VECC-34

REFERENCE: 3-VECC-9

PREAMBLE: VECC-9 identifies a number of new subdivisions and connections that are planned to occur over the 2022-2024 period.

a) Were there any new "subdivisions" added in ORPC' s service territory over the period 2014-2020? If so, please identify the subdivision, the year(s) where the initial occupancy for each occurred and the number of connections associated with each.

Based on a preliminary review of ORPC's historical data, please find below a table of subdivisions and connections between 2014 and 2020:

	2014	2015	2016	2017	2018	2019	2020
Riverfront Phase 3			68				
Mill Run Phase 1C			16				
Riverfront Phase 4					68		
Riverfront Phase 5							141
Orchardview Townhomes					32		

VECC-35

REFERENCE: 3-VECC 8, 10 & 11

PREAMBLE: VECC 8 states:
"However, a mixture of off-calendar month billing and limited historical reporting capabilities within the Customer Information System have not made it possible to review 2011 to 2013 data. The whole purchase data could not be revised due to metering software retention policies. ORPC does believe that the difference in wholesale purchase data would not be materially different if revised for the purpose of load forecasting."

VECC 10 states:
"Ottawa River Power Corporation did not revise its 2014 and 2015 data due to the metering software only retaining data for 6 years. Metering data 7 and 8 years in the past would

have been required to review and analyze 2014 and 2015 data."

VECC 11 states:
"ORPC did test the period of 2011-2020 which yielded a lower R-Square. In analysing the data, ORPC found anomalies in 2011-2013 as explained in the response to 3.0 VECC-8 and opted to leave them out after removing each year and rerunning the regression without the years in question."

a) Given that the 2014 and 2015 purchase data was not adjusted using the Metsco methodology (per VECC 10) are there material differences in the quality of the 2014 & 2015 purchase data that was used in the regression modelling and the quality of the available 2011-2013 purchase data which was not used in the regression modelling? If yes, what are the differences in the quality of the purchase power data?

ORPC is not aware of material differences between the quality of the 2014 & 2015 purchase data and the 2011 to 2013 purchase data.

b) VECC 11 indicates that ORPC did test the period 2011-2020. Please provide the resulting regression model, the model's statistics and the forecast purchases for 2022.

Please see attached VECC 35b Excel response.

VECC-36

REFERENCE: ORPC Load Forecast Model, Forecast Tab

a) In the Load Forecast Model, in forecasting power purchases for 2022 ORPC used monthly CDD values based on the average of the years 2014-2021 for the corresponding month. However, the CDD values used for 2021 are virtually the same for all months (ranging between 30 and 31 – see cells E88-E99). Please provide a revised version of the Load Forecast model where the monthly CDD values used for 2022 are based on an average of the 2014-2020 values for the corresponding month.

Please see file the attached Excel response.

VECC-37

REFERENCE: Exhibit 8, pages 29-32
Exhibit 3, Appendix 3A (Metsco Report)
8-Staff 57

a) For each of the delivery points discussed in sections 4.1 to 4.4 of the Metsco Report, please indicate which of the three values calculated (i.e., Total kWh [HV], Total kWh [MV] or Total kWh [LV]) contributes to:
   i.   The Total kWh LV values set out in Exhibit 8, pages 31-32, and
   ii.   The Total kWh HV values set out in Exhibit 8, pages 31-32.

Please review the attached Excel provided which provides the calculations requested.

b) For each of the delivery points discussed in sections 4.5 to 4.7 of the Metsco Report, please indicate which of the three values calculated (i.e., Total kWh [LV-GEN], Total kWh [MV] or Total kWh [LV-Load]) contributes to:
   i.   The Total kWh LV values set out in Exhibit 8, pages 31-32, and
   ii.   The Total kWh HV values set out in Exhibit 8, pages 31-32

Please review the attached Excel provided which provides the calculations requested.

c) With respect to the values set out in Exhibit 8, pages 31-32, what do the Total kWh values represent (i.e., the column with no HV or LV designation)?

Total kWh represent the actual billed unadjusted kWh from the generator.

d) With respect to sections 4.1 to 4.4 of the Metsco Report, each contains the following statement: "When Hydro One Networks Inc. is receiving power from ORPC, Total kWh (LV) > Total kWh (MV) > Total kWh (HV)". For each of the four supply points, please explain why this is the case.

The calculations in sections 4.1 to 4.4, show the Total kWh (HV), Total kWh (MV), and Total kWh (LV) when Hydro One Networks Inc. is delivering power to ORPC. When Hydro One Networks Inc. is receiving power from ORPC, due to the reverse power flow from the LV to MV and then HV system, Total kWh (LV) > Total kWh (MV) > Total kWh (HV) like sections 4.5 and 4.7 where there is some generation connected to LV side.

So, when there is generation connected to the LV voltage and the power flows from the LV to MV and HV, due to the power losses on the conductors and transformers, the Total kWh (LV) > Total kWh (MV) > Total kWh (HV).

On the other hand, when power is flowing from HV to LV, Total kWh (HV) > Total kWh (MV) > Total kWh (LV). Depending on the power flow direction, Total kWh is always higher at the sources where the power is supplied from, than the buses where the power flows to due to power losses on lines and transformers.

VECC-38

REFERENCE: 8-Staff 57

PREAMBLE: Staff 57 d) states:
"Instead of installing primary metering units for Ottawa River Power, Hydro One is using existing wholesale and retail meters to bill ORPC. ORPC is benefiting by paying lower losses and not paying the metering charge on monthly basis. Pembroke is supplied by Hydro One's Pembroke TS and by Brookfield. When Brookfield supplies less power, Hydro One supplies more to compensate. In 2017, Brookfield supplied approximately 9M kWh below the 5-year average requiring Hydro One to provide 9M more kWh. This resulted in an additional 9M kWh being subjected to a loss allowance (negative loss adjustment to usage due to the legacy subtractive metering arrangement) which ultimately caused overall loss adjusted consumption to be lower than non-loss adjusted usage."

The response to Staff 57 a) provides an Attachment with the following information regarding Brookfield supply:

Ottawa River Power Corporation		
OEB Staff Interrogatory Response - 8-Staff-57		
	Brookfield	
Year	Higher Value (kWh)	Lower Value (kWh)
2016	36,015,616.93	34,486,486.14
2017	49,480,405.26	47,379,594.06
2018	42,496,101.30	40,691,825.74
2019	31,676,486.60	30,331,584.16
2020	41,521,914.06	39,759,000.00

a) Please explain how the metering arrangement for the Pembroke TS reduces the losses ORPC pays for and how/why this benefit changes when Hydro One supplies more/less power.

The higher the usage by Hydro One customers on the ORPC side of the Pembroke TS station the greater the deduction or allowance on ORPC's bill from Hydro One.

b) The response to Staff 57 d) indicates that Brookfield supplied less than historic average amount of power in 2017. However, the Attachment provided in response to Staff 57 a) indicates that Brookfield's supply in 2017 was more than average. Please reconcile and revise the response to VECC 57 d) as required.

The response provided to Staff 57 d) was incorrect. The cause of the lower "Higher Value" did not pertain to a decrease in Brookfield usage.

VECC-39

REFERENCE: 3-VECC 16

a) ORPC acknowledges that the pandemic impacted 2020 sales. Please provide an alternative Load Forecast model where there is Covid-19 flag as another explanatory variable which is set at zero for all months except March to May 2020.

Please see attached Excel response.

VECC-40

REFERENCE: 3-Staff 29
              LRAMVA Workform
              Exhibit 4, pages 63-64

PREAMBLE: Staff 29 a) requested "the verified persisting savings for all years available, and Ottawa River Power's best estimate of persisting savings for all following years up to and including 2022." The response indicated that the LRAMVA Workform contained the requested data. VECC has prepared the following table based on the LRAMVA Workform:

Program Year	2014	2015	2016	2017	Annual Impact from CDM Programs (kWh) 2018	2019	2020	2021	2022
2014									
2015		3,005,375	2,985,411	2,982,630	2,995,974	2,988,021	2,975,405	2,973,670	2,973,541
2016			2,169,663	2,169,663	2,169,663	2,169,663	2,136,567	2,086,546	2,062,319
2017				2,352,167	2,090,436	2,083,040	2,039,480	2,039,355	1,985,692
2018					1,332,782	1,268,875	1,262,699	1,226,324	1,226,219
2019						5,695	5,695	-	-
2020							-		
Total		3,005,375	5,155,074	7,504,460	8,588,855	8,515,294	8,419,846	8,325,895	8,247,771

a) Please confirm if the values in the above table are correct and provide corrected values where not.

OPRC confirms that the information is correct.

b) The LRAMVA Workform did not provide savings for CDM programs implemented in 2014. Please provide and revise the table per part (a).

ORPC notes that CDM programs implemented in 2014 were disposed of in its previous application. In this application, OPRC is seeking disposition of its loss revenue as it relates to 2015-2019 CDM programs + persistence up to 2020. The attached version of the LRAMVA model with 2014 CDM savings and rates is provided for informational purposes only.

c) Please confirm that ORPC assumes that there will be no additional CDM savings after March 2019.

OPRC confirms that the statement is correct.

d) Please provide the full ISEO Reports referenced in Exhibit 4, pages 63-64 in excel format. None of them are filed/posted on the OEB web site.

The requested IESO report is attached to these responses.

e) With respect to the scenario provided in response to Staff 29 c), please explain (with supporting calculations):

  i. How the monthly CDM savings were derived for the period 2014-2020 and demonstrate that the annual savings in each year reconcile with the table as verified in parts (a) and (b).

  The methodology was suggested by Board Staff and was presented in the last tab of the model filed with ORPC's response to IR. The file entitled OPRC 2022 TESI Load Forecasting Model Staff-3-29C is attached for ease of reference.

VECC-41

  REFERENCE: IRR Cost Allocation Model (20211222)
  7-Staff 53 a)
  7-VECC 29 b)
  7-Staff 52

a) The current Cost Allocation Model (Tab I6.2 does not include a value for the number of USL connections. Please confirm that the value should be 88 per Staff 53 a).

  ORPC confirms that 88 should be the value.

b) Please confirm that the Cost Allocation Model has not been updated to reflect the revised billing and collecting weighting factors calculated in VECC 29 b).

  ORPC confirms the above.

c) Staff 52 a) questioned the proportion of customers and demand for the GS>50 class that are served by ORPC's line transformers and secondary assets. Staff 52 b) indicated that the model has been updated accordingly. In the Cost Allocation Model provided with the information request responses (IRRs) the GS>50 demand allocators for lines transformers and secondary assets are based on the percentage of the GS>50 demand (i.e., 86%) not eligible for the TOA.   This assumes that the customers that own their secondary assets are the same/equivalent to the customers that own their transformer. However, in Tab I6.2, the number of customers using ORPC transformers is 8 while the number using ORPC secondary assets is 143 (out of a total of 151). Please reconcile and indicate what the appropriate customer count values are for GS>50 customers using ORPC transformers and secondary assets.

The correct amounts should be 143 in the Line Transformer Customer Base and 8 in the Secondary Customer Base.

d) Please provide an updated Cost Allocation model that addresses the issues noted in the preceding questions.

Please see the revised model attached.

VECC-42

REFERENCE: IRR Appendix 2-ZB (Cost of Power)
                8-VECC 33

a) In Appendix 2-ZB the LV costs included in the COP for purposes of determining the rate base are $500,455. This value differs from either of the two values noted in VECC 33. Please explain the basis for the $500,455 and why it should differ from the 2022 forecast cost for LV per VECC 33.

The answer to VECC 33 represents loss unadjusted volumes whereas Appendix 2 Z-B includes losses. A loss factor of 4.1% was applied to the residential, GS<50 and unmetered classes.