

**OSHAWA PUC NETWORKS INC.**

**Response to Board Staff Interrogatory 2.0-Staff-4**

**Ref: Exhibit 2, Tab A, page 145**

Service Quality and Reliability Performance are reported in this part of the Exhibit. Has OPUCN developed any Service Quality or Reliability Performance Targets that correspond with this 5 year plan? If so, please provide them, if not, why not?

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**Response:**

OPUCN's expectation is to be 100% compliant with OEB's Electricity Service Quality Requirements (ESQR). With respect to setting reliability targets, we have not developed a forecasting tool to set future targets. However, our asset investments are directed at the highest priority areas which are expected to return performance improvements in those specific areas when the projects are completed.

**OSHAWA PUC NETWORKS INC.**

**Response to Board Staff Interrogatory 2.0-Staff-5**

**Ref: Exhibit 2/Tab B/Schedule 7/Attachment G/ p. 1 – 3**

The evidence indicates that the first two projects in the chart showing 2014 – 2019 Material Capital Expenditures were intended as a short term solution to the capacity constraints identified at Wilson TS and Thornton TS. For those two projects:

- a) Are the projects now complete? If yes, what were the actual costs? If no, what costs were incurred in 2014, and what costs are forecast to be incurred in 2015?
  - b) Do capacity constraints exist at those two TS at the present time with the current load?
- 

**Response:**

- a) Yes, these projects are complete.
  - Wilson TS to Thornton TS Load Transfer – Phase 2 – MS11 – OH Plant Rearrangement – Completed and Energized in 2014  
Actual Cost (2014) - \$ 75,000
  - Wilson TS to Thornton TS Load Transfer – Phase 2 - Gibb St - Stevenson to MS14 – Completed and Energized in 2014  
Actual Cost (2014) - \$ 866,000  
Actual Cost (2015) - \$ 75,000
- b) No

**OSHAWA PUC NETWORKS INC.**

**Response to Board Staff Interrogatory 2.0-Staff-6**

**Ref: Exhibit 2/Tab B/Schedule 2/pp. 1 – 3**

Regarding the planning decision on a long term solution to meeting transmission capacity requirements in the East GTA, HONI's planning status letter states that local planning is expected to be complete in Q1 2015.

- a) Is the local planning exercise complete? If no, when is it expected to be complete?
- b) Is the option of the addition of two feeder breaker positions at Wilson TS and Thornton TS still being considered in light of the statement in the HONI letter that this is no longer a viable permanent solution?
- c) Does OPUCN have a say in the choice of a permanent solution?
- d) If the local planning exercise is complete, please describe the results of the planning exercise and provide in detail the consequences for OPUCN's DSP and the amount and timing of the capital contribution to HONI that will be required.

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**Response:**

- a) No. It is in the final stage and is expected to be completed by Q2 2015.
- b) No, the addition of two breaker positions at Wilson TS and Thornton TS is no longer being considered. There is \$6,500,000 in the Capital program for this project work.

While reviewing loading and short circuit capacities at Thornton TS and Wilson TS with HONI it came to light that station neutral reactors are required at both stations as well as OPUCN's substations. Installation of the reactors will address both short circuit capacity constraints and compliance issues with system operating and safety codes. Due to the priority of the work, HONI will be completing the reactor work at both TS's in 2015 at their cost and subsequently OPUCN is coordinating with HONI by installing the reactors at the 8 OPUCN

municipal substations at OPUCN's cost. The total OPUCN cost estimate for reactor installation is \$1,500,000.

Therefore the net Capital program reduction will be \$5,000,000.

- c) Yes.
- d) The local planning report is expected to be released in Q2, 2015, but as per current local planning discussions, the need to build Enfield TS has been identified with an in-service date of 2018. Based on the latest correspondence from HONI, OPUCN is expected to make a \$13,500,000 capital contribution for Enfield TS.

Since we have now concluded on the selection of Enfield TS as the capacity solution for new customer load growth, the feeder supply arrangement to MS9 can now be finalised to come from two feeders out of Enfield TS rather than reconfiguration of existing feeders from Thornton and Wilson TS's. As a result, the Capital cost of these two feeders from Enfield to supply MS9 is estimated at \$5,500,000.

Therefore the net Capital program increase for the revised load growth plan will be \$14,000,000.

**OSHAWA PUC NETWORKS INC.**

**Response to Board Staff Interrogatory 2.0-Staff-7**

**Ref: Exhibit 2/Tab B/Schedule 2/p. 2**

The HONI letter states:

“As per the LDC’s anticipated load growth in the region, the connection facilities are forecasted to exceed their normal supply capacity in the near-term... In light of the updated total peak load forecast, the option of adding two new feeder breaker positions at both stations (Wilson TS and Thornton TS) is no longer deemed to be a viable permanent solution to address the station capacity limitations...”

- a) What is the source of the information on “anticipated load growth in the region” and the “updated total peak load forecast” referred to in the letter?
- b) Are the capacity constraints driven solely by OPUCN’s anticipated load?
  - If no:
    - What percentage of the capacity constraints at Wilson TS and Thornton TS is driven by OPUCN’s needs?
    - Which other LDCs in the region contribute to the capacity constraints?
    - Which other LDCs in the region would a new transmission station serve?
    - What contribution will other LDCs in the region make to the permanent solution?
  - If yes, at what point in time is the capacity of the two TS exceeded under OPUCN’s present load forecast?
    - Under what load forecast is the initially proposed upgrade to Wilson and Thornton TS new breaker positions a sufficient long term solution?
    - Under what load forecast is a new transformer station a more efficient long term investment?

**Response:**

a) The source of the information is OPUCN and is determined from the region load forecast informed by the following resources:

- Station and feeder load forecasts based on historical trends.
- New load connection forecasts based on proposed connection trends.
- Approved City of Oshawa development permit applications for construction.
- Kedron II major site development plan approved and released by the City of Oshawa.

b) No

• The percentage of capacity constraints driven by OPUCN needs are summarized as follows and detailed in the table below:

- Thornton TS – 35 % additional capacity beyond current share.
- Wilson TS – 5 % additional capacity beyond current share.

TS	Total Station Capacity	OPUCN Allocated Capacity	Actual OPUCN Utilization (2014)	Forecast OPUCN Utilization (2014)	Forecast OPUCN Utilization (2018)
Thornton TS	156MVA (100%)	78 MVA (50%)	87 MVA (56%)	109 MVA (70%)	133 MVA (85%)
Wilson TS	310 MVA (100%)	155 MVA (50%)	153 MVA (49%)	163 MVA (53%)	171 MVA (55%)

- Hydro One Distribution and Veridian Connections are the other LDCs that contribute to the capacity constraints.
- The new transmission station will also serve HONI distribution.
- The contribution of other LDCs will be dependent on the final outcome of the local planning report scheduled for release in Q2, 2015.

**OSHAWA PUC NETWORKS INC.**

**Response to Board Staff Interrogatory 2.0-Staff-8**

**Ref: Exhibit 2/Tab B/Schedule 2/p. 2**

The HONI letter indicates that the proposed new transmission station would have an in-service date of 2018 – 2019, and that interim options for managing the load at Wilson TS and Thornton TS are being reviewed. The letter indicates that available station capacity and feeder capacity utilization in the East GTA Region are being reviewed, and that interim solutions may require additional LDC investments.

- a) Please provide any updated information OPUCN has regarding these interim solutions.
- b) What will those costs be for OPUCN customers of the interim solutions being considered?
- c) In the absence of timely transmission upgrades and interim solutions, what tools and plans has OPUCN developed to ensure reliability of supply for its customers during peak periods prior to new facilities being in service?

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**Response:**

- a) As an interim solution, OPUCN has implemented short term operational measures in cooperation with other local planning members.
- b) No capital investment is required.
- c) Through the local planning meetings, OPUCN with other neighbouring utilities, have agreed to cooperate and to take active operational measures such as temporary load transfers and the use of interconnection agreements to ensure reliability performance risks are mitigated during system peak hours.

**OSHAWA PUC NETWORKS INC.**

**Response to Board Staff Interrogatory 2.0-Staff-9**

**Ref: Exhibit 2, Tab B/page 15 – System O&M Costs  
Exhibit 2, Tab A/page 29/Table 2-12 – Maintenance Expense  
Exhibit 2, Tab B/page 50/Table 18 – Capital Investment 2010-2019**

At Page 15, Exhibit 2, Tab B OPUCN states in part: "...for the sake of completeness, OPUCN has provided in this DS Plan its Historical, Bridge Year and plan period System O&M costs. These costs are, however, independent of, and not directly impacted up or down by, investments contemplated in this DS Plan."

At the same reference, OPUCN also states that: "...these 'discretionary' initiatives are expected to avoid future O&M costs. OPUCN has not precisely quantified such avoided future costs."

At Page 29, Exhibit 2, Tab A OPUCN shows that maintenance expense is forecast to grow at about 2.2% per year over 2015-2019.

In addition, OPUCN has provided Table 18 from Exhibit 2, Tab B, on page 50: Historical & Planned Capital Investment, 2010 -2019.

- a) To provide an expenditure picture that allows a comparative analysis, please include capital and planned and unplanned maintenance in the same schedule for all relevant system assets, historical and forecast.
- b) Please provide the same for relevant non-system assets, historical and forecast.
- c) If there are any outliers, please provide an explanation.
- d) Please explain why maintenance is only correlated to inflation rather than forecast in accordance with the state of the underlying assets.

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**Response:**

- a) OPUCN makes this as a qualitative statement and does not track this information in such a way to be able to quantify the value as requested.



- b) Refer to part a.
- c) OPUCN does not track this information to be able to identify outliers.
- d) Planned maintenance is established on time-based program and therefore, subject to annual inflation escalators rather than specific condition-based parameters.

**OSHAWA PUC NETWORKS INC.**

**Response to Board Staff Interrogatory 2.0-Staff-10**

**Ref: Exhibit 10/Tab B/page 4 – Cost Estimate Summary Table  
Exhibit 2/Tab A/page 12/ – Table 2-5 Capital Expenditures  
Exhibit 2/Tab B/page 40/Table 16 – Project Estimates  
Exhibit 2/Tab B/ Schedule 3/ p. 74-79/ Asset Management Plan – Capital and  
Maintenance Investments – Table 5.8**

With Regard to the Tables referenced:

- a) Do OPUCN's cost estimates include contingencies? If so what are these percentages?
  - b) Please clarify the comment in Table 16 regarding the pole replacement program.
  - c) Please provide a short explanation for the cost estimate differentials found at Table 16.
  - d) Did OPUCN rely on METSCO's budgeting analysis for its estimates? Please explain some of the variances for years 2017 and 2018. Are they related to the MS-9 substation?
- 

**Response:**

- a) Yes, OPUCN uses 15% for contingencies.
- b) The projects shown in Table 16 include replacing poles necessary for that project but there is a separate pole replacement program which is used for replacing poles to be in critical or poor condition identified by testing. This is detailed in Exhibit 2, Tab B, Schedule, p6.
- c) Cost Estimates were completed independent of each other. NBM uses their own methodology based on market information while OPUCN uses their own historical experience.

- d) No, we did not use METSCO's nor NBM's analysis for our estimates. NBM uses their own methodology based on market information while OPUCN uses their own historical experience. Yes, there are variances between OPUCN and NBM estimates for MS9: OPUCN's estimate is \$8,000,000; and NBM estimated \$10,204,219.

**OSHAWA PUC NETWORKS INC.**

**Response to Board Staff Interrogatory 2.0-Staff-11**

**Ref: Exhibit 2/Tab B/Schedule 7  
Exhibit 2/Tab B/Schedule 7/Appendices A to G**

To establish whether the most cost-effective actions have been adopted, staff suggests that the pre-filed evidence should include quantitative information on the economics of material projects/programs. Several of the projects are described as being driven by reliability considerations. OEB staff understands that these projects may impact system performance indicators.

- a) Where in the evidence is the economic evaluation of material projects, i.e. do nothing, vs. maintain vs. replace and a discussion of alternatives?
  - b) Please distinguish between discretionary and non-discretionary projects, and provide:
    - i. An overview of the economics of the project (eg. assumptions, NPV calculation) and a discussion of alternatives in that context;
    - ii. Where applicable please reference or submit additional documentation, such as independent studies that support a recommended option;
    - iii. Any investment pacing considerations related to each project; and
    - iv. Quantitative benefits to be incurred from maintaining/upgrading versus replacing the asset(s), such as lower operating costs, increased efficiency, increased reliability, improved performance indicators, etc.
- 

**Response:**

- a) We did not provide evidence for economic evaluation of material projects. In all cases of equipment replacement projects, they were evaluated to be at end of life based on condition assessments. In these cases, replacement on a like-for-like basis was the only consideration.

b) Discretionary Projects – All OPUCN evaluated and recommended capital projects.

Non-discretionary Projects – All Safety, Compliance and Customer Driven capital projects.

- i. We did not conduct an economic evaluation of project alternatives.
- ii. We did not conduct any independent reviews and studies.
- iii. Overall, investment pacing was a consideration when balancing resources and capabilities for OPUCN program delivery.
- iv. OPUCN does not quantify benefits by project. The underlying qualitative assessment is that area assets determined to be at end-of-life are expected to perform unreliably and result in negative customer experiences.

**OSHAWA PUC NETWORKS INC.**

**Response to Board Staff Interrogatory 2.0-Staff-12**

**Ref:**

- 1. Exhibit 2/ Tab B/ p. 72/ Table 31**
- 2. Exhibit 2/ Tab B/ p. 71, p. 85, and p. 92**
- 3. Exhibit 2/ Tab B/ Schedule 1/ OPA Letter**
- 4. Exhibit 2/ Tab B/ Schedule 4/ p. 12 (Capital Expense Forecast)**

In OPUCN's capital investment summary table (Reference 1), one entry is dedicated to "Ministry of Energy Approved Micro Grid Project". Further, at page 85 of Reference 2, OPUCN states that: "OPUCN's contribution to this project is its labour in kind".

At page 71 of Reference 2, OPUCN states that it "has adopted those UtiliWorks recommendations that will most affordably and cost effectively increase efficiencies to OPUCN system operations, improve on system outage durations, and minimize outage impact on its customers. The overall capital investment towards a "smarter grid" over the five year planning period is approximately \$2.6 million or 4% of the total overall DS Plan."

At Reference 3, the OPA Letter confirms that there are no future capital investments to accommodate FIT or microFIT initiatives over the 2015-2019 period.

At page 92 of Reference 2, and elsewhere in the pre-filed evidence, OPUCN affirms that system service expenditures are to incorporate new technologies that relate to grid modernization, many of which are 'smartening' the grid.

At Reference 4, the UtiliWorks' report provides a forecast of costs and benefits for OPUCN's Smart Grid initiatives. The forecast shows that while distribution operations will benefit from Smart Grid initiatives, the largest beneficiary over 2015-2019 are distributed resources, which according to the report include distributed generation, energy storage and demand response.

OEB staff notes that demand response is currently included in CDM initiatives.

- a) Respecting the micro-grid pilot project, please explain why 'labour in kind' is accounted for as a capital expenditure.
- b) Please explain how distribution operations would benefit further from additional capital spending in Smart Grid than what would already be accomplished through "smart" System Service upgrades.

- c) In the absence of planned future distributed resources, please explain how additional Smart Grid capital expenditures will provide an incremental benefit to OPUCN's customers?
- 

**Response:**

- a) The microgrid project is a build, install and grid connect project. We expect the capital contribution from the Ministry of Energy (Smart Grid Funding) to be applied to 50% of the project capital cost. OPUCN are completing the remainder of the project using its resources and are seeking rate relief for only that portion of the project.
- b) Some of the additional smart grid benefits to Distribution Operations:
- i. Develop real-time support for outage notification and restoration leading to improved response and reduced outage time.
  - ii. Improved safety and reliability through automated switching.
  - iii. Improved quality of service through active voltage monitoring.
  - iv. Deploying sensing equipment and video surveillance for substation monitoring thereby improving reliability and mitigating losses.
- c) Below find the accumulated benefits for each of the OPUCN Smart Grid projects submitted. The benefit over cost ratio in recommended projects exceed 1.0 supporting the business case to proceed.

<i>(All figures in \$000)</i>		Total Benefits
<b>Metering</b>	AMI Process Redesign	\$850.1
	Remote Connect/Disconnect	\$1,133.8
	AMI Extension	\$101.1
	Prepaid Metering	\$4,726.0
<b>Customer Service</b>	Billing System Redesign	\$282.2
	Enhanced IVR	\$1,388.5
<b>Distribution Operations</b>	Outage Management	\$2,165.6
	Voltage Monitoring	\$1,174.9
	Feeder Gateway Temperature Monitoring	\$1,196.2
	Automated Switching	\$379.5
<b>Distributed Resources</b>	Transmission Management	\$1,875.4
	Demand Management	\$2,645.8
	Load Control	\$10,583.1



**OSHAWA PUC NETWORKS INC.**

**Response to Board Staff Interrogatory 2.0-Staff-13**

**Ref: Exhibit 2/Tab B/page 72/Table 31**

As shown on this table, System Access accounts for about 23% of planned capital expenditures over 2015 -2019, and more than half of the increase is attributable to asset relocations to allow for highway works.

- a) After accounting for capital contributions, what is the rate impact of these asset relocations?
  - b) Please confirm the level of input provided to OPUCN prior to the adoption of the route where OPUCN's assets would be affected?
  - c) Is OPUCN aware of other route alternatives that would have avoided or lessened relocation costs?
- 

**Response:**

- a) The table below illustrates the annual rate impact of these asset relocations:

	2015	2016	2017	2018	2019	Total
Asset Relocations, Net	2,804,000	1,450,000	1,150,000	1,150,000	1,150,000	7,704,000
Revenue Requirement Impact	63,829	159,576	215,109	262,293	308,016	1,008,824

**Net Revenue Requirement Impact by Customer Class**

Customer Class	2015	2016	2017	2018	2019	Total
Residential	37,092	91,305	122,527	148,752	173,804	573,480
GS Less Than 50 KW	8,680	21,334	28,704	34,950	40,967	134,635
GS 50 To 999 KW	13,724	36,142	49,709	61,731	73,953	235,259
GS Intermediate 1,000 To 4,999 KW	1,729	4,102	5,099	5,688	6,092	22,709
Large Use	638	1,687	2,283	2,793	3,277	10,679
Street Lighting	1,790	4,566	6,210	7,691	9,134	29,391
Sentinel Lighting	5	11	14	16	18	65
Unmetered Scattered Load	171	429	563	672	769	2,605
<b>TOTAL</b>	<b>63,829</b>	<b>159,576</b>	<b>215,109</b>	<b>262,293</b>	<b>308,016</b>	<b>1,008,824</b>

**Annual Distribution Rate Impact by Customer (\$)**

Customer Class	2015	2016	2017	2018	2019
Residential	\$0.72	\$1.72	\$2.23	\$2.63	\$2.99
GS Less Than 50 KW	\$2.15	\$5.12	\$6.69	\$7.91	\$9.01
GS 50 To 999 KW	\$26.65	\$68.13	\$90.98	\$109.69	\$127.59
GS Intermediate 1,000 To 4,999 KW	\$152.97	\$350.56	\$424.89	\$458.71	\$475.95
Large Use	\$638.39	\$1,686.85	\$2,282.97	\$2,793.26	\$3,277.48
Street Lighting	\$0.14	\$0.34	\$0.45	\$0.54	\$0.63
Sentinel Lighting	\$0.21	\$0.53	\$0.70	\$0.82	\$0.94
Unmetered Scattered Load	\$0.58	\$1.45	\$1.90	\$2.27	\$2.59

**Average Annual Distribution Rate Impact by Customer (% of Distribution Charge)**

Customer Class	2015	2016	2017	2018	2019
All Classes	0.24%	0.56%	0.73%	0.86%	0.99%

- b) OPUCN does not have input into the initial route selection. However, we are consulted on the impact of the proposed route with OPUCN assets. In some cases, our input results in an amendment to the initial route which has a net effect of reducing the cost and impact to OPUCN plant.
- c) No, OPUCN is not aware of route alternatives for highway works.

**OSHAWA PUC NETWORKS INC.**

**Response to Board Staff Interrogatory 2.0-Staff-14**

**Ref: Exhibit 2/Tab B/pages 28-29/Table 3**

At this reference, OPUCN describes historic reliability performance in detail and states (at page 30) that its planning process “identifies projects in the System Renewal category to improve system reliability by mitigating the risk of in service failure of assets, significant outage duration and associated negative outage impact to its customers”.

Does OPUCN have a target or targets in relation to reliability performance improvement, including specifically in relation to equipment-related failures? What improvement, in which specific performance metric(s), would demonstrate value for money for OPUCN’s customers?

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**Response:**

Yes, OPUCN has a qualitative target in relation to reliability performance improvement as measured by the following metrics:

1. SAIDI
2. SAIFI
3. Momentary Interruptions (Auto Reclose)

The following improvements are being implemented by OPUCN to improve performance metrics in both frequency and duration metrics of reliability:

1. Replacement of faulty porcelain insulators and porcelain switches to address outages caused by equipment failures. (Defective equipment cause).
2. Installation of animal guards on transformer bushings to address outages caused by animal contact. (Foreign interference cause).
3. Overhead and underground rebuilds to replace equipment at end-of-life. (Defective equipment cause).

**OSHAWA PUC NETWORKS INC.**

**Response to Board Staff Interrogatory 2.0-Staff-15**

**Ref: Exhibit 2/Tab B/page 36**

OM&A per Customer: The DSP states that forecast OM&A cost per customer in 2019 will be unchanged from 2013. How sensitive is this result to the actual number of OPUCN customers at the end of 2019?

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**Response:**

OM&A Per Customer follows the Board's practice as reported in their annual Year book of Electricity Distributors. That is, the sum of Operating, Maintenance & Administration Expenses from the reported Income Statement divided by the sum of customers in the residential, small commercial and industrial categories (excludes street lights, unmetered and sentinel customer categories).

A reduction to the relative customer connections of 5,000 would result in OM&A per Customer of \$226. By way of comparison, the average OM&A per Customer for comparable utilities as per the Board's *Annual Yearbook of Electricity Distributors for 2013* [Exhibit 1, Tab C, page 32] was \$243.

**OSHAWA PUC NETWORKS INC.**

**Response to Board Staff Interrogatory 2.0-Staff-16**

**Ref: Exhibit 2/Tab B/pages 35-36**

Net Fixed Assets per Customer: The DSP states that OPUCN's forecast Average Net Fixed Assets per Customer in 2019 is \$1,818, which remains below the 2013 average for the comparable LDCs and that consequently, OPUCN's planned capital investment levels are fair and reasonable.

Staff notes that a measure of net fixed assets per customer shows growth of 27% from 2013 (\$1436/customer) to 2019 (\$1818/customer).

- a) Please provide the reasons for this growth per customer.
- b) Please confirm that this increase per customer will be greater if the forecast customer connections do not materialize by the end of 2019.
- c) Please explain why OPUCN has chosen two different "benchmarks" for OM&A per customer and net fixed assets per customer. That is, OM&A per customer is compared to OPUCN's historic level, while net fixed assets per customer is compared to other utilities' historic levels.

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**Response:**

- a) As presented in Exhibit 3, page 13:

"In 2012 and 2013, OPUCN's capital expenditure requirements have been significantly more than the allowed depreciation expense included in its Board-Approved rates. This pattern of high capital expenditures is forecast for the 2014 Bridge Year and 2015 Test Year also."

In addition, the following has been copied from Exhibit 3, page 15:

"The requirement for large capital expenditures experienced by OPUCN, which is the key driver for the decision to rebase early and the increase in operating revenue in 2015, was outlined in the cost of service rate application filed with the

Board in 2011 for rates beginning in 2012. The following highlighted material was copied from the rate application as filed.

*OPUCN's capital investment in its distribution plant has averaged approximately \$5 million per year over the past 10 years. By comparison, OPUCN estimates that it will require average capital expenditures of approximately \$12 million over the next five years, beginning with 2011.*

*As presented in the Asset Condition Assessment and Asset Management Plan ("Asset Management Plan") prepared by Metsco Energy Solutions filed as Appendix A to this Exhibit, this level of investment is required to upgrade the Company's assets which are near or at the end of their useful lives and to ensure the City of Oshawa continues to receive safe and reliable power in the future.*

*A summary of the expected capital expenditures over the next five years is presented below:*

- 2011 – \$10,740,059
- 2012 – \$11,122,343
- 2013 – \$11,885,858
- 2014 – \$13,594,095
- 2015 – \$13,312,993

The total in-service capital expenditures for the five year period presented in the 2012 cost of service rate application was \$60 million and did not include the investment in smart meters. Based upon actual expenditures on in-service capital for 2011 through 2013 (net of smart meters) plus forecast 2014 and 2015, the total spend is expected to be \$58 million.

Total planned in-service capital expenditures outlined in OPUCN's 2012 cost of service application are in line with actual expenditures for 2011, 2012 and 2013 plus forecast 2014 and 2015 amounts. The investment in smart meters was excluded from the comparison due to the special circumstances in reporting the expenditures and recognition was subject to a separate Board review and Decision.

The requirement for capital expenditures outlined in OPUCN's 2012 cost of service application was acknowledged by the Board as evidenced in their decision to: approve \$10.2 million for 2012; and, additionally, approve an Accounting Order for an asymmetrical variance account to capture the difference

between actual capital expenditures and the Board-Approved amount in the event the actual amount is lower.

The following has been copied from OPUCN's Draft Rate Order dated December 13, 2011:

Issue 2.3, "Are the capital expenditures appropriate?"

On page 11 of the Settlement Agreement, the Parties agreed that the resulting forecast of 2012 Test Year capital expenditures is appropriate. However, in the event that actual capital expenditures are less than the amount forecast, the Parties have agreed that it is appropriate to establish an asymmetrical variance account ("Capital Additions Variance Account") that would provide for the return to customers of the revenue requirement impact related to the difference between \$10.2 million (under IFRS) of capital expenditures, and actual 2012 capital expenditures, if lower.

The Capital Additions Variance Account would record the difference in all components of annual revenue requirement (including, but not limited to, depreciation, interest, return on equity and PILs) resulting from any under spending on total capital expenditures closed to rate base in the Test Year.

That is, if the capital expenditures are less than \$10.2 million, the revenue requirement impact of the shortfall will be calculated and credited to the account. The account would be subject to disposition in accordance with the Board's normal policies from time to time on the disposition of applicable variance accounts.

In addition, the Transcript Oral Hearing 20111206 filed on December 6, 2011 relating to the 2012 cost of service application included recordings of: a discussion regarding capital expenditure requirements for the years 2013 through 2015; and mechanisms to ensure OPUCN investments in its capital expenditures met its planned spend included in the table above."

As noted above, OPUCN identified its need to escalate investments in capital expenditures in its 2012 cost of service rate application. The period covered by this explanation is 2011 through 2015.

In relation to Board Staff's question on reasons for capital expenditure requirements for the Test Years 2015 through 2019, I refer the readers to OPUCN's Distribution System Plan ("Plan") which can be found in Exhibit 3, Tab B. The Plan outlines in detail the capital expenditure requirements and drivers for them for the Test Years.

- b) The increase in Net Fixed Assets Per Customer is also impacted by the number of customer connections forecast for the period. Therefore, if the actual change in customer connections differ from forecast the change in Net Fixed Assets Per Customer will also differ.
- c) OPUCN uses several metrics informed by the Board's annual Yearbook of Electricity Distributors throughout its application. For example, in Exhibit 1, Tab C, page 29 OPUCN provides *Table 12: Historical Net Fixed Assets per Customer: OPUCN and Comparators* which compares its results to other utilities. The information can also be used to compare changes over time. Similarly, comparisons using OM&A per Customer can be found throughout the application, including Exhibit 1, Tab C page 32 in *Table 15: Ontario LDC OM&A Cost per Customer Data* which can be used to compare OPUCN with comparable utilities or to measure changes in results over time.



**OSHAWA PUC NETWORKS INC.**

**Response to Board Staff Interrogatory 2.0-Staff-17**

**Ref: Exhibit 2/Tab B/7/G, page 4  
New Municipal Substation MS9**

OPUCN states that in the past, load growth did not materialize as originally forecasted and that accordingly, the MS9 investment was placed on hold. OPUCN acknowledges (at page 92) that there is a risk that the load may not materialize in full or at the pace projected by the City of Oshawa, but expresses confidence that the new substation is required and that the design and construction needs to start in 2015.

- a) Given the apparent risks, how will OPUCN ensure customer value from the MS9 investment – which represents almost 50% of proposed System Service capital expenditure over the 5 year plan period – is achieved?
  - b) Since the development of MS9 is expected to take three to four years, what would the impact to OPUCN be if the start of development was delayed to 2016 or 2017?
- 

**Response:**

- a) There are already existing capacity constraints during system peak hours as identified in the local planning meetings. As a short term measure, OPUCN is prudently planning to mitigate these constraints through interim operational measures with the collaboration of other LDC's. The permanent solution is construction of MS9 to serve new load due to customer growth as planned for with the construction of the new Enfield transmission station. This will ensure a permanent capacity solution is available that aligns with the customer growth.
- b) OPUCN is already implementing operational measures to mitigate the risks during system peak hours. In delaying MS9, OPUCN will be taking on additional risks in both reliability of supply to existing customers and construction costs to serve new load growth to meet customer service obligations. Delaying the start of MS9 project would compress the construction schedule by 50% with a 2018 in-service date which will increase the project cost

**OSHAWA PUC NETWORKS INC.**

**Response to The Consumers Council of Canada (CCC)  
Interrogatory 2.0-CCC-26**

**(Ex.2/TA/ p.84)**

Please provide a version of Table 2-32 on an in-service additions basis.

---

**Response:**

Please refer to 2.0-SEC-13 for response.

**OSHAWA PUC NETWORKS INC.**

**Response to The Consumers Council of Canada (CCC)  
Interrogatory 2.0-CCC-27**

**(Ex.2/TA/ p.112)**

Please explain the methodology used to estimate the allocation of capital contributions between OPUCN, Hydro One Distribution and Hydro One Transmission, for the upgrades to the Thornton TS. If the methodology that Hydro One has proposed, that is the subject of the EB-2013-0421 Phase 2 proceeding, is approved how would the amount OPUCN be required to contribute be affected?

---

**Response:**

Please refer to 2.0-SEC-14 for response.

**OSHAWA PUC NETWORKS INC.**

**Response to The Consumers Council of Canada (CCC)  
Interrogatory 2.0-CCC-28**

**(Ex.2/TA)**

Please provide any further information OPUCN has regarding the contribution for a permanent capacity constraint relief solution that the utility may have received from further meetings with Hydro One and IESO.

---

**Response:**

Please refer to 2.0-Staff-6 for response.

**OSHAWA PUC NETWORKS INC.**

**Response to The Consumers Council of Canada (CCC)  
Interrogatory 2.0-CCC-29**

**(Ex.2/TA/p.145)**

Please provide the forecast of OPUCN's reliability metrics for 2015-2019.

---

**Response:**

Please refer to 2.0-SEC-24 for response.

**OSHAWA PUC NETWORKS INC.**

**Response to Energy Probe Research Foundation (Energy Probe)  
 Interrogatory 2.0-Energy Probe-3**

**Ref: Exhibit 2, Tab A**

Please update Tables 2-1 and 2-2 to reflect actual data for 2014.

**Response:**

Summary of Rate Base:

**Table 2-1**

Account Description	Board-Approved	Actual		Bridge Year	Test Years at Proposed Rates				
	2012	2012	2013	2014	2015	2016	2017	2018	2019
Opening Fixed Assets, Net Book Value	60,896,584	61,933,453	69,526,603	76,200,678	82,729,353	92,411,219	98,925,784	106,114,598	112,984,262
Closing Fixed Assets, Net Book Value	68,036,873	69,526,603	76,200,678	82,729,353	92,411,219	98,925,784	106,114,598	112,984,262	117,993,326
Average Fixed Assets, Net Book Value	64,466,729	65,730,028	72,863,640	79,465,015	87,570,286	95,668,501	102,520,191	109,549,430	115,488,794
Cost of Power	97,524,785	96,181,988	102,012,056	103,265,711	120,634,817	122,428,838	123,586,740	124,964,741	125,921,985
Operation Expenses	982,254	1,167,906	919,397	1,374,416	1,288,018	1,484,147	1,593,497	1,579,144	1,410,513
Maintenance Expenses	1,409,450	1,094,190	1,313,715	1,096,733	1,346,279	1,375,515	1,405,469	1,436,077	1,467,354
Billing and Collecting Expenses	2,433,401	2,398,127	2,462,960	2,464,873	2,653,062	2,715,401	2,780,102	2,846,477	2,914,572
Administrative and General Expenses	6,505,765	6,430,919	6,361,731	6,158,401	6,699,898	6,877,527	6,942,612	7,079,635	7,219,041
Taxes Other than Income Taxes	149,350	149,309	152,292	113,474	158,445	161,613	165,007	168,473	172,010
Working Capital	109,005,005	107,422,438	113,222,151	114,473,607	132,780,518	135,043,042	136,473,428	138,074,546	139,105,474
Working Capital Allowance Rate	15.0%	15.0%	15.0%	15.0%	13.0%	13.0%	13.0%	13.0%	13.0%
Working Capital Allowance	16,350,751	16,113,366	16,983,323	17,171,041	17,261,467	17,555,595	17,741,546	17,949,691	18,083,712
Rate Base	80,817,479	81,843,394	89,846,963	96,636,056	104,831,753	113,224,097	120,261,737	127,499,121	133,572,506

Variations in Year over Year Rate Base:

Table 2-2

Account Description	2012 Actual to 2012 Board-Approved	2013 Actual to 2012 Actual	2014 Bridge Year to 2013 Actual	2015 Test Year to 2014 Bridge Year	2016 Test Year to 2015 Test Year	2016 Test Year to 2015 Test Year	2016 Test Year to 2015 Test Year	2016 Test Year to 2015 Test Year
Opening Fixed Assets, Net Book Value	1,036,869	7,593,150	6,674,075	6,528,675	9,681,866	6,514,565	7,188,814	6,869,664
Closing Fixed Assets, Net Book Value	1,489,730	6,674,075	6,528,675	9,681,866	6,514,565	7,188,814	6,869,664	5,009,063
Average Fixed Assets, Net Book Value	1,263,299	7,133,612	6,601,375	8,105,271	8,098,216	6,851,690	7,029,239	5,939,364
Cost of Power	(1,342,798)	5,830,068	1,253,655	17,369,106	1,794,021	1,157,902	1,378,000	957,244
Operation Expenses	185,652	(248,509)	455,019	(86,398)	196,130	109,350	(14,353)	(168,631)
Maintenance Expenses	(315,260)	219,525	(216,982)	249,546	29,236	29,954	30,608	31,276
Billing and Collecting Expenses	(35,274)	64,833	1,913	188,189	62,339	64,701	66,374	68,096
Administrative and General Expenses	(74,846)	(69,187)	(203,330)	541,497	177,629	65,085	137,023	139,405
Taxes Other than Income Taxes	(41)	2,983	(38,818)	44,971	3,169	3,394	3,465	3,538
Working Capital	(1,582,567)	5,799,713	1,251,456	18,306,910	2,262,524	1,430,387	1,601,118	1,030,928
Working Capital Allowance	(237,385)	869,957	187,718	90,426	294,128	185,950	208,145	134,021
Rate Base	1,025,914	8,003,569	6,789,093	8,195,697	8,392,344	7,037,640	7,237,385	6,073,384

**OSHAWA PUC NETWORKS INC.**

**Response to Energy Probe Research Foundation (Energy Probe)  
Interrogatory 2.0-Energy Probe-4**

**Ref: Exhibit 2, Tab A**

- a) Please update Table 2-3 to reflect actual data for 2014. Please also include figures for 2011.
  - b) Based on the response to part (a), what is the average actual expenditures for 2011 through 2014?
  - c) Please revise Table 2-4 to show the multiple to one decimal place, similar to Table 2-3.
  - d) What is the average level of forecasted capital expenditures for 2015 through 2019?
  - e) Please provide a version of Table 2-4 that removes the capital expenditures and depreciation expense associated with the \$6.5 million in cost contributions to Hydro One Networks Transmission for a regional transmission capacity solution and the \$9.0 million associated with the new MS9 substation.
  - f) Please confirm that OPUCN does not consider its forecasted capital expenditures in 2015 through 2019 to be highly variable. If this cannot be confirmed, please explain.
  - g) The Board has indicated that the Custom IR approach is most appropriate for distributors with investment needs that exceed historical levels. Based on the responses above, please show how the forecasted investment needs in 2015 through 2019 exceed the historical levels in 2011 through 2014, with and without the two projects noted in part (e).
- 

**Response:**

Please refer to 1.0-CCC-11 for response.



**OSHAWA PUC NETWORKS INC.**

**Response to Energy Probe Research Foundation (Energy Probe)  
 Interrogatory 2.0-Energy Probe-5**

**Ref: Exhibit 2, Tab A**

- a) Please update Table 2-5 to reflect actual data for 2014.
- b) Please divide the system access figures in Table 2-5 and the associated 3rd party contributions into amounts associated with each of third party requests for plant relocation, expansions and service connections, and metering.

**Response:**

a) Updated Table 2-5:

CATEGORY	Historical Period (previous plan <sup>1</sup> & actual)						Forecast Period (planned)				
	2010	2011	2012		2013	2014	2015	2016	2017	2018	2019
	Actual	Actual	Plan	Actual	Actual	Actual					
	\$ '000	\$ '000	\$ '000		\$ '000	\$ '000	\$ '000				
System Access	1,447	8,913	2,609	2,899	4,042	3,940	8,995	4,140	3,550	3,435	3,455
System Renewal	4,637	7,039	7,037	7,162	5,971	6,467	4,883	4,932	4,472	4,761	4,851
System Service	0	0		0	1,903	2,234	2,868	2,830	4,670	4,645	3,050
General Plant	775	1,476	1,500	2,302	530	487	1,675	1,180	755	730	510
TOTAL EXPENDITURE GROSS	6,859	17,428	11,146	12,363	12,446	13,128	18,421	13,082	13,447	13,571	11,866
Less 3rd Party Contributions	(2,173)	(931)	(931)	(1,271)	(1,699)	(2,471)	(4,911)	(1,455)	(1,075)	(1,095)	(1,105)
TOTAL EXPENDITURE NET	4,686	16,497	10,215	11,092	10,747	10,657	13,510	11,627	12,372	12,476	10,761
System O&M	1,576	1,798	2,392	2,262	2,233	2,471	2,634	2,860	2,999	3,015	2,878

b)

Projects	2010	2011	2012	2013	2014 Bridge Year	2015 Test Year	2016 Test Year	2017 Test Year	2018 Test Year	2019 Test Year
Subdivisions, Expansions	918	1,300	1,816	2,601	2,793	1,185	1,170	1,150	1,180	1,215
Service Connections	430	366	150	160	27	120	110	100	100	100
Service/Expansion Contributions	(2,034)	(931)	(1,271)	(1,459)	(1,875)	(650)	(675)	(690)	(705)	(730)
Relocation	0	467	347	708	617	7,065	2,230	1,535	1,540	1,525
Relocation Contributions	(139)	0	0	(240)	(165)	(4,261)	(780)	(385)	(390)	(375)
Metering	99	6,780	586	573	502	625	630	765	615	615
Total System Access	(726)	7,982	1,628	2,343	1,898	4,084	2,685	2,475	2,340	2,350

**OSHAWA PUC NETWORKS INC.**

**Response to Energy Probe Research Foundation (Energy Probe)  
Interrogatory 2.0-Energy Probe-6**

**Ref: Exhibit 2, Tab 1**

On page 16 it is stated that the total expenditures for system renewal over the 2015-2019 period is approximately \$23.9 million which includes unplanned emergency type replacements of \$4.2 million.

- a) Please confirm that the \$4.2 million is for the 5 year period, or about \$0.84 million per year on average.
  - b) What were the average capital expenditures over the 2011 through 2014 period for unplanned emergency type replacements?
- 

**Response:**

- a) Yes, the \$4.2 million is the total for the 5 year period.
- b) The average annual expenditures over the 2011 through 2014 period for unplanned emergency type replacements was \$800,000.

**OSHAWA PUC NETWORKS INC.**

**Response to Energy Probe Research Foundation (Energy Probe)  
 Interrogatory 2.0-Energy Probe-7**

**Ref: Exhibit 2, Tab A**

Please update Tables 2-9 and 2-10 to reflect actual data for 2014.

**Response:**

Table 2-9 2014 Actual Comparison to 2013 Rate Base:

Account Description	Actual	Bridge Year	Variance	
	2013	2014	\$	%
Opening Fixed Assets, Net Book Value	69,526,603	76,200,678	6,674,075	9.6%
Closing Fixed Assets, Net Book Value	76,200,678	82,729,353	6,528,675	8.6%
Average Fixed Assets, Net Book Value	72,863,640	79,465,015	6,601,375	9.1%
Cost of Power	102,012,056	103,265,711	1,253,655	1.2%
Operation Expenses	919,397	1,374,416	455,019	49.5%
Maintenance Expenses	1,313,715	1,096,733	-216,982	-16.5%
Billing and Collecting Expenses	2,462,960	2,464,873	1,913	0.1%
Administrative and General Expenses	6,361,731	6,158,401	-203,330	-3.2%
Taxes Other than Income Taxes	152,292	113,474	-38,818	-25.5%
Working Capital	113,222,151	114,473,607	1,251,456	1.1%
Working Capital Allowance	16,983,323	17,171,041	187,718	1.1%
Rate Base	89,846,963	96,636,056	6,789,093	7.6%

Table 2-10 2015 Test Year Comparison to 2014 Rate Base:

Account Description	Bridge Year	Test Year	Variance	
	2014	2015	\$	%
Opening Fixed Assets, Net Book Value	76,200,678	82,729,353	6,528,675	8.6%
Closing Fixed Assets, Net Book Value	82,729,353	92,411,219	9,681,866	11.7%
Average Fixed Assets, Net Book Value	79,465,015	87,570,286	8,105,271	10.2%
Cost of Power	103,265,711	120,634,817	17,369,106	16.8%
Operation Expenses	1,374,416	1,288,018	-86,398	-6.3%
Maintenance Expenses	1,096,733	1,346,279	249,546	22.8%
Billing and Collecting Expenses	2,464,873	2,653,062	188,189	7.6%
Administrative and General Expenses	6,158,401	6,699,898	541,497	8.8%
Taxes Other than Income Taxes	113,474	158,445	44,971	39.6%
Working Capital	114,473,607	132,780,518	18,306,910	16.0%
Working Capital Allowance	17,171,041	17,261,467	90,426	0.5%
Rate Base	96,636,056	104,831,753	8,195,697	8.5%

**OSHAWA PUC NETWORKS INC.**

**Response to Energy Probe Research Foundation (Energy Probe)  
Interrogatory 2.0-Energy Probe-8**

**Ref: Exhibit 2, Tab A, pages 43-52**

- a) Have there been any changes to the rates for the smart meter entity charge, Ontario clean energy benefit, wholesale market services, transmission - network, transmission - connection or rural rate assistance since OPUCN calculated the cost of power component of working capital? If yes, please update Tables 2-15 to 2-21 to reflect these changes.
  - b) In addition to any changes noted in part (a) above, please update the cost of power in Tables 2-14 to 2-21 to reflect the April, 2015 Regulated Price Plan Price Report (beginning with May 2015 and using the current forecasts for January through April, 2015).
  - c) What year of historical data has OPUCN used to calculate the split between RPP and non-RPP volumes for the residential and GS< 50 classes?
  - d) Please provide the split between RPP and non-RPP volumes based on actual 2014 consumption.
- 

**Response:**

- a) No.
- b) To be filed as part of an update.
- c) 2010.
- d) The split based on 2014 Actual is:
  - Residential 91.9% (vs 83.0%).
  - Commercial 81.6% (vs 81.7%).

**OSHAWA PUC NETWORKS INC.**

**Response to Energy Probe Research Foundation (Energy Probe)  
Interrogatory 2.0-Energy Probe-9**

**Ref: Exhibit 2, Tab A**

- a) Please confirm that the proposal to adjust the working capital component of rate base on an annual basis for changes in the rates for the cost of power (page 30) is similar to that approved for Enbridge Gas Distribution in EB-2012-0459, in that the update will reflect both the change in the rates to be applied to the volumes and to the volumes that will be also be updated on an annual basis. If this cannot be confirmed, please explain fully what adjustments would be included in the annual adjustment.
  - b) Would the annual adjustment also reflect the most recent information used to determine the split between RPP and non-RPP volumes?
- 

**Response:**

- a) OPUCN prefers to not comment on the Decision for Enbridge Gas Distribution in EB-2012-0459. However, in Exhibit 10, Tab 10 OPUCN outlines its proposal for Annual Rate Adjustment Mechanisms (“Mechanisms”). Included in the Mechanisms proposed, OPUCN is seeking approval to adjust its volumes and rates both of which will be used in adjusting working capital prospectively from the year of adjustment.
- b) Yes.

**OSHAWA PUC NETWORKS INC.**

**Response to Energy Probe Research Foundation (Energy Probe)  
Interrogatory 2.0-Energy Probe-10**

**Ref: Exhibit 2, Tab A, Appendix 2-BA**

- a) Please confirm that OPUCN does not capitalize or expense any depreciation expense.
  - b) Please update the continuity schedule for 2014 to reflect actual data and the continuity schedules for 2015 through 2019 to reflect changes emanating from 2014 actuals.
  - c) Please explain why and how the net book value for meters is negative in each of 2012 through 2019 and growing in magnitude over this period.
  - d) Please explain why there is no depreciation expense shown for smart meters in 2012.
  - e) Please explain why there is no depreciation expense shown in any of 2014 through 2019 for smart meters. If this is related to the ongoing depreciation expense shown for meters in each of those years, please provide revised continuity schedules for all years that show the depreciation expense properly allocated between meters and smart meters.
  - f) What is the depreciation rate used for meters and for smart meters?
  - g) Please explain why OPUCN continues to record expenditures related to computer hardware as part of CCA Class 10, rather than CCA Class 50?
- 

**Response:**

- a) A portion of depreciation expense is included in the vehicle charge-out rates, which will be capitalized where allocated to capital jobs.
- b) OPUCN to provide updated models.



- c) There are two rows containing meter costs which should be aggregated.
- d) See c) above.
- e) See c) above.
- f) Smart meters are amortised over 10 years. All other meter types are amortised over their useful lives as per the Kinetrics Asset Depreciation Study prepared for the OEB in 2011.
- g) OPUCN will update models to direct relevant expenditures to Class 50.

**OSHAWA PUC NETWORKS INC.**

**Response to Energy Probe Research Foundation (Energy Probe)  
Interrogatory 2.0-Energy Probe-11**

**Ref: Exhibit 2, Tab A, Appendix 2-BA**

OPUCN has capital expenditures in each of 2014 through 2019 related to transportation equipment.

- a) For each year, please indicate whether or not the expenditures are for replacement vehicles or net new additions to the fleet.
  - b) Please explain why there are no disposals (costs and accumulated depreciation) associated with transportation equipment in any of 2014 through 2019. Are all of the vehicles being replaced and disposed of fully depreciated at the time of their replacement?
- 

**Response:**

- a) All expenditures are for replacement vehicles.
- b) All replacements are scheduled at or close to expected end of useful lives of original vehicles. The expectation is that any gain/loss on disposals will not be material.

**OSHAWA PUC NETWORKS INC.**

**Response to Energy Probe Research Foundation (Energy Probe)  
Interrogatory 2.0-Energy Probe-12**

**Ref: Exhibit 2, Tab A, pages 112-113**

- a) How has OPUCN estimated the potential \$10 to \$12 million contribution noted on page 112? In particular, how have the estimated regional benefits been allocated among OPUCN and other distributors?
  - b) What is the current expectation of when the project will be completed and placed into service?
  - c) The evidence indicates that OPUCN previously purchased the land for the MS9 distribution station.
    - i. When did OPUCN purchase the land?
    - ii. What was the cost of the land?
    - iii. When did OPUCN include the land in rate base for regulatory purposes?
    - iv. What has OPUCN used the land for since its purchase given that this project was placed on hold?
  - d) When is this new MS9 substation expected to be completed and placed into service?
- 

**Response:**

- a) The estimate was provided by HONI (Refer to Exhibit 2, Tab B, Schedule 2, p3) and OPUCN's contribution is based on the prorated requirement for the capacity reserved for its customers.
- b) HONI has indicated through its latest correspondence to OPUCN that the proposed new station (Enfield TS) has an anticipated in service date of 2018.
- c) As per the following:

- i. 2006.
  - ii. The purchase cost was \$158,723.
  - iii. Since 2008.
  - iv. The land has been reserved for the new substation.
- d) MS9 substation is expected to be completed and placed in service in 2018.

**OSHAWA PUC NETWORKS INC.**

**Response to Energy Probe Research Foundation (Energy Probe)  
Interrogatory 2.0-Energy Probe-13**

**Ref: Exhibit 2, Tab A**

On page 144, it is stated that vehicle hourly charges are calculated by totaling fuel, repairs and maintenance, depreciation and other directly attributable costs, then dividing by the estimated number of available for use hours. These hourly charges are then allocated to individual capital projects through the OPUCN timesheet system.

- a) If depreciation expense is allocated to and included in the vehicle hourly charges, please explain why there is no reduction in depreciation expense shown in Appendix 2-BA to reflect the allocation of some of this expense to capital expenditures.
- b) Please confirm that the OM&A expenses included in this application do not include any costs associated with vehicle fuel, repairs and maintenance and other directly attributable costs (such as insurance) that have ultimately been allocated to capital expenditures. Please show how this has been accomplished in terms of the amounts allocated to the capital expenditures and excluded from OM&A.

---

**Response:**

- a) The expense reduction associated with the allocation is mapped against OM&A in the Income Statement, not as a reduction to depreciation expense, and so does not appear on Appendix 2-BA.
- b) Confirmed.

As noted on page 144, vehicle hourly charges are calculated by totaling fuel, repairs and maintenance, depreciation and other directly attributable costs, then dividing by the estimated number of available for use hours. These hourly charges are then allocated to individual capital projects through the OPUCN timesheet system. The allocation entry credits the same OM&A area where the original OM&A expenses are debited (other than depreciation – refer to part a).

**OSHAWA PUC NETWORKS INC.**

**Response to Energy Probe Research Foundation (Energy Probe)  
Interrogatory 2.0-Energy Probe-14**

**Ref: Exhibit 2, Tab A**

Please update Tables 2-52, Table 2-53 and the figures shown on pages 146, 147 and 149 to reflect actual data for 2014.

---

**Response:**

OPUCN to provide updated models.

**OSHAWA PUC NETWORKS INC.**

**Response to Energy Probe Research Foundation (Energy Probe)  
Interrogatory 2.0-Energy Probe-15**

**Ref: Exhibit 2, Tab A, page 19 and Schedule 1**

Please explain why OPUCN has used 13% for the calculation of the working capital allowance when the recommended figure found in the EY report in Schedule 1 at page 4 is 12.74%.

---

**Response:**

OPUCN rounded to 13%. The difference does not meet materiality.

**OSHAWA PUC NETWORKS INC.**

**Response to Energy Probe Research Foundation (Energy Probe)  
Interrogatory 2.0-Energy Probe-16**

**Ref: Exhibit 2, Tab A, Schedule 1**

Please confirm that all of OPUCN's customers are billed on a monthly basis. If this cannot be confirmed, please provide an estimate, by rate class, of the revenues from customers that are billed on monthly basis and the revenues from customers that are billed on any other frequency.

---

**Response:**

Confirmed.



**OSHAWA PUC NETWORKS INC.**

**Response to Energy Probe Research Foundation (Energy Probe)  
Interrogatory 2.0-Energy Probe-17**

**Ref: Exhibit 2, Tab A, Schedule 1**

Does OPUCN agree that when specific service start and end dates are unknown but it is known that a service is evenly distributed over a period, the mid-point of the period can be calculated as the number of days in a year divided by the number of periods in year, all divided by 2? If not, please explain fully.

---

**Response:**

As per page 5 of Exhibit 2, Tab A, Schedule 1:

Methodology for calculating lead and lag for services over period of time

When a service is provided to the company over a period of time, the service is considered to have been provided evenly over the midpoint of the period unless information is provided on actual receipt of service date. For calculation purposes, Mid-point =  $([\text{End Date}] - [\text{Start Date}]) / 2$ .

When Start Date and End Date are unknown, the service is evenly distributed over the duration of the service period. For calculation purposes, Mid-point =  $([\text{Service Period in days}]) / 2$ .

**OSHAWA PUC NETWORKS INC.**

**Response to Energy Probe Research Foundation (Energy Probe)  
Interrogatory 2.0-Energy Probe-18**

**Ref: Exhibit 2, Tab A, Schedule 1**

- a) Please show the calculation of the weighted average service lag of 20.41 days for 2012 and 21.44 days for 2013. Please show all figures and assumptions used.
  - b) If the larger revenue customers were billed near the beginning of each month, would this result in OPUCN having a service lag that is shorter than the typical midpoint of 15 days? If not, please explain fully.
  - c) Please confirm that all the revenue lags (service, billing, collection, payment processing) calculated in 2012 included the impact of the leap year.
- 

**Response:**

- a) The calculation takes the average end of month unbilled revenue at month ends as a percent of average monthly billed revenue converted into days of sale, divided by two plus billing processing time.  
  
Average unbilled revenue at month ends was \$11,737,285 in 2012 and \$12,566,542 in 2013 compared with average billed revenue of \$10,852,411 and \$11,164,410 in 2012 and 2013 respectively. This converts to 32.89 and 34.23 days of sale or 16.45 and 17.11 days when divided by two. Add 4 days to each for processing.
- b) The calculation uses actual unbilled service amounts at month end measurements - the lead-lag study was based on aggregate of all customer revenues.
- c) Calculations did not include the impact of leap year in 2012, this impact was considered immaterial.

**OSHAWA PUC NETWORKS INC.**

**Response to Energy Probe Research Foundation (Energy Probe)  
Interrogatory 2.0-Energy Probe-19**

**Ref: Exhibit 2, Tab A, Schedule 1**

Table 4 shows the calculation of the collection lag.

- a) Please confirm that the calculation of the days sales outstanding (DSO) is based on the division of the accounts receivable by the sales figures shown for each month, multiplied by 31 days in a month, even for those months that do not have 31 days.
  - b) Please confirm that the average of 21.93 and 22.30 days is a straight average and is not a dollar weighted average of the monthly figures.
  - c) Please provide a version of Table 4 that reflects the actual number of days in each month for the DSO, along with the dollar weighted average of the monthly figures.
- 

**Response:**

- a) DSO is calculated on per month basis based on the number of days in the month - not based on 31 days.
- b) 21.93 and 22.30 are straight averages of the monthly DSO for the respective two years.

c) Refer to the following table:

Month	Days	2012 AR (\$)	2012 Sales (inc HST) (\$)	2012 DSO	2012 DSO Weight	2013 AR (\$)	2013 Sales (inc HST) (\$)	2013 DSO	2013 DSO Weight
January	31	8,621,347	12,109,249	22.07	267,261,757	7,145,042	13,078,717	16.94	221,496,302
February	28	8,585,264	12,044,313	22.10	266,143,184	8,312,164	11,116,643	23.18	257,677,084
March	31	7,253,461	10,288,543	21.86	224,857,291	9,045,331	12,630,566	22.20	280,405,261
April	30	8,040,385	10,598,873	23.52	249,251,935	8,803,925	10,529,526	25.92	272,921,675
May	31	6,960,374	9,314,084	23.17	215,771,594	7,481,134	10,312,190	22.49	231,915,154
June	30	6,401,592	10,104,920	19.64	198,449,352	8,301,779	9,515,305	27.05	257,355,149
July	31	8,109,612	13,121,633	19.16	251,397,972	7,525,979	12,174,410	19.16	233,305,349
August	31	8,611,755	11,256,054	23.72	266,964,405	8,613,383	13,646,841	19.57	267,014,873
September	30	9,588,859	11,049,954	26.90	297,254,629	8,169,114	9,207,726	27.50	253,242,534
October	31	5,980,441	8,649,888	21.43	185,393,671	7,334,893	10,844,331	20.97	227,381,683
November	30	6,721,068	10,550,312	19.75	208,353,108	7,825,589	9,752,259	24.88	242,593,259
December	31	7,123,147	11,141,111	19.82	220,817,557	8,108,450	14,113,022	17.81	251,361,950
<b>Average</b>				<b>21.93</b>				<b>22.30</b>	
<b>Weighted Average</b>					<b>21.90</b>				<b>21.89</b>

**OSHAWA PUC NETWORKS INC.**

**Response to Energy Probe Research Foundation (Energy Probe)  
Interrogatory 2.0-Energy Probe-20**

**Ref: Exhibit 2, Tab A, Schedule 1**

Payment by cheque and credit card are noted in the calculation of the payment processing lag. Does OPUCN have customers that pay by internet, debit card or pre-authorized payments? If yes, how are these payments taken into account in the calculation of the payment processing lag?

---

**Response:**

The calculations took into account cheque and credit card for the payment processing lag, other electronic payment methods not included, however, OPUCN does not believe they would materially change lead lag outcome.

**OSHAWA PUC NETWORKS INC.**

**Response to Energy Probe Research Foundation (Energy Probe)  
Interrogatory 2.0-Energy Probe-21**

**Ref: Exhibit 2, Tab A, Schedule 1**

- a) Did OPUCN investigate the source of the significant difference in the revenue lag for completion of service shown in Table 6 between 2012 and 2013?
  - b) Were there any large one-time projects in either 2012 or 2013 that led to most of this difference? If yes, please recalculate the revenue lag with these projects removed.
  - c) If the response to part (b) is no, please expand Table 6 to include the calculation of the revenue lag for 2014.
- 

**Response:**

- a) Completion of Services account for 1% and 2% of weighted revenue lag in 2012 and 2013 respectively. This does not materially affect overall revenue lag. For the purposes of the lead-lag analysis, this difference was not investigated.
- b) Refer to part a).
- c) Refer to part a).

**OSHAWA PUC NETWORKS INC.**

**Response to Energy Probe Research Foundation (Energy Probe)  
Interrogatory 2.0-Energy Probe-22**

**Ref: Exhibit 2, Tab A, Schedule 1**

- a) Do the cost of power expense leads of 19.70 and 20.89 days indicate that based on an average month of 15.21 days, the payments are made on average 4.49 days (2012) and 5.68 days (2013) following month end?
  - b) Please provide a table that shows for each month of 2012 and for each month of 2013, the amounts billed and paid to the IESO, along with the payment date associated with the invoice.
  - c) Please provide a table that shows for each month of 2012 and for each month of 2013, the amounts billed and paid to embedded generators, along with the payment date associated with each of the invoices.
- 

**Response:**

- a) Cost of Power expense lead was calculated using average Power Accounts Payable at month end and Total Power expenses for the year as stated in the report. The calculation is  $(\text{average Power AP} / \text{Total Power expenses}) \times 365$  as stated in the report.
- b) The calculations were based on year-end overall total power expenses and average month end Power Accounts Payable balances.
- c) The calculations were based on year-end overall total power expenses and average month end Power Accounts Payable balances.

**OSHAWA PUC NETWORKS INC.**

**Response to Energy Probe Research Foundation (Energy Probe)  
Interrogatory 2.0-Energy Probe-23**

**Ref: Exhibit 2, Tab A, Schedule 1**

- a) The evidence states that employees are paid on a bi-weekly basis and that payments are released and deposited into employee accounts three days after the payment run is triggered. What is the bi-weekly period? For example, is it Monday through Sunday, with payment deposited on Thursday?
  - b) Please explain the lead days for Pension OMERS and WSIB are shown as 35 days, when the remittances are made on the 22 or 23rd of the month for the previous period. In particular, why is the lead not 37.5 days, being 22.5 days, plus 15 days for the service period of the previous month?
- 

**Response:**

- a) Monday through Sunday with payment leave OPUC account on Wednesday.
- b) This is correct - the lead days for Pension OMERS and WSIB should be adjusted to 37.5 and not 35 days.



**OSHAWA PUC NETWORKS INC.**

**Response to Energy Probe Research Foundation (Energy Probe)  
Interrogatory 2.0-Energy Probe-24**

**Ref: Exhibit 2, Tab A, Schedule 1**

- a) Please explain why the midpoint calculation shown on page 5 is defined as the  $((\text{end date}) - (\text{start date})) / 2$  rather than the conventional formula of  $((\text{end date}) - (\text{start date}) + 1) / 2$ .
  - b) With relationship to the two formulae noted above, please show the calculation of the 10 day lag noted in Table 10 for payroll.
  - c) Please explain why all of the lead days shown in Table 10 appear to assume an average of 15.0 days in the month when the average for a non-leap year is 15.21 days and 14.25 days for a leap year.
- 

**Response:**

- a) The formula should be  $((\text{end date}) - (\text{start date}) + 1) / 2$ . This is a typo on the report page. There is no impact to calculations based on this typo.
- b) There is no impact to calculations based on this typo.
- c) The calculations for OM&A expenses were based on the average month having 30 days (rounded down from 30.41667).

**OSHAWA PUC NETWORKS INC.**

**Response to Energy Probe Research Foundation (Energy Probe)  
Interrogatory 2.0-Energy Probe-25**

**Ref: Exhibit 2, Tab A, Schedule 1**

With respect to the supplier expenses shown in Table 11:

- a) Please provide all the data, information, calculations and assumptions used to calculate the subcontractor lead days.
- b) Are the subcontractor lead days based on dollar weighted averages, or on straight averages of the number of invoices?
- c) Please provide all the data, information, calculations and assumptions used to calculate the communications lead days.
- d) Are the communications lead days based on dollar weighted averages, or on straight averages of the number of invoices?
- e) Please provide all the data, information, calculations and assumptions used to calculate the vehicles lead days.
- f) Are the vehicles lead days based on dollar weighted averages, or on straight averages of the number of invoices?
- g) Please provide, in table format, the invoice dates, payment dates and amount associated with rent for each month of 2012 and 2013 those results in the lead days shown in Table 11. Please include all assumptions used.
- h) If insurance companies issue bills for the previous month of coverage, please explain why the expense leads are lower than the service period of 15.21 days.
- i) Please provide, in table format, the invoice dates, payments dates and amount associated with insurance for each month of 2012 and 2013 that results in the lead days shown in Table 11. Please include all assumptions used.
- j) Please provide all the data, information, calculations and assumptions used to calculate the pre-paid lead days.
- k) Are the pre-paid lead days based on dollar weighted averages, or on straight averages of the number of invoices?

- l) The other categories in Table 11 represent a significant proportion of total supplier expenses. Please indicate what costs are included in this category and why they were not analyzed as part of the lead/lag study.
- m) Please provide all the data, information, calculations and assumptions used to calculate the municipal tax lead days.
- n) Are the municipal tax lead days based on dollar weighted averages, or on straight averages of the number of payments?

**Response:**

- a) The following data was provided:

Year 2013					
Vendors	\$ Invoice Amount	Weighted Days to Pay	Weighted Average Days to Pay	Adjustment	Total
ERTH HOLDINGS INC.	628,679	31,015,525	49.3		
M.E.T. UTILITIES MANAGEMENT LTD.	208,340	6,571,671	31.5		
ONTARIO LINE CLEARING & TREE 2010 LTD.	166,876	3,826,883	22.9		
PROMARK TELECON INC.	461,390	8,873,940	19.2		
Grand Total	1,465,285	50,288,018	34.3	15	49.32

service period

Days to pay from Invoice to Payment dates calculated then +15 days for service period factor applied.

- b) Based on weighted averages.

c) The following data was provided:

Year 2013					
Vendors	\$ Invoice Amount	Weighted Days to Pay	Weighted Average Days to Pay	Adjustment	Total
BELL CANADA	34,494.73	668,179	19.37		
CPC EAST CUSTOMER COMPLIANCE	375,000.00	1,027,500	-2.74		
MOBILITY CANADA	18,964.02	327,823	17.29		
Grand Total	428,459	2,781,002	-0.07		-0.07

Days to pay from Invoice to Payment dates calculated

d) Based on weighted averages.

e) The following data was provided:

Year 2013					
Vendors	\$ Invoice Amount	Weighted Days to Pay	Weighted Average Days to Pay	Adjustment	Total
HARPER DETROIT DIESEL-ALLISON	101,530	3,447,591	33.96		
ONTARIO MOTOR SALES LIMITED	57,418	1,294,809	22.55		
SUNCOR ENERGY PRODUCTS PARTNERSHIP	89,390	3,599,001	40.26		
Grand Total	248,338	8,341,401	33.59		33.59

Days to pay from Invoice to Payment dates calculated

f) Based on weighted averages.

g) The following data was provided:

Year 2013					
Vendors	\$ Invoice Amount	Weighted Days to Pay	Weighted Average Days to	Adjustment	Total
City of Oshawa	330,257.70	3,739,918.00			
Grand Total	330,258	3,739,918	11.32	-15	-3.67576

service period

Days to pay from Invoice to Payment dates calculated then -15 days for service period factor applied.

- h) The report text was written incorrectly. As OPUC insurance companies issue bills for the following month of coverage, OPUC is essentially prepaying the expense, hence the expense lead for insurance is lower than the service period.
- i) The following data was provided:

**Year 2013**

Vendors	\$ Invoice Amount	Weighted Days to Pay	Weighted Average Days to Pay	Adjustment	Total
EULER HERMES	38,818	1,072,039	27.62		
THE MEARIE GROUP	17,484	107,386	6.14		
<b>Grand Total</b>	<b>56,302</b>	<b>1,179,425</b>	<b>20.95</b>	<b>-15</b>	<b>5.95</b>

service period

Days to pay from Invoice to Payment dates calculated then -15 days for service period factor applied.

- j) The following data was provided:

Principal Prepays - periods covered, invoice dates, and dates paid													
rank	Invoice Date	Period Covered	Month Paid	Supplier	Service	Months	Amount	Period	Gap prepaid	Invoice Date	Payment Date	full gap	WA gap
1	Oct 29/12	Jan/13-Dec31/13	Jan-13	EDA	371 2013 EDA Membership	12	71,500	183		34 2012-10-29	2013-01-01	217	15,479,750
2	Nov 7/12	Jan/13-Dec31/13	Jan-13	Mearie Ins.	2013-59 Fleet/Vehicle Insurance Policy	12	23,073	183		25 2012-11-07	2013-01-01	208	4,787,648
3	Nov 7/12	Jan/13-Dec31/13	Jan-13	Mearie Ins.	2013-59 General Insurance Policy	12	137,720	183		25 2012-11-07	2013-01-01	208	28,576,900
4	Nov 7/12	Jan/13-Dec31/13	Jan-13	Mearie Ins.	2013-59 Property Insurance Policy	12	137,019	183		25 2012-11-07	2013-01-01	208	28,431,436
5	Sept 10/12	Sept 09/13	Oct-12	Bell	TU627 Maintenance Service Agreement	12	1,752	183	(30)			153	267,246
6	Oct 30/12	Dec 31/12-Dec 31/13	Nov-12	CYME International	57185 Software Maintenance	12	4,903	183		32 2012-10-30	2012-12-31	215	1,051,694
7	Nov 6/12	Jan01/13-Dec31/13	Dec-12	Elster Canadian Meter	94023620 Software Licence Fee	12	30,211	183		26 2012-11-06	2013-01-01	209	6,299,077
8	Dec 1/12	Dec1/12-Dec1/13	Dec-12	Hydro One Telecom	3000112856 Annual IRU Maintenance	12	2,616	183	(30)			153	398,899
9	Nov 13/12	Jan01/13-Dec31/13	Dec-12	Intergraph Canada	M00008992 Maintenance Contract	12	18,860	183		19 2012-11-13	2013-01-01	202	3,800,369
10	May 12/12	June 1/12-May 31/13	Jun-12	Itron Canada	20570 Software Maintenance	12	3,539	183	(10)	2012-05-12	2012-06-01	173	610,555
11	Sept 18/12	Sept 17/12-Sept 17/13	Dec-12	Jomar	3121 Software Maintenance Fee	12	8,100	183	(30)			153	1,235,250
12	May 18/12	May/12-May/13	Sep-12	Vopella Inc	IN10222 Annual support for IVR & Main Server	12	1,983	183	(30)			153	302,458
							441,278					91,241,280	206,7661251
13	Jan 1/13	Jan/13-Dec/13	Jan-13	Utilities Standards Forum	13130 2013 USF Annual Membership Fee	12	8,750	183	(30)			153	1,334,375
14	Feb 5/13	Jan/13-Dec31/13	Jan-13	United Way	Annual Leap Payment	12	24,312	183	(5)			178	4,315,380
15	Jan 22/13	Jan/13-Dec31/13	Feb-13	Springboard Management Inc	13-01-0021 Software Maintenance	12	6,000	183	(52)			131	783,000
16	Jan 8/13	Jan/13-Jan/14	Jan-13	Solid Caddgroup Inc	IN120970 AutoCAD Map 3D Subscription	12	4,340	183	(38)			145	627,130
17	Feb 2/13	Mar31/13-Mar31/14	Feb-13	Receiver General Radio Licence	42-080002499 Radio Licence Renewal	12	2,172	183		27 2013-02-02	2013-03-31	210	455,034
18	Jan 4/13	May/13-Apr30/14	Apr-13	Kinetix Canada Ltd.	Oshawa 2013-01 Product Support	12	12,422	183		87 2013-01-04	2013-05-01	270	3,347,745
19	May 12/13	June 1/13-May 31/14	May-13	Itron Canada	24670 Software Maintenance	12	8,834	183	(11)	2013-05-12	2013-05-31	172	1,515,098
20	Nov 13/13	Dec26/13-Dec26/14	Nov-12	Intergraph Canada	M00008921 Maintenance Contract	12	19,435	183		13 2013-11-13	2013-12-26	196	3,799,623
21	April 1/13	Apr1/13-Mar31/14	May-13	Durham Strategic Energy Alliance	2013-14-22 2013-2014 Membership Fees	12	2,000	183	(30)			153	305,000
22	Feb 14/13	May28/13-May27/14	Mar-13	WenSoft Inc	WS14850 WenSoft Job Cost System - Annual Licence Fee	12	4,480	183		73 2013-02-14	2013-05-28	256	1,144,640
23	Feb 20/13	Apr9/13-Apr8/14	Feb-13	Jet Reports	SO-11908 Jet Reports (Accounting) - Annual Licence Fee	12	1,086	183		18 2013-02-20	2013-04-09	201	217,663
24	March 14/13	May 10/13-May 9/14	Apr-13	360/visibility Inc.	2004075 Great Plains Accounting System - Annual Licence Fee	12	24,051	183		27 2013-03-14	2013-05-10	210	5,038,659
25	Oct 1/13	Oct 1/13-Dec31/13	Oct-13	Ontario Energy Board	131410065 Assessment	3	33,592	46	(30)			16	537,472
26	July 1/13	Jul 1/13-Sep30/13	Jul-13	Ontario Energy Board	131410065 Assessment	3	33,592	46	(30)			16	537,472
27	May 1/13	May 1/13-Jun30/13	Jan-13	Ontario Energy Board	131410065 Assessment	3	33,592	31	(30)			1	16,796
28	Jan 2/13	Jan/13-Mar31/13	Jan-13	Ontario Energy Board	121340065 Assessment	3	28,435	36	(30)			6	156,393
29	Nov 6/13	Nov 6/13-Nov 6/14	Nov-13	Euler Hermes Canada	100196910 A/R Ins (Bad Debt)	12	36,698	183	(30)			153	5,596,506
30	Jan 21/13	Feb/13-Feb/14	Feb-13	Electrical Safety Authority	93202074 Electrical Dist Safety O.REG 22/4	12	22,457	15	(19)	2013-01-21	2013-02-01	(4)	(89,827)
							306,249					29,638,158	96,77811741

- k) Based on weighted averages.
- l) The lead-lag study analyzed 72.96% of supplier spend that could be categorized into broad supplier categories. The remaining spend could not be categorized similarly and expense lead for these spend was approximated using the weighted average for the majority of supplier spend.
- m) The municipal tax lead dates were calculated based on estimated four equal payments made in the year based on July 1st as midpoint and payments made on Feb 28th, April 30th, July 31st and Sept 30th.
- n) Based on payment timing as stated above.

**OSHAWA PUC NETWORKS INC.**

**Response to Energy Probe Research Foundation (Energy Probe)  
Interrogatory 2.0-Energy Probe-26**

**Ref: Exhibit 2, Tab A, Schedule 1**

- a) Please explain why the expense lead for interest on long term debt is based only on the external debt and not the debt from the affiliate?
  - b) Please calculate the expense lead for interest on long term debt based on the payments dates and amounts for both the external debt (\$7 million) and the affiliate debt (\$23 million). Please provide all data, information, calculations and assumptions used.
- 

**Response:**

- a) The lead-lag study dealt only with working capital exposure to external parties. Working capital for internal parties (i.e. intercompany revenue and/or expenses) were excluded from the study.
- b) Refer to part a).

**OSHAWA PUC NETWORKS INC.**

**Response to Energy Probe Research Foundation (Energy Probe)  
Interrogatory 2.0-Energy Probe-27**

**Ref: Exhibit 2, Tab A, Schedule 1**

Please provide all the data, information, calculations and assumptions used to calculate the PILs lead days.

---

**Response:**

PILs lead days were calculated based on payment occurring on 27th or 28th (27.5) of every month from service midpoint of the 15th for a lead days of 12.50 (27.5 - 15).



**OSHAWA PUC NETWORKS INC.**

**Response to Energy Probe Research Foundation (Energy Probe)  
Interrogatory 2.0-Energy Probe-28**

**Ref: Exhibit 2, Tab A, Schedule 1**

- a) Please show the calculation of each of the lead/lag days shown in each of Tables 13 and 14 based on the HST lead of (45) days that represents the gap between collections lag and HST payments and the collection and payment processing lag.
  - b) Please confirm that OPUCN remits the HST based on invoices issued in the previous month. For example, for all invoices issued in March, OPUCN has to remit the HST on the revenues invoiced at the end of April. If this cannot be confirmed, please provide an example of what is actually done.
  - c) Please confirm that OPUCN claims a credit on its monthly HST remittance based on the HST paid to the IESO and embedded distributors based on invoice received in the previous month. For example, for invoices received in March, the HST component is a credit to the amount remitted at the end of April. If this is not accurate, please provide an example of what is actually done.
  - d) Please explain why column d in Tables 15 and 16 indicates it is based on columns b and c, and yet if one of these columns is negative and the other positive, the result in d does not reflect this.
- 

**Response:**

- a) For Table 13 and 14, the Lead (Lag) days is based on the collections lag and HST payments leads of (45 days) less Collections Lag (21.93 days for 2012 and 22.30 days for 2013 - see Table 5).
- b) OPUC generally remits HST on last day of month for the previous month. The following categories are subject to HST: Customer revenues including electricity distribution and completion of services; Cost of Power; and OM&A expenses excluding Labour, Benefits, Management Fees, Bank Charges, Customer deposits and insurance.

- c) Confirmed.
- d) The lead / lag days shown in the table had signs reversed, the calculation for HST Cost (Benefit) remains the same. Please see updated Tables 15 and 16 below:

HST Category	2012 Amount	13% HST	Lead / Lag days	HST Cost (Benefit)
	A	$B = A * 13\%$	C	$D = B * C / 365$
Revenue	-116,564,276	-15,153,356	22.77	-945,358
Cost of Power	96,181,988	12,503,658	25.30	866,668
Supplier Expenses	4,937,695	641,900	47.89	84,227
Capital Expense HST	7,290,376	947,749	-0.04	-104
<b>Total</b>		<b>-1,060,048</b>		<b>5,433</b>

HST Category	2013 Amount	13% HST	Lead / Lag days	HST Cost (Benefit)
	A	$B = A * 13\%$	C	$D = B * C / 365$
Revenue	-123,740,648	-16,086,284	23.70	-1,044,340
Cost of Power	102,012,056	13,261,567	24.11	875,873
Supplier Expenses	4,884,105	634,934	29.20	50,790
Capital Expense HST	5,717,996	743,339	-4.33	-8,818
<b>Total</b>		<b>-1,446,444</b>		<b>-126,495</b>

**OSHAWA PUC NETWORKS INC.**

**Response to Energy Probe Research Foundation (Energy Probe)  
Interrogatory 2.0-Energy Probe-29**

**Ref: Exhibit 2, Tab A, Schedule 1**

- a) Does OPUCN include inventory in rate base? Please explain fully where items in inventory are recorded if they are not included in accounts that are included in rate base.
  - b) Is OPUCN aware of any other lead/lag study for electricity distributors in Ontario that have included an inventory lag?
  - c) Please provide an example of a spare transformer being purchased, remaining in inventory for a number of months and then placed into service, in terms of the financial accounting and the regulatory accounting. Please show when the transformer is included in rate base.
- 

**Response:**

- a) OPUC does not include inventory in rate base.
- b) Inventory for OPUC consists of items used for network maintenance as well as other type of supplies (e.g. spare transformers and reels). To calculate the inventory gap, all transactions for inventory for 2012 and 2013 were analyzed excluding non-relevant entries (e.g. vehicle hours and other discrepancies). Inventory lag was calculated by taking the average end of month inventory against the total cost of goods sold ("COGS") x 365 days. Inventory lag is related to OM&A expense and included in the working capital requirements calculations.
- c) Not material for OPUCN.

**OSHAWA PUC NETWORKS INC.**

**Response to Greater Oshawa Chamber of Commerce (GOCC)  
Interrogatory 2.0-GOCC-3**

Exhibit 2, Tab A, page 7 provides a list of forecasted expected capital expenditures for each of the years from 2011 to 2015 which is higher than the actual capital expenditures provided in Table 2-3.

- a) Please provide an explanation as to why Oshawa PUC has consistently underspent on capital relative to its forecast capital spending?
  - b) Does Oshawa PUC have typical annual capital spending cycle? If so, please provide a description of the typical cycle?
  - c) Is Oshawa PUC still on plan for its 2015 capital expenditures?
- 

**Response:**

- a) OPUCN has underspent on capital relative to its forecast due to the following factors:
  - Detailed design phase identified savings.
  - Negotiated savings with its external suppliers.
  - Improved project management during construction and commissioning phases.
  - Changes in project requirements either in scope, scale and timing.
- b) Annual Capital Spending Cycle usually aligns with heavier construction seasonal work.
- c) Yes OPUCN is still on plan for 2015.

**OSHAWA PUC NETWORKS INC.**

**Response to Greater Oshawa Chamber of Commerce (GOCC)  
Interrogatory 2.0-GOCC-4**

Exhibit 2, Tab A, page 10. Oshawa PUC has noted an increased capital expenditure program and 3.0% new customer growth.

- a) What is the impact to rate base and revenue requirement if the forecast growth rate is 2.0% rather than 3.0% for each year from 2015 to 2019? Please provide the calculation to substantiate the response.
  - b) What impact would such a change have on the revenue requirement?
- 

**Response:**

Unless, there are material changes to the City, Region or Hydro One development plans, OPUCN does not believe there would be a significant impact on rate base or revenue requirement, if any, where the forecast growth rate is 2.0%.

**OSHAWA PUC NETWORKS INC.**

**Response to Greater Oshawa Chamber of Commerce (GOCC)  
Interrogatory 2.0-GOCC-5**

Exhibit 2, Tab A, page 62. The Application makes several statements regarding the payment to HONI including the capital contribution to purchase 2 feeder breaker positions.

- a) Has Oshawa PUC committed to a capital contribution to HONI for 2015? Please provide any available details regarding the proposed capital expenditure.
  - b) Please provide an update of any discussions with HONI in respect of the forecasted capital contributions during the term of the Application.
- 

**Response:**

- a) No.
- b) Please refer to 2.0-Staff-6 for response.

**OSHAWA PUC NETWORKS INC.**

**Response to Greater Oshawa Chamber of Commerce (GOCC)  
Interrogatory 2.0-GOCC-6**

Oshawa PUC has forecast an increase from \$17.26million to \$18.08million in working capital allowance. Table 2-13 shows OM&A per customer increasing from \$168 to \$208 per customer or 4.7%. Tables 2-17 to Table 2- 21 shows cost of power forecast for working capital allowance calculations.

- a) What sources did Oshawa PUC use for the cost of power forecast for 2015 to 2019?
  - b) If customer growth is occurring at 3% why is cost of power not similarly increasing?
  - c) Confirm Oshawa PUC is proposing to use actual cost of power for normalized or actual volumes of power for the period of this Application?
  - d) Why does Oshawa PUC believe it can achieve 2.0% total increase and flat OM &A per customer at \$208 over the duration of the Application period when the historical increases have been double that increase?
  - e) Please explain why Oshawa completed a lead/lag study showing 12.7% working capital, yet has proposed a 13.0% working capital allowance.
- 

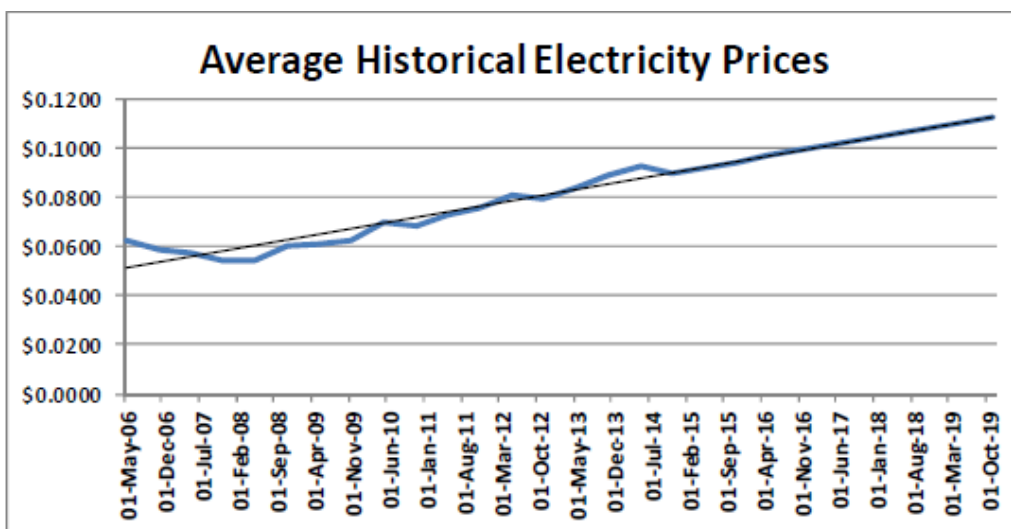
**Response:**

- a) For the Test Years 2015 through 2019, OPUCN has applied rates for commodity based upon the Board's Regulated Price Plan Price Report - November 1, 2014 to October 31, 2015 (Report) issued on October 16, 2014.
- b) As per Exhibit 2, Tab A, page 44:  
  
"With respect to forecasting rates for cost of power, OPUCN is seeking as part of this Application (Exhibit 1 – Administrative Documents) a mechanism to adjust its working capital allowance annually for the actual change in rates for cost of

power. Historically, the change in rates for cost of power have been volatile and in recent years the increases have been substantially greater than inflation.

The following chart is provided to support OPUCN's assertion that rates have been volatile and the request to have its working capital allowance adjusted annually to reflect the change in cost of power rates.

Plotting the linear trend from historical data available from 2006, provides the following results:



OPUCN did not forecast rate changes for cost of power. Cost of power takes into account forecast volume but rates are fixed. As per 2.0-Energy Probe-9 response, OPUCN has proposed an Annual Adjustment Mechanism for both rates and volumes prospectively from the year reported.

- c) Please refer to 2.0-Energy Probe-9 for response.
- d) OPUCN believes it can service the 3% annual growth in customer counts without increasing OM&A expenses by an amount commensurate with the growth. Historical increases to OM&A expenses were not attributed to customer growth. The drivers for historical increases were based upon increased activities and the associated costs required to successfully address these activities. OPUCN believes that its OM&A expenses forecast for the Test Years 2015 through 2019 will be sufficient and appropriate to manage identified activities and customer growth in an effective and efficient manner. OPUCN has provided comparable metrics in Exhibit 1, Tab C and a Benchmarking Report in Exhibit 10, Tab A to support that its OM&A expense levels are cost effective and efficient relative to comparable utilities in Ontario.
- e) Please refer to 2.0-Energy Probe-15 for response.



**OSHAWA PUC NETWORKS INC.**

**Response to Greater Oshawa Chamber of Commerce (GOCC)  
Interrogatory 2.0-GOCC-7**

Exhibit 2, Tab B, page 83, Table 37 shows that Oshawa PUC will be installing MIST meters at a rate of \$150,000 for each of 2015 and 2016 and \$125,000 for the remaining years.

- a) Please confirm this expenditure is for replacement of existing meters prior to end of life.
  - b) Why did Oshawa PUC front load this capital program?
  - c) Is Oshawa PUC on target for this expenditure?
- 

**Response:**

- a) Yes, this expenditure is for existing meter replacement prior to end of life.
- b) The MIST metering capital program is a mandatory upgrade of all General Services >50KW currently not interval metered by 2020 by OEB. Implementation of this program will begin in 2015 by leveraging OPUCN's AMI infrastructure to include MIST meters.
- c) Yes, the program is on target.

**OSHAWA PUC NETWORKS INC.**

**Response to Greater Oshawa Chamber of Commerce (GOCC)  
Interrogatory 2.0-GOCC-8**

Oshawa PUC has stated there is considerable uncertainty regarding the capital relocation program resulting from municipal projects.

- a) Please confirm that the existing forecast of capital projects has not changed. If it has changed, specify which projects have changed and why.
- 

**Response:**

The 2015 program has been updated with the latest information provided by the Region and City's requirements. These changes are reflected in the attached table below ("2014-2019 Capital Projects Estimates for Interrogatories – Municipal") showing the actual information filed with the application and the update based on new information provided:

2014-2019 Capital Projects Estimates For Interrogatories - Municipal							
2015 CAPITAL PROJECTS - PRELIMINARY	SCOPE/ COMMENTS	CRITERIA	Estimated Total Project in Filing \$	Estimated Total Project in Filing \$	Updated Estimate Total in 2015	Updated Estimate Total in 2016	PROJECT PROCEEDING IN 2015
Customer Driven requested work ( e.g. City, Region, COSTCO, UOIT)			Net 2014	Net 2015	Net 2015	Net 2016	
407 Extension - removal of temporary OH Plant 13.8kV & 44kV	407 Relocation - carry-over related work, temporary pole line removals, etc.	To facilitate 407 Extension opening the fall 2015. Region wil be rushing work. cost for incremental Civil 100 % by OPUCN		\$550,000	\$550,000		Yes
Region Relocate - Consumers Dr (Champlain Dr) - West City Limits to Thornton Rd S.	Approx 12 poles. Approx Total Cost - \$250K, Region contribution approx \$50K. Net OPUCN cost \$200K	Non discretionary - depends on regions design - very preliminary		\$250,000	\$0		No
Region Relocate - Simcoe St N. - Conlin to Winchester	Region road widening from 2 to 5 lanes. Pending Region design. Propose installing 33 ples, 44kV to service proposed Rio Can Development Estimated Total \$650K with Region contribution of \$150K and potentially \$100K form Developers	Non discretionary - waiting regions design - very preliminary		\$650,000	\$650,000		Has not materialized yet, may still be asked to start design work this year.
Region Relocate - Harmony - Taunton to Coldstream	Approximately 20 poles, including station 44 kV feeders, 13.8 kV feeders, station risers and cable		\$640,000		\$640,000		Project moved from 2014 to 2015.Design and costing not finalised.
Region Relocate - Harmony Rd N - Rossland to Taunton Rd N	Approx 2,100m. Approx Total Cost - \$930K (depending on poles determined to be in conflict.) Net \$697K	Non discretionary - design started in 2014 with construction completion in 2015		\$930,000	\$0	\$930,000	Deferred into 2016 by the Region
City Relocate - Riverside Dr South - Hoskin Ave to Palace St	Approximately 7 poles to be rebuild	Preliminary scope - City has not finalize design		\$105,000	\$0		Project proceeded but after OPUCN's input City worked around hydro so no relocate was required.
<b>NEW PROJECTS FOR 2015</b>					Estimated Total Project NOT in Filing in 2015	Estimated Total Project NOT in Filing in 2016	
Region Relocate - Harmony - Winchester Intersection	46 poles, 13.8kV		\$270,000		\$505,000		Scope of work increased by Region
Region Relocate - Winchester - Simcoe Intersection	Approximately 33 poles, padmounted switchgear and extensive ductbank system required.				\$300,000	\$1,200,000	Temporary Relocate in 2015 and Permanent in 2016
City Relocate - Ritson Rd. N south of Winchester	Approximately 60 poles - 13.8 KV				\$665,000		Design and costing not finalised.
City Relocate - Thornton Rd. N - Taunton to Conlin	Approximately 30 poles - 13.8 kV				\$450,000		Design and costing not finalised.

**OSHAWA PUC NETWORKS INC.**

**Response to School Energy Coalition (SEC)  
Interrogatory 2.0-SEC-12**

**[Ex. 2-A, p.39]**

Please update Appendix 2-BA (2014 and 2015) to show actual audited year-end amounts for 2014.

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**Response:**

A revised Chapter 2 Appendices excel model will be filed via RESS. Below are 2014 and 2015 Appendix 2-BA:

Appendix 2-BA  
 Fixed Asset Continuity Schedule - MIFRS

Year 2014

CCA Class	OEB	Description	Cost				Accumulated Depreciation				Net Book Value
			Opening Balance	Additions	Disposals	Closing Balance	Opening Balance	Additions	Disposals	Closing Balance	
12	1611	Computer Software (Formally known as Account 1925)	1,552,176	83,001	0	1,635,177	(939,026)	(371,456)	0	(1,310,482)	324,695
CEC	1612	Land Rights (Formally known as Account 1906)	0	0	0	0	0	0	0	0	0
N/A	1805	Land	293,875	0	0	293,875	0	0	0	0	293,875
47	1808	Buildings	709,412	47,648	0	757,060	(388,071)	(14,581)	0	(402,652)	354,408
13	1810	Leasehold Improvements	0	0	0	0	0	0	0	0	0
47	1815	Transformer Station Equipment >50 kV	0	0	0	0	0	0	0	0	0
47	1820	Distribution Station Equipment <50 kV	18,975,879	1,758,038	(511,147)	20,222,770	(7,660,747)	(93,542)	509,796	(7,244,493)	12,978,277
47	1825	Storage Battery Equipment	0	0	0	0	0	0	0	0	0
47	1830	Poles, Towers & Fixtures	34,446,424	3,370,745	(750,583)	37,066,586	(13,807,057)	(699,349)	742,658	(13,763,748)	23,302,837
47	1835	Overhead Conductors & Devices	19,319,701	1,793,381	(940,102)	20,172,980	(8,687,050)	(313,560)	940,102	(8,060,508)	12,112,471
47	1840	Underground Conduit	0	0	0	0	0	0	0	0	0
47	1845	Underground Conductors & Devices	41,089,183	2,239,876	(745,884)	42,583,175	(17,636,228)	(1,056,879)	695,501	(17,997,606)	24,585,569
47	1850	Line Transformers	52,004,337	2,916,584	(117,014)	54,803,906	(29,250,700)	(863,264)	96,619	(30,017,345)	24,786,561
47	1855	Services (Overhead & Underground)	0	0	0	0	0	0	0	0	0
47	1860	Meters	2,701,692	558,725	0	3,260,418	(3,194,586)	(756,435)	0	(3,951,021)	(690,604)
47	1860	Meters (Smart Meters)	7,733,934	0	0	7,733,934	(747,565)	0	0	(747,565)	6,986,369
N/A	1905	Land	0	0	0	0	0	0	0	0	0
47	1908	Buildings & Fixtures	0	0	0	0	0	0	0	0	0
13	1910	Leasehold Improvements	907,778	27,482	0	935,260	(530,275)	(118,599)	0	(648,875)	286,386
8	1915	Office Furniture & Equipment (10 years)	0	0	0	0	0	0	0	0	0
8	1915	Office Furniture & Equipment (5 years)	722,939	4,745	0	727,684	(662,321)	(18,523)	0	(680,844)	46,841
10	1920	Computer Equipment - Hardware	2,409,538	62,473	0	2,472,011	(2,150,811)	(112,997)	0	(2,263,808)	208,204
45	1920	Computer Equip.-Hardware(Post Mar. 22/04)	129,776	0	0	129,776	(74,955)	0	0	(74,955)	54,821
45.1	1920	Computer Equip.-Hardware(Post Mar. 19/07)	0	0	0	0	0	0	0	0	0
10	1930	Transportation Equipment	4,103,335	84,705	0	4,188,040	(2,197,729)	(250,138)	0	(2,447,867)	1,740,173
8	1935	Stores Equipment	24,516	0	0	24,516	(24,516)	0	0	(24,516)	0
8	1940	Tools, Shop & Garage Equipment	2,373,125	25,397	0	2,398,522	(1,906,363)	(139,605)	0	(2,045,968)	352,554
8	1945	Measurement & Testing Equipment	458,634	51,670	0	510,304	(296,874)	(22,064)	0	(318,938)	191,366
8	1950	Power Operated Equipment	0	0	0	0	0	0	0	0	0
8	1955	Communications Equipment	418,133	0	0	418,133	(284,605)	(15,855)	0	(300,460)	117,673
8	1955	Communication Equipment (Smart Meters)	0	0	0	0	0	0	0	0	0
8	1960	Miscellaneous Equipment	157,645	0	0	157,645	(98,298)	(1,991)	0	(100,289)	57,356
47	1970	Load Management Controls Customer Premises	107,035	0	0	107,035	(36,163)	(70,871)	0	(107,034)	0
47	1975	Load Management Controls Utility Premises	1,021,693	0	0	1,021,693	(777,278)	(17,447)	0	(794,725)	226,969
47	1980	System Supervisor Equipment	293,582	0	0	293,582	(293,583)	0	0	(293,583)	(1)
47	1985	Miscellaneous Fixed Assets	0	0	0	0	0	0	0	0	0
47	1990	Other Tangible Property	0	0	0	0	0	0	0	0	0
47	1995	Contributions & Grants	(32,328,140)	(2,367,193)	152,785	(34,542,548)	8,219,274	995,356	(259,532)	8,955,098	(25,587,450)
	etc.		0	0	0	0	0	0	0	0	0
		<b>Total PP&amp;E</b>	<b>159,626,204</b>	<b>10,657,277</b>	<b>(2,911,945)</b>	<b>167,371,536</b>	<b>(83,425,527)</b>	<b>(3,941,800)</b>	<b>2,725,144</b>	<b>(84,642,184)</b>	<b>82,729,353</b>

Appendix 2-BA  
 Fixed Asset Continuity Schedule - MIFRS

Year 2015

CCA Class	OEB	Description	Cost				Accumulated Depreciation				Net Book Value
			Opening Balance	Additions	Disposals	Closing Balance	Opening Balance	Additions	Disposals	Closing Balance	
12	1611	Computer Software (Formally known as Account 1925)	1,635,177	939,565	(975)	2,573,768	(1,310,482)	(433,162)	487	(1,743,157)	830,611
CEC	1612	Land Rights (Formally known as Account 1906)	0	0	0	0	0	0	0	0	0
N/A	1805	Land	293,875	0	0	293,875	0	0	0	0	293,875
47	1808	Buildings	757,060	750,000	0	1,507,060	(402,652)	(20,245)	0	(422,897)	1,084,163
13	1810	Leasehold Improvements	0	0	0	0	0	0	0	0	0
47	1815	Transformer Station Equipment >50 kV	0	0	0	0	0	0	0	0	0
47	1820	Distribution Station Equipment <50 kV	20,222,770	2,880,436	(79,665)	23,023,542	(7,244,493)	(455,298)	79,004	(7,620,787)	15,402,755
47	1825	Storage Battery Equipment	0	0	0	0	0	0	0	0	0
47	1830	Poles, Towers & Fixtures	37,066,586	5,941,860	(1,278,749)	41,729,697	(13,763,748)	(609,644)	1,126,765	(13,246,627)	28,483,071
47	1835	Overhead Conductors & Devices	20,172,980	2,946,495	(623,028)	22,496,449	(8,060,508)	(352,536)	542,535	(7,870,509)	14,625,940
47	1840	Underground Conduit	0	0	0	0	0	0	0	0	0
47	1845	Underground Conductors & Devices	42,583,175	3,518,861	(667,534)	45,434,502	(17,997,606)	(824,580)	576,961	(18,245,225)	27,189,277
47	1850	Line Transformers	54,803,906	675,031	(165,725)	55,313,212	(30,017,345)	(784,527)	142,981	(30,658,892)	24,654,321
47	1855	Services (Overhead & Underground)	0	0	0	0	0	0	0	0	0
47	1860	Meters	3,260,418	612,932	(94,126)	3,779,224	(3,951,021)	(805,129)	47,519	(4,708,631)	(929,407)
47	1860	Meters (Smart Meters)	7,733,934	0	0	7,733,934	(747,565)	0	0	(747,565)	6,986,369
N/A	1905	Land	0	0	0	0	0	0	0	0	0
47	1908	Buildings & Fixtures	0	0	0	0	0	0	0	0	0
13	1910	Leasehold Improvements	935,260	247,500	0	1,182,760	(648,875)	(171,269)	0	(820,144)	362,617
8	1915	Office Furniture & Equipment (10 years)	0	0	0	0	0	0	0	0	0
8	1915	Office Furniture & Equipment (5 years)	727,684	27,500	0	755,184	(680,844)	(9,434)	0	(690,277)	64,907
10	1920	Computer Equipment - Hardware	2,472,011	366,511	(1,334)	2,837,189	(2,263,808)	(180,849)	667	(2,443,990)	393,198
45	1920	Computer Equip.-Hardware(Post Mar. 22/04)	129,776	0	0	129,776	(74,955)	0	0	(74,955)	54,821
45.1	1920	Computer Equip.-Hardware(Post Mar. 19/07)	0	0	0	0	0	0	0	0	0
10	1930	Transportation Equipment	4,188,040	420,000	0	4,608,040	(2,447,867)	(293,863)	0	(2,741,730)	1,866,310
8	1935	Stores Equipment	24,516	0	0	24,516	(24,516)	0	0	(24,516)	0
8	1940	Tools, Shop & Garage Equipment	2,398,522	145,324	(14,392)	2,529,454	(2,045,968)	(147,464)	12,188	(2,181,244)	348,210
8	1945	Measurement & Testing Equipment	510,304	8,884	(337)	518,851	(318,938)	(18,346)	307	(336,977)	181,874
8	1950	Power Operated Equipment	0	0	0	0	0	0	0	0	0
8	1955	Communications Equipment	418,133	0	0	418,133	(300,460)	(15,854)	0	(316,314)	101,818
8	1955	Communication Equipment (Smart Meters)	0	0	0	0	0	0	0	0	0
8	1960	Miscellaneous Equipment	157,645	0	0	157,645	(100,289)	(12,757)	0	(113,045)	44,600
47	1970	Load Management Controls Customer Premises	107,035	0	0	107,035	(107,034)	0	0	(107,034)	0
47	1975	Load Management Controls Utility Premises	1,021,693	0	0	1,021,693	(794,725)	(58,017)	0	(852,742)	168,951
47	1980	System Supervisor Equipment	293,582	0	0	293,582	(293,583)	0	0	(293,583)	(1)
47	1985	Miscellaneous Fixed Assets	0	0	0	0	0	0	0	0	0
47	1990	Other Tangible Property	0	0	0	0	0	0	0	0	0
47	1995	Contributions & Grants	(34,542,548)	(4,911,000)	0	(39,453,548)	8,955,098	701,387	0	9,656,486	(29,797,062)
	etc.		0	0	0	0	0	0	0	0	0
			0	0	0	0	0	0	0	0	0
		Sub-Total	167,371,536	14,569,900	(2,925,861)	179,015,575	(84,642,184)	(4,491,588)	2,529,414	(86,604,357)	92,411,219

**OSHAWA PUC NETWORKS INC.**

**Response to School Energy Coalition (SEC)  
Interrogatory 2.0-SEC-13**

**[Ex.2-A, p.84]**

Please provide a version of Appendix 2-AA on an in-service additions basis.

---

**Response:**

OPUCN will provide updated models including the Chapter 2 Appendices excel model via RESS.

The Distribution System Plan only identifies projects that are replacement for existing in-service assets as well as new connection assets for new load growth with all assets planned to be put into service for this application. This application does not include any non-in-service assets that are specifically addressing provisions for future plans such as acquisition of land.

**OSHAWA PUC NETWORKS INC.**

**Response to School Energy Coalition (SEC)  
Interrogatory 2.0-SEC-14**

**[Ex.2-A, p.112]**

Please explain how the Applicant has estimated the allocation of capital contributions between itself, Hydro One Distribution and Hydro One Transmission, for the upgrades to the Thornton TS Capacity Upgrades. If the methodology proposed by Hydro One Transmission that is the subject of the EB-2013-0421 Phase 2 proceeding is accepted, how would it change the amount the Applicant would be required to contribute?

---

**Response:**

As per Exhibit 2, Tab B, Schedule 2, p16 (“Needs Screening Report”), HONI is scheduled to upgrade Thornton TS including the installation of new neutral reactors and is not asking for any contributions from OPUCN for this upgrade.



**OSHAWA PUC NETWORKS INC.**

**Response to School Energy Coalition (SEC)  
Interrogatory 2.0-SEC-15**

**[Ex.2-A, p.112-113]**

With respect to the MS9 Distribution Station:

- a) When is the Applicant forecasting the Station to go into-service?
  - b) When did the Applicant purchase the land for the station and at what cost?
  - c) Is the land currently in rate base? Is the Applicant proposing to put the land in rate base?
- 

**Response:**

- a) The station is expected to be in-service fully in 2018.
- b) Please refer to 2.0-Energy Probe-12 for response.
- c) Refer to part b).

**OSHAWA PUC NETWORKS INC.**

**Response to School Energy Coalition (SEC)  
Interrogatory 2.0-SEC-16**

**[Ex.2-A, p.6, Ex.2-A-1, p.4]**

Please explain why the Applicant is proposing to use a working capital percentage of 13% instead of 12.74% as proposed by Ernst & Young LLP.

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**Response:**

Please refer to 2.0-Energy Probe-15 for response.

**OSHAWA PUC NETWORKS INC.**

**Response to School Energy Coalition (SEC)  
Interrogatory 2.0-SEC-17**

**[Ex.2-B]**

Please describe how the Applicant forecasted the costs for its individual capital projects between 2015-2019.

---

**Response:**

Capital Project Costs were developed as a high level estimate based on initial project layout and using typical construction costs developed from historical data. The project estimate is then updated through the detailed design phase prior to being released for construction for all projects listed.

**OSHAWA PUC NETWORKS INC.**

**Response to School Energy Coalition (SEC)  
Interrogatory 2.0-SEC-18**

**[Ex.2-B, p.12]**

Please explain why 'Reactive/emergency Plant Replacement' does not decrease through the test period in light of the considerable capital program the Applicant proposes to undertake.

---

**Response:**

Relatively speaking, the amount of reactive component in the total capital budget is low and is reflective of the typical experience at OPUCN. From a qualitative perspective, since OPUCN is using the same planning methodology for capital projects, we expect similar trends in reactive capital as the number and type of failures are expected to remain consistent with past experience. We do, however, expect increased risks resulting from changing weather patterns, and increased loading stress as we continue to take on peak loading risks. The net effect of these items is reflected in our submission for reactive capital.

**OSHAWA PUC NETWORKS INC.**

**Response to School Energy Coalition (SEC)  
Interrogatory 2.0-SEC-19**

**[Ex.2-B-3]**

With respect to the Asset Condition Assessment:

- a) Please explain why age is a relevant factor in assessing the condition of an asset.
  - b) Please re-run the results of the Asset Condition Assessment removing age as a factor.
  - c) Please provide METSCO's experience conducting an electricity distribution system asset condition assessment.
  - d) Have the conclusions changed since the Applicant's previous Asset Condition Assessment filed in EB-2011-0073? If so, please explain.
- 

**Response:**

- a) The condition of fixed assets employed on Oshawa PUC Network system has been determined through the use of algorithms that were developed by assigning appropriate weights to various indicators of asset health, including (a) service age; (b) results of visual inspections and (c) results of testing.

For distribution assets, service age is an important relevant factor in assessing an asset's condition because experience shows there is a strong co-relation between an asset's service age and its probability of failure.

- b) Please refer to (a) above. Because for distribution system assets, service age is an important relevant factor in assessing asset health, if service age is removed from the health index formulation, it will not provide accurate results of asset condition. Therefore, to re-run the results of the Asset Condition Assessment by removing age as a factor is ineffective.

c) METSCO's recent experience in conducting asset condition assessment of distribution system assets is summarized on the following two pages:

Client	Title of Project	Work Description	Date of completion
CEATI	Asset Condition Assessment and Health Indices for Substation Assets	Preparation of a guide for best-in-class condition assessment strategies transmission assets, including circuit breakers of all types, circuit switchers, disconnect switches, isolators, instrument transformers, series and shunt capacitors and lightning arresters.	2008-11
CEATI	Asset Condition Assessment and Health Indices for Distribution System Assets	Preparation of a guide for best-in-class condition assessment strategies for distribution assets, including poles, conductors, insulators, distribution transformers, underground cables, pole and pad mounted disconnect switches and right-of-ways.	2013-2015
CEATI	Ground Grid Maintenance Guide	Development of best in class guidelines for assessing the condition of grounding systems and optimizing investments into preventative maintenance based on the safety risks	2013-14
CEATI	Station Health Index	Development of a Health Index Tool for Stations using Best in Class Risk approach to assessing station reinvestment requirements. This project is unique from other Health Index Tools as it combines asset specific Health Indices into a single Composite Index.	2015-Ongoing
North Bay Hydro	Asset Condition Assessment and Asset Management Plan	Condition Assessment of fixed assets and preparation of Asset Management Plan for all distribution assets in support of Utility's Rate Filing	2014
Oshawa PUC	Asset Condition Assessment, Asset Management Plan and Depreciation Study	Condition Assessment of fixed assets and preparation of Depreciation Study and Asset Management Plan for all distribution assets in support of Utility's Rate Filing	2014

Client	Title of Project	Work Description	Date of completion
Entegrus	Asset Condition Assessment and Asset Management Plan	Condition Assessment of fixed assets and preparation of Asset Management Plan for all distribution assets in support of Utility's Rate Filing	2014
Whitby Hydro	Asset Condition Assessment and Asset Management Plan	Condition Assessment of fixed assets and preparation of Asset Management Plan for all distribution assets in support of Utility's Rate Filing	2014
Medicine Hat Electric Distribution	Asset Condition Assessment and Asset Management Plan	Condition Assessment of fixed assets and preparation of Asset Management Plan for all distribution assets in support of Utility's Rate Filing	2013
Portland General Electric	Asset Management and Investment Prioritization Model	Development of asset risk models for Transmission & Distribution assets and use of the models to develop an asset management plan	2014-2015
EPCOR	Asset Management and Investment Prioritization Model	Development of asset risk models for Transmission & Distribution assets and use of the models to develop an asset management plan	2014-2015
EPCOR	Asset Risk Management Model	Developed and implemented Asset Risk Framework that includes key concepts of asset condition assessment, total life-cycle cost considerations, and risk-based project justification.	2014
Center Wellington Hydro	Asset Condition Assessment and Asset Management Plan	Condition Assessment of fixed assets and preparation of Asset Management Plan for all distribution assets in support of Utility's Rate Filing	2012
Eric Thames Power	Asset Condition Assessment and Asset Management Plan	Condition Assessment of fixed assets and preparation of Asset Management Plan for all distribution assets in support of Utility's Rate Filing	2011
North Bay Hydro	Asset Condition Assessment and Asset Management Plan	Condition Assessment of fixed assets and preparation of Asset Management Plan for all distribution assets in support of Utility's Rate Filing	2009
PUC Inc.	Asset Condition Assessment and Asset Management Plan	Condition Assessment of fixed assets and preparation of Asset Management Plan for all distribution assets in support of Utility's Rate Filing	2007-08

- d) This asset condition assessment report indicates the condition of fixed assets employed on Oshawa PUC's distribution system at the end of 2013. The previous asset management report, prepared in 2009, provides an indication of the condition of assets at that time.



**OSHAWA PUC NETWORKS INC.**

**Response to School Energy Coalition (SEC)  
Interrogatory 2.0-SEC-20**

**[Ex.2-B-3]**

What percentage of the Applicant's current assets are, i) beyond useful life, and ii) are projected to be beyond useful life by 2019?

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**Response:**

Precise percentages of assets at or predicted to be beyond useful life are not possible. Asset replacement is done by taking into consideration various issues, but risk of failure (or end of life) is a major consideration.

The Asset Condition Assessment Report provides a complete picture of the existing health and condition of the distribution system assets at the end of 2013 and provides quantitative estimates of the assets found in poor and very poor condition, requiring rehabilitation or replacement over the next five year period. The methodology utilized in this study is an integral part of a risk based asset management strategy that is based on the Asset Management Standard PAS-55, a specification developed by British Standards Institute (BSI) and commonly employed by progressive electric utilities.

**OSHAWA PUC NETWORKS INC.**

**Response to School Energy Coalition (SEC)  
Interrogatory 2.0-SEC-21**

**[Ex.2, Ex.4]**

With respect to contract labour:

- a) Please explain how the Applicant utilizes contractors and/or external services for its capital and OM&A programs.
  - b) For the period 2012-2019, please provide the annual OM&A expenditures for all external contract services. Also provide the percentage this represents of total annual OM&A expenditures.
  - c) For the period 2012-2019, please provide the annual capital expenditures for all external contract services. Also provide the percentage this represents of total annual capital expenditures.
- 

**Response:**

- a) OPUCN uses contractors for economic and specialty skill cases (e.g. hydro vac pole excavation, directional boring, etc.), as well as, resource balancing to augment existing resources for short term fluctuations.
- b) See table below:

Year	OM&A \$ Sub-Contractors	% of OM&A
2012	\$1,654,508	14.7%
2013	\$1,678,466	15.0%
2014	\$1,463,587	13.1%
2015	\$1,696,456	14.0%
2016	\$1,698,258	13.5%
2017	\$1,732,224	13.4%
2018	\$1,766,868	13.5%
2019	\$1,802,205	13.7%

- c) OPUCN does not forecast contractor amounts. Contractors are used to augment internal resources where necessary. Forecasts are based upon standard costs whether they include OPUCN or contracted resources. The table below shows the actual contractor amounts for 2012 to 2014 – note that this includes costs other than just labour:

Year	Capital \$ Sub-Contractors	% of Capital (Gross)
2012	\$3,077,030	24.9%
2013	\$5,296,935	42.4%
2014	\$6,724,375	51.8%

**OSHAWA PUC NETWORKS INC.**

**Response to School Energy Coalition (SEC)  
Interrogatory 2.0-SEC-22**

**[Ex.2-B-3, Ex.4, Appendix 4-3]**

Please explain the interrelationship, if any, between the METSCO Asset Condition Study and Asset Depreciation Study.

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**Response:**

There is no direct relationship between the two studies.

**OSHAWA PUC NETWORKS INC.**

**Response to School Energy Coalition (SEC)  
Interrogatory 2.0-SEC-23**

**[Ex.2-B-5, p.1]**

Please explain the methodology for determining the risk probability and risk consequences. Please provide all supporting calculations.

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**Response:**

METSCO Energy Solution's Asset Condition Assessment Report and Asset Management Plan includes identification of critical and high priority asset investment requirements, and explains the reasons for such identification. This work forms the basis for the prioritization of OPUCN's capital investment program components.

As explained at Exhibit 2, Tab B, page 47 (bottom) et seq., OPUCN uses best available information (including the information from METSCO's detailed asset condition report) to categorize risk probability as "unlikely", "somewhat likely", "likely" or "almost certain", and to categorize risk consequences as "minor", "moderate", "major" or "critical". The key consequence factors considered are list in the evidence referenced above.

The evidence supporting the probability and consequence priorities assigned to OPUCN's various types of assets is found in the METSCO report [Exhibit 2, Tab B, Schedule 3]. There are no additional "calculations" engaged in the prioritization process.

**OSHAWA PUC NETWORKS INC.**

**Response to School Energy Coalition (SEC)  
Interrogatory 2.0-SEC-24**

**[Ex. 2-A, p.145]**

Please provide a forecast of the Applicant's reliability metrics for 2015-2019.

---

**Response:**

OPUCN programs are designed to address the highest priority needs based on assets evaluated to be at end of life with a qualitative expectation to improve the reliability performance going forward for those specific areas. OPUCN does not specifically quantify the reliability improvements expected.

**OSHAWA PUC NETWORKS INC.**

**Response to Vulnerable Energy Consumers Coalition (VECC)  
Interrogatory 2.0-VECC-9**

**Reference: E2/TA/pg.16**

- a) Please a category breakdown (e.g. transformer, poles etc.) of the annual total of unplanned emergency replacements for each year in the period 2012 to 2014.
  - b) Is the budgeting for unplanned replacements indicative of a “run to fail” philosophy (as opposed to proactive replacement). If not, please explain how the distribution system plan addresses how to reduce this category of spending.
- 

**Response:**

- a) Unplanned emergency replacements:

	<b>2012</b>	<b>2013</b>	<b>2014</b>
Padmount Transformers	20	32	24
Polemount Transformers	9	12	23
Poles, Towers & Fixtures	2	17	10

- b) Yes.

**OSHAWA PUC NETWORKS INC.**

**Response to Vulnerable Energy Consumers Coalition (VECC)  
Interrogatory 2.0-VECC-10**

**Reference: E2/TA/pg.84**

Please update Appendix 2AA for 2014 actuals.

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**Response:**

OPUCN will provide updated models including the Chapter 2 Appendices excel model via RESS.



**OSHAWA PUC NETWORKS INC.**

**Response to Vulnerable Energy Consumers Coalition (VECC)  
Interrogatory 2.0-VECC-11**

**Reference: E2/TA/pg.84**

Please provide the policy governing the capital contributions for the 407 East Project, and that from Durham Region and the City of Oshawa.

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**Response:**

The policy governing the capital contributions can be referred to in *The Public Service Works on Highways Act, R.S.O. 1990*. Refer to the Ontario government web link below for additional information.

<http://www.ontario.ca/laws/statute/90p49>

In the case of the 407 East Project, the customer pays 100% of all relocation work, including materials, for both temporary and permanent relocation of utility infrastructure. OPUCN is responsible for the cost of work to provide provision for future expansion. For example when constructing duct banks under the 407, the customer pays for the duct bank required to replace existing infrastructure and OPUCN pays for any incremental costs for additional infrastructure to allow for future expansion.

For all other projects initiated by either the City of Oshawa or the Region of Durham, they pay according to a formula prescribed in the above regulation which is based on 50% of labour and labour saving devices for the project.

**OSHAWA PUC NETWORKS INC.**

**Response to Vulnerable Energy Consumers Coalition (VECC)  
Interrogatory 2.0-VECC-12**

**Reference: E2/TA/pg.84**

Between 2012 and 2013 the Service/Expansion contributions as a percentage of subdivision expansion has consistently exceeded 70%. For the forecast for 2015 through 2019 the equivalent figure is approximately 60%. Please explain why the forecast amount of contributions as a percentage of subdivision expansion is forecast to decline.

---

**Response:**

Expansion contributions are higher when a subdivision is small in size such as a typical infill project. There are greater economies of scale in larger subdivision expansions which are typically greenfield projects which will result in lower capital contributions.

**OSHAWA PUC NETWORKS INC.**

**Response to Vulnerable Energy Consumers Coalition (VECC)  
Interrogatory 2.0-VECC-13**

**Reference: E2/TA/pg.146**

Please update Table 2-53 to include 2014 data.

---

**Response:**

Refer to table below:

	<b>Includes Outages Caused by Loss of Supply</b>							<b>Excludes Outages Caused by Loss of Supply</b>						
	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2013*</b>	<b>2014</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2013*</b>	<b>2014</b>
<b>SAIDI</b>	3.49	0.65	1.88	1.27	0.79	6.86	1.43	1.31	0.62	1.88	1.27	0.79	6.86	1.34
<b>SAIFI</b>	1.67	0.80	1.66	1.08	0.76	2.39	1.98	1.17	0.61	1.66	1.08	0.76	2.39	1.19

**OSHAWA PUC NETWORKS INC.**

**Response to Vulnerable Energy Consumers Coalition (VECC)  
Interrogatory 2.0-VECC-14**

**Reference: E2/TA/pg.84 & E4/pg.37**

- a) Between 2011 and 2012 OPUCN spent \$2.023 million on fleet purchases. Please provide the vehicle inventory (with make year) at the end of 2012.
  - b) Please provide a current list of vehicles including the year of make of each vehicle.
  - c) For comparison please provide the forecast list of vehicles at the end of 2017 along with the forecast year of make of each vehicle.
- 

**Response:**

The table following provides the information requested in parts a), b) and c) above:

Asset Description	2012	Current	2017
1997 CHEV 1 TON SPECIAL SERVICE	30,243	30,243	30,243
1997 CHEV 1/2 TON PICK-UP	20,409	0	0
1998 CHEV 1/2 TON PICK-UP	25,765	0	0
1999 CHEV 1/2 TON EXTCAB PICK-UP	27,395	27,395	0
2000 CHEV ASTROVAN	23,637	0	0
2000 CHEV 1 TON DUMP	41,842	41,842	41,842
2005 FRTL SINGLE BUCKET	233,683	233,683	0
2005 FRTL SINGLE BUCKET	232,833	232,833	0
2005 3/4 ton extended cab - #23	37,146	37,146	0
2005 CHEV 3/4 TON EXTCAB PICK-UP	37,436	0	0
2005 CHEV 3/4 TON EXTCAB PICK-UP	40,796	0	0
2005 CHEV 3/4 TON EXTCAB PICK-UP	40,462	0	0
2005 CHEV 3/4 TON EXTCAB PICK-UP	44,646	44,646	0
2006 CHEV 1/2 EXTCAB TON PICK-UP 4X4	34,546	34,546	34,546
2006 CHEV 1/2 EXTCAB TON PICK-UP 4X4	34,160	34,160	34,160
2006 CHEV 1/2 EXTCAB TON PICK-UP 4X4	36,218	36,218	36,218
2005 CHEV CUBEVAN	41,479	41,479	0
2006 CHEV UPLANDER CARGOVAN	29,400	29,400	0
2006 CHEV UPLANDER CARGOVAN	28,616	0	0
2006 CHEV UPLANDER CARGOVAN	28,643	0	0
2006 CHEV UPLANDER CARGOVAN	28,683	28,683	0
2006 CHEV UPLANDER CARGOVAN	28,607	28,607	28,607
2005 CHEV 1/2 EXTCAB TON PICK-UP 4X4	38,490	38,490	38,490
2005 CHEV C5500 DUMP	60,721	60,721	60,721
2007 FRTL DOUBLE BUCKET	378,990	387,000	0
2011 FRHT SINGLE BUCKET	207,405	207,405	207,405
2011 CHEVROLET VOLT ELECTRIC CAR	46,391	46,391	46,391
2012 FRHT DOUBLE BUCKET	370,670	370,670	370,670
2012 FRHT Radial Boom Derrick	325,530	325,530	325,530
2012 FRHT Radial Boom Derrick	325,535	325,535	325,535
2013 Chevy Silverado Truck	30,458	30,458	30,458
2012 Substation Van, 18 ft, diesel chasi	83,833	83,833	83,833
2012 FRHT 50' Single Bucket Truck#18	282,368	282,368	282,368
2012 FRHT Single Bucket Truck-Truck #19	592,200	592,200	592,200
2013 Chevy Silverado Truck	30,458	30,458	30,458
2012 Chevy Silverado Truck#26	37,139	37,139	37,139
2013 Chevrolet Cruze	17,542	17,542	17,542
2014 GMC Van	0	0	33,354
2014 1/2 Ton 4x4 Chev P/U	0	26,506	26,506
2015 83 ft. Double Bucket Truck	0	99,800	369,800
2015 Chevy 3/4 ton extended cab pick-up	0	0	30,000
2015 CHEV 1/2 TON PICK-UP 4X4	0	0	29,249
2015 Cubevan Aerocell	0	0	60,000
2015 GMC Safari Van	0	0	33,354
2015 CHEV 1/2 TON PICK-UP 4X4	0	0	29,249
2015 CHEV 1/2 TON PICK-UP 4X4	0	0	29,249
2016 46 ft. Single Bucket Truck	0	0	375,000
2016 Chevy 3/4 Ton Extended cab pick-up with liftgate	0	0	40,000
2017 46 ft. Single Bucket Truck	0	0	375,000
2017 Chevy 3/4 Ton Extended cab pick-up	0	0	35,000
<b>Other (Trailers etc)</b>	254,837	281,237	311,237
<b>Total Vehicles - Cost</b>	<b>4,209,212</b>	<b>4,016,354</b>	<b>4,074,853</b>
Quantity (excluding trailers etc)	37	31	33

**OSHAWA PUC NETWORKS INC.**

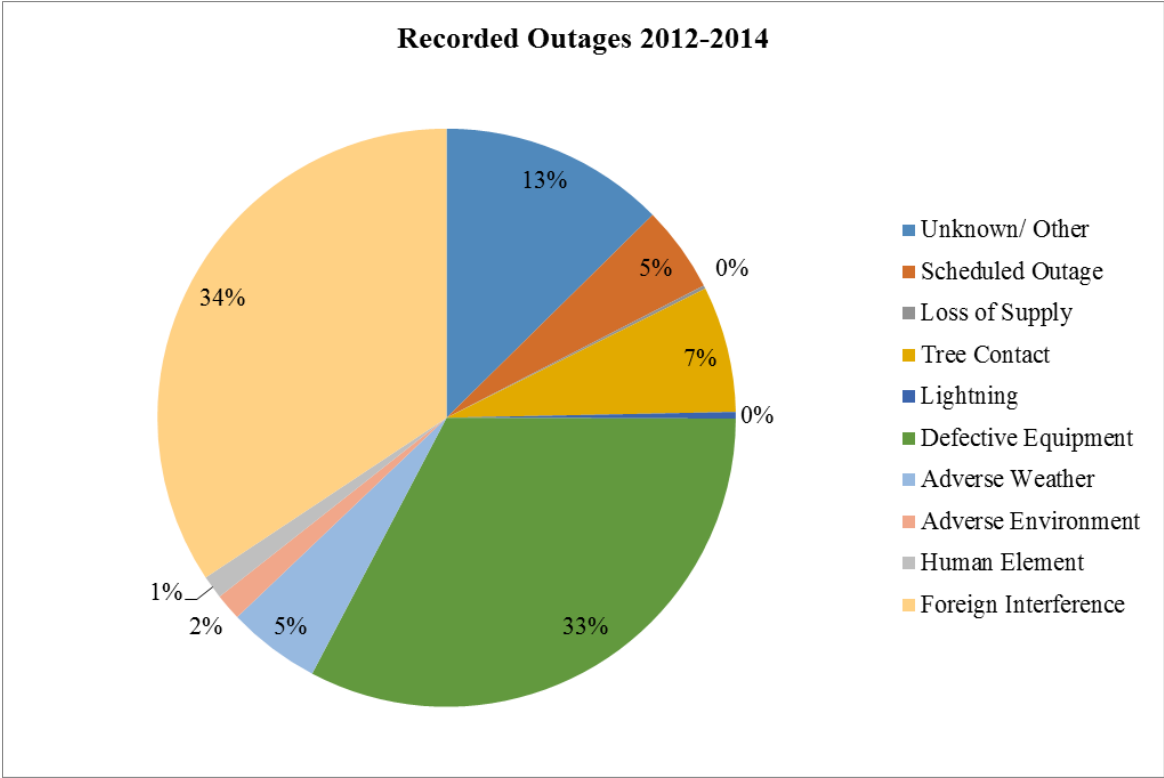
**Response to Vulnerable Energy Consumers Coalition (VECC)  
Interrogatory 2.0-VECC-15**

**Reference: E2/TB/pg.66**

- a) Please update Figure 7 to show 2014 results and the period 2012 through 2014.
  - b) Please update Table 29 to include 2014 number of interruptions.
- 

**Response:**

- a) Refer to chart below:



b) Refer to table below:

<i>Cause</i>	<i>Number of Interruptions</i>					
	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>Unknown/ Other:</b> Customer interruptions with no apparent cause or reason which could have contributed to the outage.	22	13	9	29	20	19
<b>Scheduled Outage:</b> Customer interruptions due to the disconnection at a selected time for the purpose of construction or preventive maintenance.	0	0	0	16	2	8
<b>Loss of Supply:</b> Customer interruptions due to problems in the bulk electricity supply system such as under frequency load shedding, transmission system transients, or system frequency excursions. During a rotating load shedding cycle, the duration is the total outage time until normal operating conditions resume, while the number of customers affected is the average number of customers interrupted per rotating cycle.	1	1	0	0	0	1
<b>Tree Contact:</b> Customer interruptions caused by faults due to trees or tree limbs contacting energized circuits.	12	11	8	10	11	17
<b>Lightning:</b> Customer interruptions due to lightning striking the Distribution System, resulting in an insulation breakdown and/or flashovers.	5	1	6	2	0	0
<b>Defective Equipment:</b> Customer interruptions resulting from equipment failures due to deterioration from age, incorrect maintenance, or imminent failures detected by maintenance.	64	53	59	61	48	67
<b>Adverse Weather:</b> Customer interruptions resulting from rain, ice storms, snow, winds, extreme ambient temperatures, freezing fog, or frost and other extreme conditions.	16	5	7	20	5	3
<b>Adverse Environment:</b> Customer interruptions due to equipment being subjected to abnormal environment such as salt spray, industrial contamination, humidity, corrosion, vibration, fire or flooding.	0	0	0	0	1	7
<b>Human Element:</b> Customer interruptions due to the interface of the utility staff with the system such as incorrect records, incorrect use of equipment, incorrect construction or installation, incorrect protection settings, switching errors, commissioning errors, deliberate damage, or sabotage.	3	1	1	2	2	3
<b>Foreign Interference:</b> Customer interruptions beyond the control of the utility such as birds, animals, vehicles, dig-ins, vandalism, sabotage and foreign objects.	66	71	91	75	59	51
<b>TOTAL</b>	<b>189</b>	<b>156</b>	<b>181</b>	<b>215</b>	<b>148</b>	<b>176</b>

**OSHAWA PUC NETWORKS INC.**

**Response to Vulnerable Energy Consumers Coalition (VECC)  
Interrogatory 2.0-VECC-16**

**Reference: E2/TA/pg.145 /TB/pg.65**

- a) Please explain what reliability metrics are used (and how) to assess the success of the distribution system plan.
  - b) At page 65 of the Asset it states that “[T]he two predominant causes of OPUCN’s historical power interruptions were foreign interference and defective equipment.” Please explain the DSP programs and their costs that address these two causes of interruptions.
- 

**Response:**

- a) OPUCN assess the success of the distribution system plan by analyzing the trends of the following reliability metrics:
  - i. SAIDI
  - ii. SAIFI
  - iii. Momentary Interruptions (Auto Reclose)
- b) The DSP programs and their costs that address the predominant causes of OPUCN’s historical power interruptions are described in detail in the Distribution System Plan – Please refer to Exhibit 2 Tab B Page 50 through 69.

**Capital Programs**

- i. Installation of animal guards on transformer bushings to address outages caused by animal contact (foreign interference causes).



- ii. Replacement of faulty porcelain insulators and porcelain switches to address outages caused by defective equipment.

	Actual Costs
2013-2014 Porcelain Insulator Replacement and Animal Guard Installation	\$496,000
2013-2014 Porcelain Switch Insulator Replacement	\$343,000

**OSHAWA PUC NETWORKS INC.**

**Response to Vulnerable Energy Consumers Coalition (VECC)  
 Interrogatory 2.0-VECC-17**

**Reference: E2/TB/S4**

- a) Please provide a list of the programs and their cost for each of the years 2015 through 2020 that are used to execute the Smart Grid Roadmap and Financial Analysis Plan.
- b) Please identify those programs recommended by the Utiliworks study that OPUCN is opting not to implement.
- c) The Utiliworks study identifies outage minute reductions and a number of other benefits that would measure the success of implementing their recommendations. Are any of these measures being adopted. If yes please explain how. If no, please explain why not.

**Response:**

- a) Please refer to the table below for the four program types and associated project costs as identified in Exhibit 2, Tab B, Schedule 4, p31.

	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
Metering	\$ 727,152	\$ 207,660	\$ 212,941	\$ 219,036	\$ 224,922	\$ 14,616	\$ 14,814	\$ 15,048	\$ 15,264	\$ 15,498
Customer Service	\$ 185,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Distribution Operations	\$ 1,425,000	\$ 380,000	\$ 380,000	\$ 418,000	\$ 456,000	\$ 38,000	\$ 38,000	\$ 38,000	\$ 38,000	\$ 76,000
<u>Distributed Resources</u>	<u>\$ 949,905</u>	<u>\$ 659,505</u>	<u>\$ 774,300</u>	<u>\$ 887,825</u>	<u>\$ 1,022,540</u>	<u>\$ 526,809</u>	<u>\$ 542,734</u>	<u>\$ 564,996</u>	<u>\$ 570,417</u>	<u>\$ 582,888</u>
Total	\$ 3,287,057	\$ 1,247,165	\$ 1,367,241	\$ 1,524,861	\$ 1,703,462	\$ 579,425	\$ 595,548	\$ 618,044	\$ 623,681	\$ 674,386

- b) OPUCN is planning to implement all projects identified in the four program types recommended in the Utiliworks study. Please refer to Exhibit 2, Tab B, Schedule 4 (“Smart Grid Roadmap and Financial Analysis”).
- c) Under the Distribution Operations program type, implementation of the Outage Management System (OMS) is the key project to identify outage minute

reduction and the tool to record service minutes of improvement in reliability performance.

**OSHAWA PUC NETWORKS INC.**

**Response to Vulnerable Energy Consumers Coalition (VECC)  
Interrogatory 2.0-VECC-18**

**Reference: E2/TA/S1**

- a) Please provide the name(s) of the principle author of the EY Lead-Lag Study.
  - b) Please provide a list of prior lead-lag studies undertaken by this author.
  - c) Please provide an existing study which shows for a monthly billing electricity utility that used a service lag greater than 16 day.
  - d) The following is taken from the testimony of Mr. Paul Normand before the Public Utilities Commission of the State of New Hampshire, the definition is, in our experience, typical of other lead-lag studies: *“The service lag is the average time span between the mid-point of the customer’s consumption interval, also known as the usage period, and the time that such usage is recorded by the Company for billing purposes. This service period determines the average length of time over which the billed services are provided and establishes a common point in time from which to measure (1) the time of reimbursement for the billed services, and (2) the time at which the accrued costs for the service period are actually paid. For virtually all utilities, the service lag is one-half of an average month or 15.21 days.* – emphasis added (Northern Utilities, Inc. Docket No. DG 11-069). Please explain why OPUCN believes it should depart from the standard practice of other monthly billing utilities in North America. Specifically show how the 20.41 days is calculated indicating what customers and class make up the variation from 15.21 days.
- 

**Response:**

- a) EY Working Capital Advisory Services Practice is a dedicated service line within EY that assists companies in evaluating working capital requirements and the impact to these requirements through optimization and alignment to leading practices of commercial terms, processes and policies (including Meter to Cash, Procure to Pay and Forecast to Fulfil cycle).

Mathieu Chretien, an EY Senior Manager with over 10 years of experience, was the principal author.

Chris Stepanuik - As a Vice President in Ernst & Young Inc.'s Working Capital Advisory Services practice, Chris has over 15 years of experience in providing strategic advisory and corporate finance services to clients with a specific focus on assisting businesses to identify and realize cash management improvements across the procure-to-pay, order-to-cash and forecast-to-fulfill processes. Chris is a CFA, CAIRP, CMC and Six Sigma Black Belt.

Stephen Tsai - Stephen is a manager in EY Working Capital Advisory Services (WCAS) and the analytics lead for Canadian EY WCAS practice. Stephen works with a wide range of clients for process and performance improvements across business value chain processes in Procure to Pay, Order to Cash, Forecast to Fulfill. Stephen is Chartered Professional Accountant, Certified Management Accountant, CPA, CMA.

- b) EY are one of the largest accounting firms in the world who have a specialized practice in working capital analysis. As per part a), individuals working on the report have significant experience in preparing working capital studies.
- c) Lead-lag study was prepared on information relating to OPUCN. The lead-lag study takes into account a number of different variables which are weighted to produce final results. EY provides the methodologies used to develop the results and the relevant data is provided.
- d) Please refer to 2.0-Energy Probe-18 for response.