OSHAWA PUC NETWORKS INC.

Undertaking JT1.1

Provide the 2 IESO reports used for the CDM forecast.

Response:

Oshawa filed CDM plans with the IESO on the following dates:

- May 1, 2015
- December 31, 2015
- January 10, 2017
- May 1, 2017
- August 15, 2017 (approval pending)

The following schedules have been filed in response to Undertaking No. JT1:

CDM Plan – Oshawa PUC Networks May 1 2017

CDM Plan – Oshawa PUC Networks August 15 2017_V1

IESO CDM EE CE Tool PortfolioLevel Master 08016-v13_Oshawa PUC Networks_2017 CDM Plan_V7

IESO CDM EE CE Tool PortfolioLevel Master 08016-v13_Oshawa PUC Networks_2017 CDM Plan_V8

OSHAWA PUC NETWORKS INC.

Undertaking JT1.2

Provide a written explanation on street lighting adjustments made for the CDM forecast.

Response:

CDM savings related to the City of Oshawa's retrofit of street lights to LED were developed:

1. Under Oshawa's CDM program using deemed savings based upon estimation tools available for calculating incentives among other attributes of the IESO's CDM initiative; and

2. By a third party engaged by the City of Oshawa to implement the conversion project.

The results of both methodologies were included in Oshawa's load forecast, filed as *OPUCN_Weather Normalization_Trend Model_Mid Term 2017_20171027* (Load Forecast), under the *CDM Summary* tab in rows 10 and 11.

Oshawa determined the lower savings developed by the installer were the best estimate for load forecasting. To effect the lower estimates, Oshawa deducted the street light savings from the CDM results and added back the savings from the installer under the *CDM Summary* tab in rows 14 and 18 respectively.

OSHAWA PUC NETWORKS INC.

Undertaking JT1.3

Provide the formula used to produce the CDM forecast in the load forecast model from the CDM reports.

Response:

Forecast CDM savings included in Oshawa's load forecast, filed as *OPUCN_Weather Normalization_Trend Model_Mid Term 2017_20171027*, under the *CDM Summary* tab were calculated based on the *IESO CDM EE CE Tool 08016-v13_Oshawa PUC Networks_2017 CDM Plan_V8* (CE Tool) which was filed in response to Undertaking No. JT1.

The CE Tool is used to calculate net and gross energy savings based on planned programs, by program, by year. Calculated net and gross energy savings by measure, by program year by year can be found under the *Savings Results* tab of the CE Tool.

The contents of this tab were then copied into *OPUC CDM by year by customer type_V2*, filed separately, to calculate the annual summary of CDM savings by program year by year. Gross savings were summed by Program Year at the Generator Level and then discounted by line loss factors used in the CE Tool to arrive at total gross program savings by program year by year. The line loss factors, which can be found in the *CE Parameters* tab within the CE Tool are 2.5% for transmission losses and 4.2% for distribution losses.

The annual savings by Program Year at the Customer Level, which are those used in the *CDM Summary* tab, can be found under the *Summary* tab of the *OPUC CDM by year by customer type_V2* in columns K through P.

Note that there were minor updates made in the CE Tool before the August 15, 2017 submission to the IESO, however, in total these updates represent less than a 1% change to the savings included in Oshawa's load forecast. The final CE Tool was not available when Oshawa's rate application was filed in July.

OSHAWA PUC NETWORKS INC.

Undertaking JT1.4

Provide an explanation on the development of Enfield TS related projects, specifically changes from what was approved at the time of the decision to the current application.

Response:

The following table summarizes the chronological development of cost forecasts ($000's) for Enfield TS, MS9 and related connection infrastructure:

Asset Description	Original DSP	Decision on Custom IR	Mid Term Application
Enfield TS Contributions	$6,500	$13,500	$4,000
MS9 Substation	$7,000	$7,000	$7,000
MS9 Overhead Feeders	2,000	$7,500	$7,500
Overhead Feeder Enfield TS Egress and Load Transfer	Nil	Nil	$6,500
Total	**$15,500**	**$28,000**	**$25,000**

The projects under the asset description column are generally required to address capacity demands in Oshawa's service territory to the north and over-capacity load constraints at existing supply sources, Wilson TS and Thornton TS. The projects were itemized based upon the regional planning process which was in the early stages of development when the OEB issued their decision in November 2015. As per their decision on Oshawa's Custom IR, the OEB approved interim rates for 2018 and 2019 which incorporated the estimated costs summarized above totalling $28,000.

In their decision, the OEB also required Oshawa to file a mid-term update to finalize its rates for 2018 and 2019, and to update its estimates for the projects identified above in accordance with final regional planning developments [Decision and Order EB – 2014 – 0101, Section 4.2]. In response to the OEB's decision:

1. Enfield TS contributions to Hydro One have been adjusted to match the agreed upon CCRA included as *OPUCN_APPL_Ex A_Att 1_Hydro One CCRA_20170707* in Oshawa's submission. The CCRA now takes into account the latest cost estimates for constructing Enfield TS, the proportionate share of cost allocated to Oshawa and the economic evaluation used to estimate the up-front contributions required from Oshawa. Contributions are approximately $4.0

million and are subject to final true-up at the end of construction which is standard practice for these types of shared arrangements.

2. The estimated costs for MS9 and MS9 overhead feeders are consistent with the OEB’s decision.

3. Overhead feeders for Enfield TS egress and load transfer requirements have now been identified as part of the regional planning process as noted below in Undertaking No. JT1.5.

OSHAWA PUC NETWORKS INC.

Undertaking JT1.5

Provide engineering documents for the $6.5M feeder project on Enfield TS.

Response:

Based on the outcomes of the Regional Planning process and as per the Regional Infrastructure Planning Report, filed separately as *Regional Infrastructure Planning Report 2017_GTA East*, it was identified that a new transmission station (Enfield TS) was required to address capacity needs in the Oshawa-Clarington area. Enfield TS is located at the existing Clarington TS site near the intersection of Winchester Rd E and Townline Rd N.

As part of finalizing the planning process, which was developed subsequent to Oshawa receiving the OEB's decision on its Custom IR rate application, new feeder circuits are required to be constructed in order to connect Enfield TS to Oshawa's distribution system. In addition, pole rebuilds are required to connect distribution system infrastructure and permanently relieve over-capacity load constraints from Wilson TS and Thornton TS, and transfer load to Enfield TS.

As per the 44kV single line diagram, filed as *44KV DIAGRAM with proposed Enfield feeders_01-Model*, the proposed feeder circuits are set-out in red and blue lines for Enfield TS and MS9 respectively, and the black lines represent feeder circuits for existing 44kV feeder circuits.

From the diagram, the majority of the projects are planned through "greenfield" service territory which will require Oshawa to build new feeder circuits in order to connect to the existing distribution system; the closest existing 44kV feeder circuit from Enfield TS is at the intersection of Conlin Rd E and Harmony Rd N, approximately 3.9km away.

The following assumptions were used in the planning and estimation process:

1. Feeder Egress:

   - 500m x 2-44kV feeder circuits of UG cable installation within Enfield TS station.

- Self-supporting poles will be utilized for the high risk poles with potential 4 feeder circuits at egress location.

2. 28% of the new feeder circuits are proposed to have double 44kV circuit and the remaining 72% are proposed to have single 44kV circuit.

3. All new pole lines will have 13.8kV circuits or provision to have 13.8kV circuits and have factored in the dip/riser poles to be able to provide supply to both residential and commercial development in the area

Please refer to the following table showing project scope and estimated cost:

Project	**Scope**	**Estimated Cost $'000**
Enfield Feeders Riser Poles and UG Cable Installation Within Enfield Station	500m x 6 (2 circuits) = 3,000m of 1000MCM cable installation and 6 poles installation within Enfield TS station.	$702
Enfield TS Feeder Egress from TS Station Fence to Grandview St N	Feeder egress at Townline Rd N from Enfield TS and OH Rebuild at Winchester Rd E from Townline Rd N to Hwy 407 (approx. 650m). New pole build to accommodate 2-44kV circuits and provisions for 2 additional 44kV circuits in the future. Self-supporting poles to be utilized for high risk poles with potential 4 feeder circuits.	$707
OH Rebuild at Harmony Rd N from Winchester Rd E to Conlin Rd E	Install 1.12km of new circuits on existing poles at Winchester Rd E from Grandview St N to Harmony Rd N and rebuild 1.87km of pole line to bring Enfield feeder to MS15. Replace existing 44kV switch. Partial rebuild has been completed with 5-6 poles south of Winchester Rd E. This will provide loading relief from Wilson TS (54M3).	$2,499
OH Rebuild at Harmony Rd N from Rossland Rd E to King St E and at King St E from Harmony Rd N to Farewell St	Rebuild 2.5km of line to provide loading relief from Thornton TS (52M3) by installing a new automated load break switch and rebuilding the existing pole line	$2,555
	TOTAL	**$6,463**

OSHAWA PUC NETWORKS INC.

Undertaking JT1.6

Provide the current status of 2017 capital expenditures to approved 2017 capital expenditures, methodology of determining 2018 rate base, and references from the board decision to support the 2018 rate base.

Response:

In response to 1-Staff-3 [OPUCN_IR_Response_20171027], Oshawa included an estimate for capital expenditures in 2017. Total forecast expenditures are approximately $9.0 million which is $1.3 million higher than the approved amount totalling $7.7 million. Using year-to-date October 31 data, total capital expenditures are $11.1 million which include approximately $2.7 million for construction-in-progress resulting in $8.4 million. Oshawa plans to achieve its 2017 forecast over the remaining months.

Oshawa did not adjust its 2017 rate base for the purpose of determining final rates for 2018 and 2019. In its decision [Decision and Order EB – 2014 – 0101, Section 4.2], the OEB outlined the following:

The mid-term review will have a narrow scope with a limited number of 2016 actual and forecast updates. The OEB directs Oshawa PUC to file a new application no later than July 1, 2017 including evidence of:

- *customer connections and consumption*
- *capital expenditures by Oshawa PUC, net of contributions, resulting from:*
    - *regional planning*
    - *third party requests for plant relocations*
    - *new customer connections*
- *cost and schedule of the MS9 substation project and the proposed Hydro One Enfield TS, as well as any related capital contributions to Hydro One by Oshawa PUC*

- *cost of capital*
- *working capital requirements based on an updated forecast for the cost of power*
- *comparisons of OEB-approved to actuals for 2015-2017*
- *comparisons of the approved forecasts for 2018 and 2019 that are used to set interim rates in this Decision and updated forecasts for 2018 and 2019, and*
- *comparisons of the interim rates for 2018 and 2019 set in this Decision and the rates that would flow from the updated forecasts Oshawa PUC provides.*

In Chapter 6 (Rate Base), the Board found as follows (page 21, emphasis added):

> *The OEB approves the rate base as filed by Oshawa PUC for 2015, 2016 and 2017, with the exceptions noted in subsections 6.1 and 6.2. The OEB also approves the rate base as filed for 2018 and 2019, subject to the findings in subsections 6.1 and 6.2, and on the understanding that <u>the rate base for these last two years</u> will be adjusted as necessary as part of the mid-term review.*

The OEB did not instruct Oshawa to update or adjust its 2017 closing rate base/2018 opening rate base as part of the mid-term update. For adjustments (reductions) to rates for 2018 and 2019, Oshawa started with the 2018 and 2019 rate base previously approved, and calculated adjustments to that previously approved rate base, if necessary, for the items directed by the Board to be updated in setting final 2018 and 2019 rates, if necessary.

OSHAWA PUC NETWORKS INC.

Undertaking JT1.7

Provide confirmation if the $1.9M Durham plant relocation project was known at the time of the Custom IR or was it unplanned.

Response:

The project was not specifically identified in Oshawa's original Distribution System Plan. However, the nature of regional and municipal planning does not lend itself to specifically identifying all projects over a period of five years. The risk associated with forecasting project costs influenced by third-parties was identified in Oshawa's Custom IR and informed the OEB's decision to include adjustments, if necessary, in the mid-term update.

As per Oshawa's response to 1-Staff-3, the Region determined a rebuild of the Simcoe St N and Winchester Rd. intersection is required and the existing plant be relocated underground due to the congestion at the intersection with Hydro One infrastructure. The forecast impact is $1.9 million in additional costs, subject to final design.

OSHAWA PUC NETWORKS INC.

Undertaking JT1.8

Provide electronic Cost of Power files.

Response:

Oshawa has filed *CostofPowerCalc_20171115* in response.

OSHAWA PUC NETWORKS INC.

Undertaking JT1.9

Provide written responses to Supp-Staff-6 and Supp-Staff-7 provided prior to teleconference. Please include Supp-Staff-6 and Supp-Staff-7 in the response for reference.

Response:

Supp-Staff-6
Ref. IR response 1-Staff-10

a) In response to IR 1-Staff-10, the applicant has completed and submitted a GA Analysis Workform for 2016.

   i. The "GA Analysis Instructions" require a separate GA Analysis Workform to be completed for each of the years that are being sought for disposition. Since the applicant is seeking the disposition of both the 2015 and 2016 cumulative GA balance, a GA Analysis Workform must be completed for each of those years. Therefore, please complete and file a GA Analysis Workform for 2015 as well.

   OSHAWA PUC has now completed and filed the GA Analysis Workform for 2015.

   ii. The completion of the 2016 GA Analysis Workform indicates no reconciling items in Note 5, primarily due to the fact that the applicant indicated that it trues-up all components of the GA to actual prior to submitting to the OEB for recovery. Then please provide an explanation as to the causes of the overall variance that is being presented in Note 5 of the 2016 GA Analysis Workform.

   The unresolved variances for 2015 and 2016 are -$301k (-0.9%) and $378k (0.9%) respectively, or $77k (0.11%) for 2015 and 2016 combined. Both of the years in question fall below the materiality threshold for further analysis per note 6 of the GA Analysis Instructions.

iii. Please provide the total GA amounts billed to non-RPP customers in 2015 and 2016 as recorded in the applicant's revenue G/L accounts for 2015 and 2016 excluding any transfers of revenue to the RSVA GA account if applicable.

Please see table below:

Year	GA Billed to non-RPP customers
2015	$29,413,319
2016	$39,280,485

b) Please provide a reconciliation between the deferral and variance accounts as presented in the 2016 audited financial statements compared to what is being sought for disposition as per the completed DVA continuity schedule. Please provide explanation for any reconciling items.

Please see table below containing extracts from the DVA continuity schedule and the 2016 audited financial statements. The amounts being sought for disposition are highlighted and cross referenced to their location in the audited financial statements.

Extract from DVA Account Workform

Account Descriptions	Account Number	Closing Principal Balances as of Dec 31-16 Adjusted for Dispositions during 2017	Closing Interest Balances as of Dec 31-16 Adjusted for Dispositions during 2017	Closing Interest Balances as of Dec 31-16 Adjusted for Dispositions during 2017		
Group 1 Accounts						
Smart Metering Entity Charge Variance Account	1551	$(35,308)	$(984)	$(36,292)	$(36)	a.
RSVA - Wholesale Market Service Charge[9]	1580	$(2,873,150)	$(32,467)	$(2,905,617)		
RSVA - Retail Transmission Network Charge	1584	$2,455,904	$27,065	$2,482,969	$(1,717)	b.
RSVA - Retail Transmission Connection Charge	1586	$(1,279,678)	$(15,052)	$(1,294,730)		
RSVA - Power (excluding Global Adjustment)[12]	1588	$(127,700)	$(1,163)	$(128,863)	$(129)	c.
RSVA - Global Adjustment [12]	1589	$(634,996)	$(21,679)	$(656,675)	$(657)	d.
				$(2,539,209)		

Extract from Financial Statements Note 5

REGULATORY ASSETS AND LIABILITIES

Regulatory asset balances consist of the following:

	January 1, 2016 $	Balances arising in the period $	Recovery/ reversal $	**December 31, 2016 $**
Regulatory assets				
Retail settlement variance – power	770	(770)	–	**–**
Post-employment benefits deferral	–	975	–	**975**
Regulatory Asset Recovery Account ["RARA"]	5,565	–	(1,710)	**3,855**
Total regulatory assets	6,335	205	(1,710)	**4,830**

Regulatory liability balances consist of the following:

	January 1, 2016 $	Balances arising in the period $	Recovery/ reversal $	**December 31, 2016 $**		
Regulatory liabilities						
Retail settlement variance – power	–	129	–	**129**	$129	c.
Retail settlement variance – global adjustment	210	446	–	**656**	$656	d.
Retail settlement variances – other	1,050	667	–	**1,717**	$1,717	b.
Deferred income taxes *[note 8]*	6,046	(552)	–	**5,494**		
Post-employment benefits deferral	327	(327)	–	**–**		
Regulatory liability – other	10	(7)	–	**3**	$36 **	a.
Total regulatory liabilities	7,643	356	–	**7,999**		

The $36k SME variance account not shown separately in Financial Statements - part of balance in 'Regulatory Liability - Other' **

c) In terms of unbilled revenue, please explain the period in which the final actual billed data becomes available in order to true-up the unbilled revenue accrual to actual. Please confirm that the general ledger stays open until this time in order to capture the impact of this true-up in the closing balance.

The final actual billed data becomes available mid-February for December 31st consumption. The GL remains open until then in order to capture the impact of this true-up in the closing balance.

Supp-Staff-7
Ref. IR response 1-Staff-11

In the response provided to IR 1-Staff-11, the applicant has documented its settlement process with the IESO.

a)

i. How does the applicant determine the RPP/non-RPP proration for charge type 148.

Oshawa PUC extracts total consumption from the billing system, analysed between different categories, and determines from this the appropriate proration. It is the same analysis used in the annual RRR 2.1.5 submission.

ii. In the initial IESO settlement done on the fourth business day of the following month, is the RPP/non-RPP proration based on estimated billing information?

Yes, the initial IESO settlement includes actual billing plus unbilled estimates.

iii. When does the estimated RPP/non-RPP split get trued-up to actual (include the period in which the final data needed to do the true-up is known) and how does this true-up get reflected in the balance being brought forward for disposition?

At year end (December), accounting books are kept open until complete billing of that year's consumption/demand has been done (usually mid-February). These actual numbers are reflected in final December balances, which are brought forward for disposition.

b) How are GA balances associated with class A customers being settled? Does the balance in account 1589 (for 2015 and 2016) include GA balances pertaining to class A customers?

The Class A billing to the customer is done in the month following the month in which charged by the IESO. For example, Dec 2016 Class A charge of $206k expensed in Dec but billed to customer in Jan 2017. It is however accrued in Dec 2016 and so no Class A balance rests in 1589 at year end.

c) Explain how the GA billing rate is determined for billing cycles that span more than one load month.

It is pro-rated. For example, the July portion of a bill covering parts of July and August is billed using the July rate while the August portion is billed using Aug rate.

d) Please confirm that the GA billing rate that is used is applied consistently for all billed and unbilled revenue transactions for non-RPP Class B customers. If the same rate is not being used, then please explain why.

For billing, the GA billing rate used is always the IESO 'First Estimate', mainly to ensure bills can be issued as soon as possible. For unbilled calculations, the GA billing rate that is used is always the IESO 'Prelim' rate. The 'Prelim' rate is issued after the 'First Estimate' and is expected to be more accurate and closest to 'Final' rate. For this reason it is used rather than the 'First Estimate' rate.

OSHAWA PUC NETWORKS INC.

Undertaking JT1.10

Provide an explanation to why there has been such a large increase to planned outages (ref: 7.0-VECC-14b).

Response:

Oshawa is able to be more proactive (less reactive) in managing distribution component assets as a result of implementing its outage management system in 2016 by leveraging data provided by smart meters. The outage management system also provides a more accurate base upon which it tracks planned outages.

Oshawa’s outage management system is reporting the following service quality events attributing mainly to planned outages: lines rebuild; component change outs; and replacing leaking transformers.

OSHAWA PUC NETWORKS INC.

Undertaking JT1.11

Provide an explanation to how Oshawa PUC's load forecast update reflect the OEB's Decision.

Response:

Under section 4.2 of its decision, the OEB stated the following:

The mid-term review will have a narrow scope with a limited number of 2016 actual and forecast updates. The OEB directs Oshawa PUC to file a new application no later than July 1, 2017 including evidence of:

- *customer connections and consumption*

Oshawa determined that to update forecast consumption, in addition to customer connections, the purchased power model and CDM forecast, along with other contributing attributes to the forecast, needed to be updated.

OSHAWA PUC NETWORKS INC.

Undertaking JT1.12

Provide the final output of the model in response to VECC-15d in comparison to the final output of the current model - refer to 1-Staff-3 response.

Response:

The result is summarized in the table below:

Year	Purchased (MWh)		Billed (MWh)	
	Filed	Per Request	Filed	Per Request
2018	1,100	1,166	1,062	1,112
2019	1,098	1,171	1,060	1,117