary contact outages in 2016.

In reviewing the five (5) overhead primary contact outages noted in the 2017 Table, it was determined that four (4) of the outages had incorrect outage categories applied in the outage records (one was a secondary contact by a road excavation contractor and three were outages related to the same tree contact). The remaining one (1) valid overhead primary contact outage was the result of a boom from a delivery vehicle contacting an overhead energized primary conductor.

2-Staff-78

Vegetation Management

Ref: 2-Staff-12

Ref: Distribution System Plan Table 2-16

Ref: Distribution System Plan Table 2-17

Historically, Kitchener-Wilmot has underspent every year of its 2014 OEB approved tree trimming budget and the outages between 2014-2018 due to tree contacts have generally been declining.

- a) The historical average tree trimming budget between 2014-2018 is approximately \$755k but Kitchener-Wilmot is forecasting \$806k. Considering the historical underspend and the improving outage statistics, please provide justification on why historical levels of vegetation management would not be sufficient.

As noted in 4-Staff-39 (b), the increase in budget for tree trimming is the result of hiring an additional arborist in the Forestry department in September 2018. This restored the work group to the 2014/2015 staffing level of 6: one supervisor and five arborists. The additional arborist allows us to maintain two full crews in the field when one arborist is away for planned or unplanned reasons and this increases the efficiency of the department and contributes to KWHI completing its annual tree trimming program. Overtime hours have decreased and in addition contracted costs for third parties that were previously assisting with tree trimming have decreased by 300% (i.e. \$75,000). Without the additional arborist, contractors would be hired at an additional cost. Reliability will be impacted over time, if the annual tree trimming program is not completed.

The 2019 tree trimming costs are projected to come in as budgeted and accordingly the 2020 forecast of \$806,000, which is based on the same staffing level, is appropriate.

2-Staff-79

Voltage Conversion

Ref: 2-Staff-15

Ref: 2-Staff-13

Kitchener-Wilmot stated that the combination of voltage conversion and pole line replacement budget in the current application is \$4,000k. Based on the table provided in 2-Staff-13, it appears it should be \$4,532k.

- a) Please confirm which number is correct or provide an explanation on the variance.

\$4,532K is the correct amount include in the 2020 budget for pole line replacement and voltage conversion material projects. This amount includes transformer budgeted for replacement during voltage conversion.

2-Staff-80

Light Rail Transit (LRT)

Ref: 2-Staff-17

Ref: 2-VECC-12

Kitchener-Wilmot stated that the LRT project was initially forecasted to cost \$8.6M but due to multiple changes in scope and more detail design information the total project cost was \$26M. Kitchener-Wilmot also stated that resources were redirected to the LRT project due to the increased costs.

- a) Please compare the expected scope of work for the LRT known at the time of the last cost of service (EB-2013-0147) and the scope of work that has evolved between 2014-2017 and explain the variances.

Comparison between actual LRT relocation costs and original estimate prepared in late 2012.

Project	Project Total [Actuals - Dec 31, 2017]	Original Estimate as of November 2012	Variance [Actuals - Orig. Est]
Overhead Relocations + Conversions	11,731,001	1,600,000	10,131,001
Underground Relocations	14,756,243	7,000,000	7,756,243
Grand Total	26,487,243	8,600,000	17,887,243

The estimated scope of work for LRT that was included in the 2014 cost of service application (EB-2013-0147) includes the following:

- Underground
 - Replace 29 pull boxes, 4 network transformer vaults, 1200 m of concrete-encased ductbank, associated primary (2,200 m) and secondary cable (600 m).
- Overhead + Conversions to Underground
 - Replace 55 poles on single 3-phase circuit and 36 poles on double 3-phase circuit including 7 conversion of overhead to underground crossings (only primary circuits were considered in original estimate).

The actual work completed for the LRT relocation includes:

- Underground
 - Replace 62 pull boxes, 7 network transformer vaults, approx. 6,800 m of concrete-encased ductbank, 31,000 m of primary and 70,000 m of secondary cable. The primary and secondary cable amount includes cable used in overhead to underground conversions.
- Overhead + Conversions to Underground

- o Replace 381 poles (single and double circuit), 77 conversion of overhead to underground crossings (primary and secondary circuits).

The drivers for the variances are scope change caused by final design for the alignment of the LRT tracks and in some locations, additional modifications of KWHI's plant after initial plant relocation was completed.

- b) Please provide the process Kitchener-Wilmot uses to negotiate scope change with the municipality, in particular cost responsibilities and design requirements (eg. decision on overhead or underground construction).

Scope changes were communicated and at times negotiated with the Region of Waterloo LRT project manager. The changes in scope were normally triggered by design decisions made by the Region's contractor (Grandlinq) during the final design process and also during construction of the LRT system. The Region approves the final design and alignment proposed by the LRT contractor. KWHI also sent status letters to the Region at different stages of the project to provide update on scope changes and estimated costs.

A general agreement was reached between KWHI and the Region that outlines the cost sharing agreement for different types of work. See below.

- Underground Relocations, like for like:
 - o 50% utility and 50% Region
- Overhead Relocations, like for like:
 - o 50% utility and 50% Region
- Conversion of Overhead crossings of LRT to Underground crossings:
 - o 100% of civil costs to Region
 - o 50% of electrical costs to Region, 50% to utility
- Additional modifications after work has been completed:
 - o 100% of all costs Region

2-Staff-81

#5TS Power Transformer Replacement

Ref: 2-Staff-18

Kitchener-Wilmot stated that the need for 100MVA transformers is to accommodate overload due to abnormal feeder and station conditions that may appear in the future. In the operations map provided, TS #1, 3, 4, and 7 service areas are adjacent to the TS #5 service area. The station utilization for TS #1, 3, 4, and 7 are 58%, 39%, 57%, and 70%, respectively.

- a) Please comment on how Kitchener-Wilmot considered load transfers between these stations to minimize the need for a larger transformer.

KWHI have considered load transfers between the stations mentioned above when sizing the new #5 TS station transformer. There is no concern during normal loading condition and normal system configuration at TS #5. However, under contingency conditions at TS #5 such as a transformer being out of service due to planned or forced outages, the remaining in-service transformer (83 MVA – 2 x 42.5 MVA windings) does not have sufficient capacity to support the loads and the reach of feeders from the adjacent TS #1, 3, 4, and 7 creates thermal limitations (abnormal voltage drop) if required to supplied the unserved loads.

Analysis

The design of TS #5 includes two power transformers with two LV (low voltage) windings each and four LV buses. When considering the capacity of our transformers with two LV windings, the capacity of each LV winding becomes the limiting factor. In the case of the 84.4 MVA transformers (T9 and T10) at TS #5, we consider the capacity of each of the two LV windings to be half the total MVA, which is 42.2 MVA or 1715 A. Under normal loading conditions, our TS #5 load is less than 84.4 MVA and the Bus T91+T101 and the Bus T92+T102 load is less than the LV winding capacity of 42.2 MVA. However, during routine equipment upgrades or maintenance, we will have one or more of the 4 LV buses out of service. When one or more bus is out of service at this or other adjacent stations, the loading on one of our 5TS buses will increase.

During the 2018 system peak, a large Protection and Control rebuild was occurring at TS #5. At the time of this peak, we had one of the four buses, the T102 bus, at 5TS out of service. Despite our best efforts to distribute load from the feeders on the T102 bus to all other stations, we had 1291 A on the T91 bus and 1139 A on the T101 bus. In the event of a loss of one of these transformers or the 115kV line feeding it, the total load on the remaining LV bus would be 2430A. This 2430 A load would exceed the transformer LV winding capacity of 1715 A by 41.7%. This level of overload is unacceptable.

We are proposing replacement of these old transformers with their limited overload capability with new standard transformers of a similar size that will include a tested overload rating that will enable the LV windings of the transformers to carry the extra load that is transferred to our No.5 TS during routine transformer station equipment upgrades and maintenance or during distribution feeder work.

2-Staff-82

Pole Replacement

Ref: 2-Staff-19

Kitchener-Wilmot provided outage information for pole failures between 2016-2018. Three of the six outages were due to pole fire.

- a) Was the pole fire due to pole attached assets or current leakage passing through the pole?

Evidence would suggest that pole fires are predominately the result of current leakage along the surface of cracked porcelain insulator to the pole's surface.

- b) Were the poles that failed due to pole fire from the same vendor?

KWHI has purchased wood poles from the same vendor for many years.

Kitchener-Wilmot stated that customers were generally supportive of an accelerated pole replacement program during the survey questions.

- c) Did customers understand the quantitative reliability impacts of this investment when customers were asked that question (ie. many customers may not have historically experienced outages due to pole failures but may assume pole replacement will improve their reliability)?

(Exhibit 1 Appendix 1-27) In the enhanced engagement performed by Innovative Research Group, low-volume customers stated their three priorities to be:

- reducing extreme restoration times
- reducing overall number of outages
- reducing the length of outages

Mid-Market and Large business customers appear to prioritize reliability over price.

The question that was asked of the low-volume and small business customer was:

A recent asset health condition assessment shows that 15% of the poles in KW Hydro's distribution system are in poor or very poor condition. Customers served by these lines are more likely to experience power outages, and when they do, those outages are more likely to last longer and be more expensive to fix. KW Hydro is proposing to replace these poles over the course of the next five years, however, there is an opportunity to replace these poles more quickly, improving reliability for customers served by this type of equipment.

Overall, support for investments in KW Hydro's pole replacement program is strong, especially amongst residential customers, where a majority believe that the utility's investment pace should be accelerated. Nevertheless, between 75% and 81% of low-volume customers support KW Hydro's current approach to pole replacement, or one that replaces 1,500 more at-risk poles by 2024.

2-Staff-83

Innovation and Reliability

Ref: 2-Staff-21

Kitchener-Wilmot installed 22 reclosers replaced between 2014-2017, which based on current estimates should have cost approximately \$1.5M. The reliability improvements stated are very high compared to the overall system reliability metrics.

- a) Has Kitchener-Wilmot considered investing more resources in this program, while reducing capital spending in programs that do not have as high system reliability improvements per dollar spent? If not, why?

KWHI has consider investing more resources in this program at a gradual pace as outlined in Appendix A of the DSP (Capital project Summary for Innovation and Reliability Improvement). Also, during pole line rebuilds, the opportunity to replace manual switches with automated reclosers are evaluated and where feasible, reclosers are used. However, the other capital programs that impact reliability have not been scale back since they typically achieve multiple objectives. Example, the replacement of poles will impact reliability but also has an impact on maintaining public safety.

3-Staff-84

Load Forecast

Ref: 3-Staff-33

OEB staff asked for the corresponding Lost Revenue Adjustment Mechanism Variance Account (LRAMVA) threshold for the 2020 test year associated with the conservation demand management adjustment. In response to this question, Kitchener-Wilmot indicated that this was provided in the revised LRAMVA workform. Based on OEB staff's review of the LRAMVA workform, the rate class breakdown for the LRAMVA threshold associated with the 2020 CDM adjustment was not provided.

- a) Please confirm the document the LRAMVA threshold was updated from. Please provide a table with the rate class breakdown for the LRAMVA threshold in the 2020 test year.

The Excel file EB-2019-0049_KWHI_IR_CDM_2019 and 2020 Savings Estimate_20190731 is the source of the breakdown.

Rate Class	Billed Load Forecast <i>before</i> CDM Adjustment (kWh)	Billed Load Forecast <i>after</i> CDM Adjustment (kWh)	CDM Adjustment (kWh)
Residential	660,769,294	660,525,997	(243,297)
General Service <50kW	232,340,867	229,178,008	(3,162,859)
General Service >50kW	813,223,725	792,300,195	(20,923,530)
Large Use	35,092,547	35,092,547	0
Street Lighting	7,307,482	7,307,482	0
Unmetered Scattered Load	4,173,587	4,173,587	0
	1,752,907,502	1,728,577,817	(24,329,686)

Rate Class	Billed Load Forecast <i>before</i> CDM Adjustment (kW)	Billed Load Forecast <i>after</i> CDM Adjustment (kW)	CDM Adjustment (kW)
General Service >50kW	2,098,102	2,042,617	(55,485)

3-Staff-85

Cost Allocation

Ref: 3-Staff-31; Load Forecast Model, sheet Load

OEB staff requested an alternative method of calculating the historic kW to kWh ratio underpinning the kW forecast in the GS > 50 rate class. Kitchener-Wilmot provided a response related to customer connection counts.

- a) Please prepare a GS > 50 kW class total demand forecast based on the ratio of total class energy to total class demand.

The submitted load forecast had the information on the “Load” worksheet but was not sufficiently highlighted for visual ease. Resubmitted as EB-2019-0049_KWHI_PreADR_3-Staff-85_20190814.

4-Staff-86

Engineering and Operations

Ref: 4-Staff-37

Kitchener-Wilmot stated that it has hired a retired distribution design supervisor for the part-time designer role because of their significant experience in overhead distribution designs.

- a) Does Kitchener-Wilmot have a succession plan to back-fill the part-time designer role in the event that the distribution design supervisor is no longer available?

No additional full-time resource has been planned for to back-fill the part-time designer. The current plan is to utilise third party contracting resources when the current designer becomes unavailable.

4-Staff-87

Insulator Washing

Ref: 4-Staff-39

Ref: 2-Staff-19

From the table provided in 4-Staff-39 it appears that Kitchener-Wilmot has spent less money in insulator washing than approved in 2014. There has also been a pole fire every year between 2016-2018 as provided in 2-Staff-19.

- a) Has Kitchener-Wilmot studied the correlation between insulator washing and pole fires?
- b) Has Kitchener-Wilmot considered the cost-benefit of increased insulator washing to minimize pole related outages?

KWHI participated on an Electrical Safety Authority (ESA) Working Group in 2016 that produced the “Mitigation of Pole Top Fires Best Practice” document. The document indicated that insulator selection is an important part of preventing pole fires and that insulators manufactured with a one-piece housing molded entirely from silicone have proven to be the overall best long-term performers in preventing pole fires. As a result of this, on an on-going trial basis since 2016, KWHI has excluded the washing of pole lines with silicone insulators from our annual contract resulting in reduced annual costs. KWHI has not experienced any substantial increase in pole fires since commencing this trial and does not believe that the small number of pole fires on an annual basis warrants any change in practice at this time.

4-Staff-88

OEB Assessment Cost

Ref: 4-Staff-40

Based on Kitchener-Wilmot's forecasting methodology for the OEB assessment cost, the 2020 test year OEB assessment cost should be \$241k and not \$421k.

- a) Please update appendix 2-M or explain the variance.

Appendix 2-M shows \$237,500 as the expense for Cost Assessment fees in 2019. This is because the remainder is deferred as per the Board letter dated February 9, 2016.

Cost assessment fees for 2020 were forecasted as follows

Actual as at June 30, 2018		\$205,452
Projected to year end 2018		\$411,900
Forecast increase for 2019	1.2%	
2019		\$415,900
Forecast increase for 2020	1.5%	
2020		\$422,700

4-Staff-89

Legal Fees

Ref: 4-Staff-40

Kitchener-Wilmot has only incurred \$14,012 in legal fees as of June 30th.

- a) Please update the forecasted legal fees in the event this application has a full settlement.

Forecasted legal fees – as of today	\$16,500
Include Settlement Conference	\$60,000
Include Oral Hearing	\$150,000

4-Staff-90

Consultant Costs

Ref: 4-Staff-40

Kitchener-Wilmot broke down consultant costs and provided \$90k in an “other” category.

- a) Please provide more details on what is considered “other”.

As of today's date, KWHI has spent \$15,000 on other engagement. This consists of marketing efforts aimed at KWHI customers regarding the Customer Engagement undertaken by IRG. The category is meant to capture miscellaneous charges that may occur as a result of the Cost of Service process. Additional consulting in the other category may be required to prepare for an oral hearing.

- b) Please update the forecasted consultant costs in the event this application has a full settlement.

As of July 31, \$245,400.
Forecast if settled - \$270,000

4-Staff-91

IFRS 16

Kitchener-Wilmot stated that it has adopted IFRS 16 as of Jan 1, 2019, which essentially allows an entity to capitalize most operating leases. A statement of the estimated impact of IFRS was not given in the notes other than the corporation is currently assessing it.

- a) Please confirm if the 2020 test year includes the impact of IFRS 16.

KWHI has been assessing the impact of IFRS 16; however, KWHI does not expect an impact as leases are limited to photocopying equipment which is immaterial. KWHI does not expect to change its levels of leasing.

- b) If the 2020 test year does not include the impacts of IFRS 16, please provide the estimated impacts.

The estimated impacts are zero.

4-Staff-92

CCA

Ref: 4-Staff-44

Kitchener-Wilmot did not use the 2020 tax model to show actual CCA (including the AIIP versus non-AIIP additions for the historical, bridge, and test years) because the model does not allow for negative CCA (to account for the smoothing).

- a) Is there any particular reason why the 2020 model could not be used to show the 2020 CCA deductions on an actual basis (ie. bringing closing 2018 and 2019 UCCs forward with the AIIP applied, applying AIIP in 2020, and then using the T1 Schedule 1 to book the difference between \$22,662,966 CCA used in 2020 versus the \$19,000,992 that is calculated on a smoothed basis)?

No, the difference between the CCA with AIIP and without AIIP could also be calculated through Schedule 1. The opening UCC balances from 2018 and 2019 could also be used. The differences would be immaterial and the PILs provision would remain at zero.

4-Staff-93

CCA

Ref: 4-Staff-46

Kitchener-Wilmot stated in 4-Staff-46d that “The opening UCC coincides with part B) above”.

- a) Does that refer to the 2019 closing UCC With AIIP (lower table in 4-Staff-46 b) or the 2019 closing UCC Without AIIP?

The opening balances coincide with 4-Staff-46 b). The opening balance for 2019 UCC is \$194,838,605 (without AIIP) and \$194,608,885 (with AIIP). Note KWHI was referring to the opening balance for 2019 UCC and not 2020 UCC.

4-Staff-94

CCA

Ref: 4-Staff-46

Kitchener-Wilmot stated that it would support the smoothing technique to be used for the purposes of calculating CCA for the rebasing period for its 2020 rate application.

- a) Why is there a smoothing mechanism proposed for CCA when, in either case (average AIIP impact over 5 years applied to 2020, versus actual 2020 AIIP impact applied to 2020), the PILs payable is nil?

KWHI's 2020 rate application as originally filed included an amount for a grossed-up PILs provision of \$925,875 as it was calculated without the AIIP. The PILs provision was updated using the AIIP rules through the Interrogatory process as requested by Board staff and Intervenor. The recalculation of the 2020 PILs provision reduced PILs payable to zero; however, KWHI was asked to make a number of calculations related to its previously proposed approach to AIIP for PILs. KWHI did as it was asked.

KWHI was asked if it would support the use of the smoothing technique for applying CCA in general. While the smoothing technique may not now necessarily apply to KWHI itself, it did respond that it would support in the Cost of Service applications for other LDCs that rebased within the period of which the CCA deduction is accelerated.

7-Staff-95

Cost Allocation

Ref: 7-Staff-51

Ref: Cost Allocation Model, sheets I6.1 Revenue, I6.2 Customer Data, I8 Demand Data

OEB staff sought to understand a discrepancy between NCP values for the GS > 50 rate class and the Transformer Ownership Allowance (TOA) requested for the rate class. Kitchener-Wilmot revised the Cost Allocation model such that:

- 1) The Line Transformer NCP (LTNCP) is calculated as the Classification NCP times the ratio of the Primary connection count to the Line Transformer connection count.
- 2) The Secondary NCP is calculated as the LTNCP times the ratio of the Primary connection count to the Secondary connection count.

OEB staff notes that on sheet I6.1, 997,138 kW of 2,008,538 kW (50%) for the billing demand on sheet I6.2 is subject to TOA, while on sheet I6.1, 768 of 938 (82%) customers are served using Kitchener-Wilmot supplied line transformers. This implies that the customers receiving the TOA are not the average size for the rate class.

Of the 768 customers served using Kitchener-Wilmot supplied line transformers, 760 (99%) also rely on secondary distribution service.

- a) Please confirm that Kitchener-Wilmot does not have the necessary information to determine LTNCP and Secondary NCP values directly from the load profiles of the customers requiring line transformer and secondary distribution services.

Confirmed

- b) Please provide a scenario where the GS > 50 NCP values are calculated as follows:
 - a. the LTNCP is calculated as the ratio of (Class Billing Demand – TOA) / Class Billing Demand times the Primary NCP.
 - b. The Secondary NCP is calculated as the LTNCP times the ratio of the Line Transformer connection count to the Secondary connection count.

The file attached is as per the request. However, the requested ratio appears to be reversed of that which would have expected. See file EB-2019-0049_KWHI_IR_2019_Cost_Allocation_Model_7-Staff-95a_20190814

Appendix D – Pre-Settlement Clarification Question at Settlement Conference

Question:

Could not reconcile the basis for the allocation of 2020 annual manual adjustment for CDM. Please provide the source of 1% used in calculation.

Response:

Correction to VECC-48

VECC - 48

Reference: Staff 33 e)

KWHI_IRR_ Load Forecast Model-IR_20190731, Energy and CDM Tabs

a) Please explain the basis for the allocation the 2020 manual adjustment for CDM and the LRAMVA threshold to customer classes.

Response:

Referring to the “LDC Progress” Tab of the 2018 Participation and Cost Report-20190415, at column BE (hidden) row 6 – total residential CDM savings in 2019 was 15,120 kWh as of April 2019.

As a percentage of total estimated CDM savings for 2019 of 24,356,204 as set out in row 24, column B of the “Summary” Tab of KWHI_IRR_CDM_2019 and 2020 Savings Estimate_20190731, this equals 0.062%.

This was mistakenly rounded up to 1% (the author confused 0.62% with 0.062%).

The Applicant believes the correct value to apportion CDM to residential customers in 2019 and 2020 should be 0%.

The Applicant will provide a revised load forecast (and associated cost allocation model) to reflect this correction.

Question:

Why is there a discrepancy in the number of FTEs in the Business Plan (181) and in Appendix 2-K (186)?

Response:

Appendix 2-K number reflects FTEs including Part-Time employees and the Business Plan number reflects Full-Time employees.