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November 16, 2020

Delivered by Email & RESS

Ms. Christine Long, Registrar
Ontario Energy Board
P.O.Box 2319, 27th Floor
2300 Yonge Street
Toronto, ON M4P 1E4

Dear Ms. Long:

Re: OEB File No. EB-2020-0048
Oshawa PUC Networks Inc. ("OPUCN") 2021 Rates Application
Interrogatory Responses

Pursuant to Procedural Order No. 2, please find attached OPUCN's Interrogatory Responses for the above proceedings.

OPUCN is filing a redacted version of the Interrogatory Responses as well as a redacted version of the "Taking A.I.M. Operational Plan for Oshawa PUC Networks Inc. by UtilityPULSE" ("**Operational Plan**") as further described below. OPUCN is filing this information in confidence pursuant to the Ontario Energy Board's (the "**Board**") *Practice Direction on Confidential Filings* (the "**Practice Direction"**).

OPUCN has endeavoured to provide as much detail as possible in its Interrogatory Responses, balancing open disclosure with the need to maintain confidentiality of third-party personal and commercially sensitive information in its possession. OPUCN has been selective in its redactions, limiting them to specific instances of confidential and sensitive information.

Personal Information

The information in Interrogatory Response to 4-EP-21(c) has been redacted. Specifically, this information pertains to the 2019 Total Compensation for the CEO of OPUCN. This information is considered personal information (i.e. salary) of the CEO of OPUCN.

The information redacted in the Operational Plan filed in response to Interrogatory Response 1-DRC-7(a) also includes personal information; specifically, the names, positions and responsibilities of individuals employed at UtilityPULSE, a third party to the proceeding.

The Practice Direction recognizes that personal information is among the factors that the Board will take into consideration when addressing the confidentiality of filings[1].

As defined in *Freedom of Information and Protection of Privacy Act* ("**FIPPA**") "personal information" means recorded information about an identifiable individual, including information relating to the employment history of the individual or information relating to financial transactions in which the individual has been involved. The compensation received by the CEO of OPUCN and the employment information of individuals at UtilityPULSE would be considered personal information, which is one of the factors the Board considers in addressing confidentiality of filings. Therefore, such personal information should not be disclosed on public record.

Commercially Sensitive Information (Vendor Pricing)

In addition, the price quotation provided by UtilityPULSE to OPUCN for their customer engagement services has been redacted.

UtilityPULSE is a customer research firm that provides customer engagement activities and services, which is a competitive business activity. The quotations it provides to its customers is commercially sensitive information. The information that has been redacted is consistently treated in a confidential manner as set out in Appendix B of the Practice Direction (i.e. Item 5, third party information as described in section 17(1) of FIPPA, including vendor pricing information.)

Disclosure of this third party information in the documents contained in the Operational Plan above could reasonably be expected to prejudice the economic interest of, significantly prejudice the competitive position of, cause undue financial loss to, and be injurious to the financial interest of the third party, UtilityPULSE. By disclosing UtilityPULSE's pricing information on the public record, it will enable other companies that offer similar services as UtilityPULSE to gain a competitive advantage over UtilityPULSE by adjusting their prices according to this information and thereby securing business opportunities at the loss of UtilityPULSE. Meanwhile, these competitors can keep their own pricing information confidential to their target customers. Therefore, such third party information of UtilityPULSE should not be disclosed on public record.

Board's Practice Direction

The Practice Direction recognizes that the abovementioned (i.e. personal information, information that is prejudicial to one's competitive position, information that if disclosed would produce significant loss or gain to any person, matters relating to FIPPA) are among the factors that the Board will take into consideration when addressing the confidentiality of filings[2]. They are also addressed in subsection 17(1) of FIPPA. The Board provided a summary of pertinent FIPPA provisions at Appendix C of the Practice Direction, which provides, in part:

> "Under section 17(1), the Board must not, without the consent of the person to whom the information relates, disclose a record where:

[1] Appendix A - Ontario Energy Board *Practice Direction on Confidential Filings,* Revised October 28, 2016.
[2] Ibid.

(a) the record reveals a trade secret or scientific, technical, commercial, financial or labour relations information;

(b) the record was supplied in confidence implicitly or explicitly; and

(c) disclosure of the record could reasonably be expected to have any of the following effects:

i. prejudice significantly the competitive position or interfere significantly with the contractual or other negotiations of a person, group of persons or organization;

[…]

iii. result in undue loss or gain to any person, group, committee or financial institution or agency"

In addition, as mentioned above, the Practice Direction notes (at Appendix B of the Practice Direction) that third party information as described in subsection 17(1) of FIPPA is among the types of information previously assessed or maintained by the Board as confidential.

In keeping with the requirements of the Practice Direction, OPUCN is filing confidential unredacted versions of the documents with the Registrar only. The unredacted versions of the documents have been marked "Confidential" and OPUCN has identified the portions of the documents in respect of which confidentiality is claimed through the use of sidebars ("|"). OPUCN requests that the unredacted documents be kept confidential.

Yours very truly,

BORDEN LADNER GERVAIS LLP

Per:

Flora Ho

cc: Intervenors of record in EB-2020-0048

EB-2020-0048

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

AND IN THE MATTER OF an application by Oshawa PUC Networks Inc. for an order approving just and reasonable rates and other charges for electricity distribution beginning January 1, 2021.

Oshawa PUC Networks Inc.

Interrogatory Responses

November 16, 2020

RESPONSES TO BOARD STAFF INTERROGATORIES

1-Staff-1
Updated Revenue Requirement Workform (RRWF) and Models

Upon completing all interrogatories from Ontario Energy Board (OEB) staff and intervenors, please provide an updated RRWF in working Microsoft Excel format with any corrections or adjustments that the Applicant wishes to make to the amounts in the populated version of the RRWF filed in the initial applications. Entries for changes and adjustments should be included in the middle column on Sheet 3 (Data_Input_Sheet). Sheets 10 (Load Forecast), 11 (Cost Allocation), and 13 (Rate Design) should be updated, as necessary. Please include documentation of the corrections and adjustments, such as a reference to an interrogatory response or an explanatory note. Such notes should be documented on Sheet 14 (Tracking Sheet), and may also be included on other sheets in the RRWF to assist understanding of changes.

In addition, please file an updated set of models, as applicable, that reflects the interrogatory responses, including an updated Tariff Schedule and Bill Impact model for all classes at the typical consumption/demand levels (e.g. 750 kWh for residential, 2,000 kWh for GS<50, etc.).

Response:

Models have been updated to reflect all interrogatory responses, and all applicable models have been filed via RESS.

1-Staff-2
Cost of Power – Updated Model Ref 1: Exhibit 2, Pages 20-22
Ref 2: 2021 Chapter 2 Appendices – Tab 2-ZB – Cost of Power

OEB staff notes that the Chapter 2 Appendices originally posted on the OEB's website contained a formula error in Tab 2-ZB. The error was in the Smart Meter Entity Charge section, which did not multiply column J by 12 in order to get an annual number.

OEB staff has updated Oshawa PUC Networks' model and has provided a copy along with these interrogatories.

a. Please confirm the accuracy of the updated model.
b. Please update all the necessary workforms for the updated cost of power.
c. Please utilize this model going forward for any changes as a result of interrogatories.

Response:

a. Confirmed.
b. All the necessary workforms for the updated cost of power have been updated.
c. OPUCN will utilize this model going forward for any changes as a result of interrogatories.

1-Staff-3
Responses to Letters of Comment

Following publication of the Notice of Application, the OEB received 5 letters of comment. Section 2.1.7 of the Filing Requirements state that distributors will be expected to file with the OEB their response to the matters raised within any letters of comment sent to the OEB related to the distributor's application. If the applicant has not received a copy of the letters, they may be accessed from the public record for this proceeding.

Please file a response to the matters raised in the letters of comment referenced above. Going forward, please ensure that responses to any matters raised in subsequent comments or letter are filed in this proceeding. All responses must be filed before the argument (submission) phase of this proceeding.

Response:

See response letters filed with these responses as Appendix A.

1-Staff-4
Evolution of Customer Engagement

Please describe the differences between customer engagement conducted in preparation for the current application and previous customer engagement. Please explain how customer engagement has been enhanced, adapted etc.

Response:

Over the last 3 years OPUCN has been enhancing their customer outreach. Prior to this time there was no public events held outside of Conservation and Demand Management events.

Beginning in 2017 efforts were focused on:

- improving website functionality, adding more information, creating online forms,
- enhancing social media messaging, creating and planning timely, relevant and engaging messages
- hosting open houses to allow customers to come and speak face to face with staff. Subject matter experts from all business divisions would attend
- creating safety videos that that promoted safety around power line infrastructure
- presenting Hazard Hamlet in open houses and public school visits to promote power line safety in the classroom
- built community partnerships to participate in common public events

In previous customer engagement campaigns OPUCN conducted a telephone survey to gather customer feedback.

In an effort to reach a larger demographic of customers to gain broader feedback about the current rate application OPUCN created a seven chapter online survey that was available from Oct 1, 2019 to Dec 8, 2019. An informational video was created and shared on website and social media describing the survey and the rate application purpose and process. OPUCN hosted a public telephone town hall during the evening hours, hosted three daytime public information sessions at local community centres and one information session at the main library in Oshawa during evening hours. The recording and transcript of the telephone townhall were posted on our website for customers to refer to at a later time. The online survey and public events were advertised through social media, website, media releases and newspaper advertisements.

All public events were hosted by the OPUCN executive team and operational staff were on hand to provide support. A copy of the presentation deck was posted on our website for customers to view. Also, informative emails were sent out to all customers that provided an email address about the online survey and public events.

For those who were not online paper copies of the survey were provided for them to complete and mail back.

1-Staff-5
Ref: Exhibit 1, Page 7

Oshawa PUC Networks is implementing a "Three-Year Culture Transformation Plan" with an aim of building and developing the workforce of the future, focusing on diversity of thought, expertise, and backgrounds.

Please explain how this plan is different/enhanced when compared to Oshawa PUC Networks' current strategy with respect to its workforce, and the resulting changes expected.

Response:

Oshawa Power's Three-year Culture Transformation Plan was developed to support our organizational strategy to evolve as a low-cost, high-performing, service-oriented, Cohort 2 LDC. The Plan addresses specific drivers of employee engagement identified in our 2019 Employee Engagement Survey and resonates with a key objective of our five-year Strategic Plan – Invest in our People. Enhancing customer experience through an engaged workforce focused on safe and reliable service, we are continuing to raise the standard on measuring our performance through scorecard indicators of culture transformation.

Productivity as an outcome of engagement is measured by indicators (i.e. completed actions and initiatives) of culture transformation identified within our three-year plan. Our historic low rate of absenteeism translates into increased productive time measured by extra days at work. Our zero rate of lost time and work accommodation days are additional contributors to enhanced productivity levels.

This strategy focuses on improvement in customer service outcomes, ensuring that our employees are engaged in proactive customer service management. The principal areas of our survey that are driving internal engagement are – frontline leadership, communicating change, and strategic direction. Historically, strategy has been to make operational adjustments locally at the department level with improvements. This is a coordinated approach starting bottom up through employee survey and top down with strategic direction.

1-Staff-6
Customer Engagement Ref: Exhibit 1, Page 11

Oshawa PUC Networks notes that it conducts a customer satisfaction survey on a biannual basis to obtain feedback on the overall value of service offered to customers. The latest survey took place in 2018 with the 2020 survey process currently taking place. The purpose of the survey is for customers to be able to provide feedback on their perceptions of Oshawa PUC Networks' performance, desired service improvements, customer priorities, among other matters.

a. Has Oshawa PUC Networks adapted the 2020 survey in any way as a result of its learnings from previous customer engagement surveys? If yes, please explain how. If not, please explain why.
b. If available, have any of the 2020 survey results to date varied significantly in any aspect from the results utilized to form the proposals in Oshawa PUC Networks' current application? If yes, please describe those aspects.
c. Does Oshawa PUC Networks anticipate that the COVID-19 pandemic will have an impact on the priorities of its customers in relation to reliability, cost etc. currently and on a go-forward basis?
   i. Is Oshawa PUC Networks comfortable that its past survey results continue to indicate the priorities of its customers given the COVID-19 pandemic?

Response:

a) Yes we have adapted the survey. When we created the latest survey related to the Distribution System Plan and Rate Application process we decided to conduct an online survey instead of a telephone based survey. We decided this to measure whether we would get higher engagement with the customer. We allowed for more unscripted input for the customer to submit and the customer was able to request a contact from the company. This allowed for more open dialogue between the company and the customer.
   Over time, the questions evolve based on the customer's feedback. For example, if in one survey we noticed a higher interest in investing in customer service technology, we may ask more detailed questions in the next survey, to learn more about the customer's desires.
b) We are conducting are next survey in January 2021. Our last customer satisfaction survey was done slightly ahead of schedule in Fall 2018. We normally conduct our surveys in January.
c) Yes, we feel the COVID-19 pandemic will have an impact on the priorities of its customers in relation to reliability and costs. For many customers the new reality is working from home and learning from home. In order for that to be successful stable electricity is a must. Some customers may take a greater interest in the utilities plans to prevent power outages and to react to power outages.

1-Staff-7

Reference to Conditions of Service Ref: Exhibit 1, Page 26

Oshawa PUC Networks is in the process of updating its Conditions of Service to include changes to the format so as to mirror the OEB's template, as well as, to include any new connection and disconnection activities available by customer rate class.

Please further explain what is meant by "any new connection and disconnection activities available by customer rate class".

Response:

Oshawa PUC is referring to including connection and billing conditions regarding net metering. As well as, including detailed conditions for disconnection of low income customers to align with current regulated practices.

1-Staff-8
Ref 1: Exhibit 1, Page 36, Table 1-8
Ref 2: EB-2017-0069 – OPUCN_Rev_Reqt_Work_Form_V4_RUN-1_20180122

The OEB-approved Operations, Maintenance & Administration (OM&A) expenses in the table in reference 1 shows an amount of $13,307k in 2019, while reference 2 show an amount of $13,102k. Please confirm if the difference is due to the inclusion of LEAP and Property Taxes.

Response:

Confirmed.

1-Staff-9
OM&A Cost Drivers
Ref: Exhibit 1, Page ~~51~~ 44 [sic], Table 1-15

Annual OM&A cost drivers are shown in Table 1-15. In the table, bad debt expense is forecasted to increase by $195,266 in 2020 and a further $8,932 in 2021. In the August 14, 2020 accounting order[1], Account 1509 – Impacts Arising from the COVID-19 Emergency, Sub-account Bad Debt was established.

a. Please explain whether the increases in bad debt for 2020 and 2021 reflect considerations for COVID-19.
b. Please also explain whether the increases in bad debt include any amounts recorded or to be recorded in Account 1509, Sub-account Bad Debt.
c. If yes, please indicate the bad debt amounts excluding any bad debt recorded or to be recorded in the Account 1509, Sub-account Bad Debt.

Response:

a. No. The 2020 and 2021 forecasts are reflective of the average expense over the preceding years. Bad debt provisions increased significantly in 2017, with the ban on winter disconnections contributing to an unusually large arrears balance at the end of 2017. These arrears were gradually reduced through 2018 and 2019, with the resulting provision reductions credited back to expense over 2018 and 2019. The 2020 forecast is based on a historic norm for doubtful debts, and does not include any COVID-19 impact.
b. No.
c. N/A.

1-Staff-10
Ref 1: Exhibit 1, Page 52
Ref 2: Exhibit 1, Appendix 1.1 - Oshawa Power 5 Year Infrastructure Investment Plan Virtual Town Hall, Page 3
Ref 3: Exhibit 2, Distribution System Plan (DSP) – Appendix A, Page 175

Oshawa PUC Networks notes that in recent years, there has been increased levels of:
…theft, attempted thefts, and vandalism which has necessitated additional security measures provided by subcontractors to protect the security of station buildings, pole yard, and head office. This is consistent with the increased crime growth in Downtown Oshawa, where the head office is located. **As well, this supports our need to assess other head office locations (emphasis added)**.

As it relates to a new facility and re-locating, Oshawa PUC Networks notes that there is a majority of customer support for doing so. These findings will affect decisions made around Oshawa PUC Networks' facility in the future.

At reference 3, Oshawa PUC Networks provides a business case noting that through inspection of its office and facilities equipment, it determined investments are required to ensure the **existing office space continues to provide efficient and effective operational support (emphasis added)**.

a) Please reconcile the two statements which are bolded.
b) Is Oshawa PUC Networks in any current discussions to move office locations?
c) If yes, please provide a status update of those discussions.
d) If discussions are currently not underway, when does Oshawa PUC Networks expect those discussions to commence?

e) Reference 2 shows that only 12.3% of customers who participated in the survey supported investing and retrofitting the existing facility.
   Please explain why planned expenditures to update Oshawa PUC Networks' current facilities is a prudent expenditure at this time given that a decision is yet to be made on moving locations, and second, only 12.3% of customers supported investments in the existing facility.

Response:

a) Statement 1 describes increasing expenditures being incurred at OPUCN's head office related to managing the safety and security of the premises.
   Statement 2 describes the need for capital expenditures required to maintain reasonable facility functionality and a safe working environment, based on the results of a building condition assessment. The use of the word "continued" should not be construed as an endorsement for the sufficiency of the facility to provide efficient and effective operational support that is optimal, or meeting all of the required needs of the utility until the move takes place.

b) The City of Oshawa owns the municipal property at 100 Simcoe Street South (OPUC's head office) and has advised OPUC that it intends to terminate OPUC's leasehold occupancy of the premises within the investment period of this rate filing in order to implement larger municipal development plans encompassing this downtown location. As a result, OPUC is preparing for an involuntary, but much required move, supported by operational needs. Market studies, space requirements and conceptual designs have been completed to date. OPUC is now preparing to develop a project plan.

c) See d) below.

d) Discussions to move office locations have occurred, and are continuing between the City of Oshawa, OPUC and OPUC's Board of Directors. There is continued interest to explore whether a campus approach with other municipal service organizations is both feasible and cost effective. OPUC's Board of Directors have approved a move, it's considered imminent, but the details of where, when, what and how are pending.

Low customer support for investments in the existing facility is not interpreted by OPUC as do or spend nothing; but rather, spend the minimal required to maintain a safe and functional work environment. To that effect, there are no materially significant upgrades, or improvements planned beyond those absolutely necessary, as identified by building condition assessments. Additionally, OPUC has taken additional steps to determine if any necessary major capital investments can be reasonably delayed with additional maintenance, to bridge the period of time from now until a probable move.

1-Staff-11
Ref: Exhibit 1, Appendix 1.1 - Taking A.I.M. (Applied Insights Methodology) Survey, Page 34

Customers were asked "…To relocate and build a new facility that will accommodate our operational demands and growth in today's market will generate a monthly cost increase, beginning in 2022 of $1.53 per month. Which of the following statements best reflects your view about going to a modern facility?"

a. Given that there seems to be no concrete plans in place for a new building, please explain the assumptions behind the $1.53/month figure.
b. Please confirm that there are no amounts included in the proposed capital spending for a new building in this application for the test year and beyond.

Response:

a) A great deal of research has gone into evaluating options for a facility that will accommodate OPUCN's operational demands and growth.
The basis of the $1.53 figure was:
   a. $25,000,000 investment
   b. Building expensed would occur within one year
   c. Depreciation over 50 years
   d. Residential Cost Allocation of 62.4%
   e. Based on 54, 640 customers
   f. Cost of Capital 0.0602
   g. Tax effect 80%

b) It is confirmed that there are no amounts included.

1-Staff-12
Ref: Exhibit 1, Page 69

Oshawa PUC Networks provides the total number of customers engaged through surveys, in person town halls, and virtual town halls in the table below.

Customer Engagement Activity	Methodology	Customers Engaged
Customer Engagement Surveys (2014, 2017, 2018)	Telephone	**1,207**
Taking A.I.M. (Applied Insights Methodology) Survey - 2019	Online	**1,240**
Public Open House (Nov 2017, May 2018, Nov 2018)	In-person	**275**
Virtual Telephone Town Hall (Oct 2019)	Telephone (Live)	**9,798**
Four separate information sessions (Nov-Dec 2019)	In-person	**50**
Total number of customers who participated in the engagement:		**12, 570**

a. For the line item "Virtual Town Hall" which notes over 9,000 customers engaged, was there a metric used to determine if a call would count towards this quantum (for example, would a customer need to stay on the line for a minimum amount of time for it to count towards this number)?
b. If yes, what was this metric?
c. If not, please provide a discussion on Oshawa PUC Networks' thoughts regarding whether this number is skewed for those customers that were on the line for a very short period, and did not participate in the full call?

Response:

a) Not all 9,798 participants were on the call for the entire duration of the call. Some dropped off when their question was discussed and some joined late as they missed the first invitation call. At peak, we had 2,471 participants on the call at the same time. The average duration for time on the call was 14 minutes. We were not given a detailed log of each participant's duration from the vendor. We counted all participants.
b) We counted all participants who listened to the introduction message and stayed on to join the call.
c) OPUCN previously released details of the agenda of the phone call through a media release, email blast, newspaper advertisement and IVR message. OPUCN customers were invited to submit questions ahead of time and also request a specific phone number to be called at. With the communications leading up to the telephone town hall customers were informed. When the customers were called there was a thorough introduction recording of our CEO describing the call, subject matter and format. If customers hung up during that recording they were not counted. If customers entered into the call then they were counted. The automatic dialer continued to outbound call throughout the live call and people joined in at different times.

1-Staff-13
Customer Feedback Ref: Exhibit 1, Page 73

Oshawa PUC Networks states that it posts a listing of its capital investment projects for the upcoming years on its website and that it has posted its capital projects for 2020- 2022. This allows customers to review the upcoming projects and submit their concerns or questions. Any customer feedback or concerns are reviewed and responses provided accordingly.

a) Please provide the link to the posting of capital projects from 2020-2022.
b) As a result of this posting, has Oshawa PUC Networks received any comments or questions on the proposed projects? If yes, please file those comments and the responses sent by Oshawa PUC Networks. If no responses have been sent, please explain why.
c) As a result of any filed comments, did Oshawa PUC Networks alter any of its capital projects for the 2020-2022 period? If not, please explain why.

Response:

a) Here is the link to the Capital Projects on the Oshawa Power website https://www.opuc.on.ca/residential/capital-rebuild-plan/. Before the projects begin we hand delivered letters to all affected properties to make them aware of the upcoming
b) We have received general inquiries about length of job, any expected damage to driveway, how long is the job. We have not received any feedback or requests to alter any jobs. We have received comments from third parties, such as Bell Canada, and together we recognized we could coordinate our projects into a single dig.
c) We have not received any comments requesting any changes to our planned projects.

1-Staff-14
Current Performance Measurement Ref: Exhibit 1, Page 91

Oshawa PUC Networks introduced a new estimating software (Quadra) to enhance the quality of estimates as well as a new Centralized Maintenance Management System (CMMS) software to better manage and operate its maintenance program. Oshawa PUC Networks identified key measures within each department in order to highlight organizational efficiencies as well as highlight areas for improvement.

a) When was Quadra acquired and rolled out?
b) What were the costs associated with the acquisition of the Quadra system and where are they included?
c) Is Oshawa PUC Networks aware of any other utilities utilizing this software?

Response:

a) Implementation of Quadra was started in January 2019 and it was rolled out in September 2020.
b) The purchase of the Quadra system and implementation is work in progress. An estimate of its cost is $64,750 which is included in Geographic Information System (GIS) Upgrades and Enhancements, SS-07.
c) Oakville Hydro, Halton Hills.

1-Staff-15
Future Performance Measurement Ref 1: Exhibit 1, Pages 19-21, 91-93
Ref 2: Exhibit 2
Ref 3: Exhibit 4

Under the heading "Current Performance Management," it's noted that:

> OPUCN [Oshawa PUC Networks] identified key traceable measure within each department in order to highlight organizational efficiencies as well as highlight areas for improvement which includes project schedule, project cost and response time. Such KPI's have been implemented within the Capital Design department, responsible for the design of all capital construction jobs, in order to track key elements aligned with the overall goals of the company. Response time for new connection offers, residential upgrade response time, and controllable capital project spending are just some of the newly implemented performance metrics measured internally.

a) When were these metrics/indicators implemented?
b) Oshawa PUC Networks provides some of the metrics above. Please list all new performance metrics that were implemented and the results, if available.
c) How have these metrics influenced Oshawa PUC Networks' capital and OM&A spending? Please provide specific examples.

Under the heading "Future Performance Measurement," Oshawa PUC Networks notes it is planning on implementing the following new metrics:

Financial	Asset Management	Capital Design Cost $/km UG conductor to be replaced
		Capital Design Cost $/pole to be replaced
		Capital Expansion Design Cost $/Lot energized
	Cost Control	$/km - Vegetation Management
		$/km - System Patrol
		$/pole installed
		$/Pad-mount Transformer Replaced
		$/Pole-mount Transformer Replaced
		Wrench Time Categories TBD by CMMS system

d) When will these new metrics be implemented?

Response:

a) These metrics were implemented in 2016.

b) Please see Exhibit 1, Page 84 of 100.
Performance metrics that were implemented in the form of corporate scorecard are as follow:
   a. Financial Earnings;
   b. Cost Control;
   c. Reliability;
   d. Customer Service; and,
   e. Safety and People.

2019 Performance Scorecard							
Key Performance Indicators	***Weight***	***Threshold***	***Target***	***Stretch***	***YTD Status***		
FINANCIAL – 20%					***Plan***	***Actual***	***Outlook***
EBITDA ($'s Consolidated) *in thousands*	10%	$14,318	$14,818	$15,318	$14,818	$14,672	
Total Revenue ($'s Consolidated) *in thousands*	10%	$31,790	$31,965 ($5,051)	$32,140	$31,965	$30,863	
COST CONTROL – 10%					***Plan***	***Actual***	
Program Delivery Schedule	5%	95%	100%	105%	100%	105.6%	
Program Delivery Cost	5%	100%	95%	93%	95.7%	106.7%	
RELIABILITY- 10%					***Plan***	***Actual***	
SAIDI (minutes)	5%	78	71	61	71	59	
SAIFI	5%	1.38	1.25	1.10	1.25	1.07	
CUSTOMER SERVICE – 10%					***Plan***	***Actual***	
Customer Service Composite Score	10%	3	4	5	4	5	
SAFETY AND PEOPLE – 10%					***Plan***	***Actual***	
Lost Time Injuries (LTI)	5%	3	1	0	1	0	
Employee Engagement (Planned Touchpoints)	5%	75%	85%	95%	85%	98.5%	

2020 Performance Scorecard				
Key Performance Indicators	Weight	Threshold	Target	Stretch
FINANCIAL – 10%				
EBITDA *in thousands*	10%	*13,265*	*13,765*	*14,265*
COST CONTROL – 20%				
Program Delivery Schedule (Regulated)	5%	*95%*	*100%*	*105%*
Program Delivery Cost (Regulated)	5%	*100%*	*96%*	*94%*
Program Delivery Schedule (Unregulated)	5%	*33%*	*66%*	*100%*
Program Delivery Cost (Unregulated)	5%	*105%*	*100%*	*95%*
SYSTEM RELIABILITY – 10%				
OEB SAIDI (minutes)	5%	*77*	*70*	*60*
OEB SAIFI (frequency)	5%	*1.21*	*1.1*	*0.94*
CUSTOMER SERVICE – 5%				
Customer Service Composite Score	5%	4	5	6
SAFETY AND PEOPLE – 15%				
Lost Time Injuries (LTI)	7.5%	1	0	0
Cultural Change Initiative	7.5%	75%	100%	105%

c) Please find the specific examples below:

Implementation of Quadra, discussed in our DSP, to streamline our program delivery cost and have more granular knowledge in form of per unit cost. Program delivery cost is part of our performance scorecard.

To improve on the system reliability metric and based on its results, Oshawa Power installed squirrel fencing in Municipal Substations to increase system reliability.

d) These metrics will be implemented after the accumulation of enough data in our estimating software, tentatively by December 2021.

1-Staff-16
Ref 1: Exhibit 1, Appendix 1.2 Customer Engagement – Virtual Town Hall Summary, Page 2
Ref 2: Exhibit 1, Page 65
Ref 3: Exhibit 2, Appendix 2-1 Distribution System Plan, Page 95

A portion of reference 1 is reproduced below:

Question 1: Many customers have indicated that they would like to see more automated, self serve options allowing them to conduct their business with us at their convenience similar to the banking or retail shopping industry. Do you feel Oshawa Power should:

Answer	Responses	Percentage
Invest in new customer facing technology that will give customers self serve options to conduct their hydro account business at their convenience.	127	29.5%
I do not think it necessary to invest in self serve options at this time.	238	55.2%
Unsure or Undecided	66	15.3%

At reference 2, Oshawa PUC Networks states that customers would like to see more automated options to look after their account at their convenience. Although customers were concerned with rates, reliable safe electricity service was more important to them.

At reference 3, Oshawa PUC Networks notes that 2020 General Plant spending increases are partly attributable to the $140k addition of Customer Self-Serve Online Portal (Green Button Dashboard).

Please reconcile the references given that 55% of Oshawa PUC Networks customers do not think it necessary to invest in self-serve options, however it seems as though Oshawa PUC Networks is doing so.

Response:

Low customer support for self-serve options is not interpreted by OPUC as do or spend nothing; but rather, spend the minimal required to provide basic functionality to our customers. An investment has been made in 2020 to implement basic self-serve functionality that ensures OPUC is positioned well with a foundational online platform that will realize operational efficiencies as more customers embrace self-serve options, and which has been widely adopted across the utility sector. The budget is reasonable and comparably insignificant in relation to other major capital expenditures. Since implementation, customer feedback about the self-serve enhancements has been overwhelmingly positive.

1-Staff-17

Ref 1: Exhibit 1, Page 102, Appendix 3, Audited Financial Statements
Ref 2: Exhibit 1, Page 103, Appendix 4, Reconciliation of 2019 Audited Financial Statements

In Note 14 of Oshawa PUC Networks' 2019 audited financial statements, Oshawa PUC Networks recognized a right of use asset in its transition to IFRS 16 Leases. Right of use assets of $838,000 and $509,000 were recognized on January 1, 2019 and December 31, 2019, respectively for a building and IT equipment.

a. Please explain whether these leases were previously treated as operating or finance lease for regulatory purposes in the prior rebasing application, and whether the associated costs were included in OM&A or rate base.
b. Please explain whether the cost associated for these leases are included in OM&A or rate base in this rate application.
   i. If it is included in rate base, please indicate which account(s) it is included in in the Fixed Asset Continuity Schedules in Exhibit 2 and the amount(s) included.
   ii. In the Appendix 4 Reconciliation, there are adjustments to reduce the right of use asset and lease liability to $0 in the RRR. Please explain how the leases are accounted for in the RRR.
c. If Oshawa PUC Networks is changing the treatment of the leases between OM&A and rate base from the previous rebasing application to the current application,
   i. Please explain the nature of the change.
   ii. Please quantify the revenue requirement difference between including the costs in OM&A versus capital.
   iii. Please explain how Oshawa PUC Networks plans to treat this revenue requirement difference for rate purposes.

Response:

a. In the prior rebasing application, the leases were treated as operating leases where the costs associated with leasing the building and IT equipment was expensed through OM&A.

b. The costs associated with these leases are included in OM&A for this 2021 rate application.

   i. n/a. The costs for purposes of the rate application are included in OM&A.

   ii. For purposes of OEB TB, for RRR purposes the IFRS change to show leases as capital assets was not made. For our external IFRS statements the leases are shown as assets. For the RRR the leases are still shown as operating leases, and only their monthly reoccurring expense is included in OM&A.

c. Oshawa PUC is not changing the treatment of the leases between OM&A and rate base from the previous rebasing application to the current application.

1-Staff-18
Capital Contributions

Ref: Exhibit 1, Page 103, Appendix 4, Reconciliation of 2019 Audited Financial Statements

In the Appendix 4 Reconciliation, there are adjustments to deferred developer contribution revenues and depreciation expense. Deferred developer contribution revenues are adjusted by $1,654,000, from ($1,654,000) in the audited financial statements to $0 in the RRR. Depreciation expense is reduced by $2,014,000 from $7,717,000 to $5,703,000.

a. Please explain the reason for the adjustments made to developer contribution revenues and depreciation expense.

b. Please explain whether the adjustment for developer contribution revenues correlates to the adjustment in depreciation expense. If it does correlate, please explain how. If not, explain why not.

Response:

a. The reason for the changes is for IFRS purposes for external financial reporting. Under IFRS deferred developer contributions (DDC) are required to be shown as a liability and amortized into revenue as recognized. However, for purposes of OEB RRR reporting OPUCN has kept treatment consistent with the last rebasing application, but showing DCC as a net to capital assets, and the recognized revenue as netted with depreciation expense.

b. We confirm that the adjustment for developer contributions revenues correlates to the adjustment in depreciation expense. The depreciation expense per IFRS statements of $7,717,000 is made up of the following:

Depreciation expense per RRR filing of $5,703,000;
Add back DDC (reclass to revenue, rather than net with depreciation) of $1,654,000;
Add depreciation of right-of-use asset lease (reclass from O&M) of $360,000.

2-Staff-19
Ref 1: Exhibit 4, Page 12
Ref 2: Chapter 2 Appendices, Tab 2-AB - Capital Expenditures

Oshawa PUC Networks notes that while the COVID-19 pandemic has had current impacts to its business environment, “it has prepared this application on the assumption the COVID-19 crisis will have abated by 2021.”

Since the preparation and filing of this application, does Oshawa PUC Networks still consider this to be a prudent decision in the context of its capital expenditures? If yes, please explain why.

Response:

Based upon our experience over the last 8 months, Oshawa Power has determined that even if the pandemic continues beyond 2020, we are confident that we can continue to respond without significant changes. In addition, with an increase in residential customers working from home and relying on power for longer periods of the day – ongoing reliability and service quality is of paramount importance for these customers.

2-Staff-20
Cost of Power
Ref 1: Exhibit 2, Page 20
Ref 2: Filing Requirements for Electricity Distribution Rate Applications – 2020 Edition for 2021 Rate Applications, Section 2.2.1.3 Allowance for Working Capital, Page 16

At the above reference, Oshawa PUC Networks notes:

> In accordance with the Filing Requirements, the commodity price estimate used to calculate COP was determined using a split between RPP and non-RPP Class A and Class B customers based on 2019 actual data and uses the most current RPP price. Non-RPP consumption data has been further split between customers eligible for the Global Adjustment (GA) modifier vs. non-eligible.

Please confirm that the reference to the GA modifier is incorrect and in accordance with reference 2, Oshawa PUC Networks has included the impact of the Ontario Electricity Rebate of 31.8% (and not the GA modifier) on the total bill.

Response:

OPUCN confirms that the reference to GA modifier is incorrect. Non-RPP consumption data was further broken down by Class A and Class B customers to estimate Global Adjustment charges. As well, the Ontario Energy Rebate of 31.8% was calculated on the cost of power subtotal.

2-Staff-21
Rate Base
Ref: Exhibit 2, Page 5

Oshawa PUC Networks' rate base for the 2021 test year is forecast to increase by approximately 50% from 2015 OEB-approved amount and 12% from the 2019 OEB- approved amount.

a. In its annual capital planning and implementation for the years 2015 to 2019, did Oshawa PUC Networks take into account the cumulative impact its capital expenditures would have on rate base and rates in 2021?
b. How did this inform the pacing of investments identified in the Distribution System Plan?

Response:

a. Rate base and rates are a key consideration in all OPUCN planning, including capital expenditures.
b. OPUCN has sought to pace investments as evenly as possible in order to minimize rate shocks.

2-Staff-22
Capital Contributions Paid
Ref: Exhibit 2, Page 12, Table 2-6 Fixed Asset Continuity Schedule

In the 2019 Fixed Asset Continuity Schedule, there is a $4,136,705 addition for capital contributions paid. Please explain Oshawa PUC's basis for accounting of capital contributions paid. In particular:

a. Please explain whether the related asset has been put into service and whether the full capital contribution was paid in 2019.
b. If the full capital contribution was not paid in 2019, please indicate the period in which the capital contribution will be paid and provide a supporting schedule of payments.
c. If the full capital contribution was not paid in 2019, please explain whether the $4,136,705 represents the full cost capital contribution or only the portion of the capital contribution paid.
    i. If the $4,136,705 represents the full capital contribution, please explain why the full capital contribution has been included and not just the portion of capital contribution paid.

Response:

a. The related asset, Enfield TS, was put into service in 2019. The capital contribution to Hydro One was paid in stages over 2016 and 2017, and held in work in progress until related asset put into service.
b. A schedule outlining the timing of payments is show below:

Date	Vendor Name	Amount
01-Mar-2016	Hydro One Networks Inc.	$165,339
31-Jul-2016	Hydro One Networks Inc.	$330,000
21-Dec-2016	Hydro One Networks Inc.	$500,000
30-Dec-2016	Hydro One Networks Inc.	$175,000
01-Jun-2017	Hydro One Networks Inc.	$2,614,471
		$3,784,810
Other - capitalised interest and incidentals		$351,895
Total		$4,136,705

c. This represents the full capital contribution, subject to normal re-evaluations to ensure agreed upon capacity utilization etc.

i. See table in b. above.

2-Staff-23
Deferred Revenues
Ref : Exhibit 2, Page 12, Table 2-6 to 2-9 Fixed Asset Continuity Schedules

In the 2019 (actual) to 2021 Fixed Asset Continuity Schedules, there are additions to contribution and grants, and deferred revenues for ($6,198,919), ($1,958,057) and ($2,043,057) for 2019, 2020 and 2021 respectively. Please explain Oshawa PUC's basis for accounting of capital contributions. In particular:

a. In 2019, Account 1995 Contributions & Grants is used and Account 2440 Deferred Revenues is not used. It appears that starting in 2020, new capital contributions are recorded in Account 2440 going forward. Please explain why Account 2440 was not used from 2015 to 2019 even though Oshawa PUC is applying regulatory accounting under MIFRS.
b. Please explain the basis in which Oshawa PUC Networks has recorded the capital contributions, in particular, whether the amounts recorded reflect assets that are in-service.
c. Please explain whether the capital contributions are received over a period of time or as a lump sum. If received over a period of time, please explain if the amounts recorded in the Fixed Asset Continuity Schedule reflect the full capital contribution or the paid portion of capital contributions.
    i. If the amounts recorded in the Fixed Asset Continuity Schedule are received over a period of time and reflect the full capital contribution, please explain why the full capital contribution is recorded and not the paid portion.

Response:

a. OPUCN's 2015-2019 rate application was submitted and approved using account 1995. This basis was followed on an actual basis for consistency.
b. Capital contributions are recorded initially as 'work in progress' and moved to Account 1995 when the related asset is in service.
c. Capital contributions are normally received in a single period. Only contributions paid are recorded.

2-Staff-24
Ref 1: 2021 Chapter 2 Appendices, Tab 2-BA – Fixed Asset Continuity Schedule Ref 2: Exhibit 2, Page 29, Table 2-20

Please provide a breakdown of the $4.5m addition in 2018 to Account 1808 – Buildings.
The 2018 OEB-approved closing balance was $2.5m for this account, while the 2018 actual was $5.3m, resulting in a $2.8m variance.

Response:

The $4.5m addition in 2018 to Account 1808 – Buildings consists entirely of the new municipal substation (MS9), energized late in 2018. The allocation of projected capital spending to USA accounts is done on an estimated basis, with most focus on the actual project itself. The MS9 forecast cost was $7.0m and actual final cost was $7.3m.

2-Staff-25
Capitalized Overhead
Ref 1: Exhibit 2, Page 60, Table 2-35 Appendix 2-D Overhead Expense
Ref 2: Exhibit 4, Pages 25-26

On page 25 of Exhibit 4, there is a section titled “Increase in OM&A Expense in Relation to a Decrease in Capitalized Overhead”. Page 26 indicates that this application does not include any further capitalization changes since the changes made in Oshawa PUC Networks’ transition to MIFRS in its last rebasing application.

a. Please clarify if OM&A increased in the current application as a result of a decrease in capitalized overhead. If so, please explain why OM&A would have increased due to capitalized overhead changes if there were no further capitalization policy changes made in this application.
b. In Table 2-35, capitalized overhead information is provided from 2017 to 2021. Please provide the same information for 2015 approved, 2015 actual and 2016.

Response:

a. No, OM&A has not increased in the current application as a result of a decrease in capitalized overhead.
b. See updated table below:

OM&A Before Capitalization ($000's)	2015 Approved	2015 Historical Year	2016 Historical Year	2017 Historical Year	2018 Historical Year	2019 Historical Year	2020 Bridge Year	2021 Test Year
Corporate	2,729	2,526	2,672	2,855	3,009	3,059	2,810	3,101
General & Administrative	2,078	1,930	2,083	2,116	2,351	2,283	2,543	2,512
Customer Service	2,848	2,693	2,859	3,135	2,991	2,586	3,100	3,162
Facilities	1,204	1,184	1,258	1,292	1,394	1,476	1,435	1,466
Operations & Metering	7,168	7,163	7,128	7,331	8,209	7,662	8,234	8,229
Property Taxes	158	128	136	136	136	136	149	152
Total OM&A Before Capitalization (B)	16,185	15,624	16,136	16,865	18,089	17,201	18,271	18,621

Capitalized OM&A ($000's)	2015 Approved	2015 Historical Year	2016 Historical Year	2017 Historical Year	2018 Historical Year	2019 Historical Year	2020 Bridge Year	2021 Test Year
employee benefits	3,118	2,999	2,843	2,997	3,429	3,288	3,353	3,420
initial delivery and handling costs	206	198	188	198	227	217	222	226
vehicle and related costs	621	597	566	597	683	654	668	681
Total Capitalized OM&A (A)	3,945	3,794	3,597	3,792	4,338	4,159	4,242	4,327

% of Capitalized OM&A (=A/B)	24%	24%	22%	22%	24%	24%	23%	23%

Total OM&A After Capitalization (B - A)	12,240	11,830	12,539	13,073	13,751	13,042	14,029	14,294

2-Staff-26
Ref: DSP, Page 44, 72, 76

With respect to the customer engagement, the DSP notes on page 72:

> OPUCN considers all customer feedback and preferences in determining the pacing of its investments and in optimal selection of projects. Furthermore, OPUCN has been prudent when incurring costs since the Customer Satisfaction survey results indicate that low price of electricity is an important factor to customers.

And additionally, on page 76:

> In addition to the asset condition and risk assessment, customer engagement sessions were held to receive feedback and determine customer preferences for service quality level and rate increase, which assisted in shaping the preliminary investment portfolio to address customer needs.

a) Please explain how customer feedback has informed the pacing of Oshawa PUC Networks' capital plans. In particular, please explain how Oshawa PUC Networks determined the balance between maintaining service quality and keeping costs low.
b) How is customer feedback used to help determine the optimal selection of projects?
c) How does Oshawa PUC Networks determine whether the costs it has incurred are prudent?
d) In quantitative terms (e.g. SAIDI, SAIFI), what is the level of service quality that Oshawa PUC Networks is aiming for?
e) On page 44 of the DSP, Oshawa PUC Networks notes that it does not have formal analytical tools/methods for risk management and does not have a quantitative risk assessment methodology. Given that Oshawa PUC Networks has no quantitative means to manage risk, how does Oshawa PUC Networks determine the necessary level of capital spending required to achieve the level of service quality specified in part (d)?

Response:

a) See the response to 1-SEC-9. In addition, in this DSP, OPUCN further improved its investment prioritization process by introducing Asset Management (AM) objectives. AM objectives seek to qualitatively assess and prioritize all projects based on corporate strategic objectives, whether projects are considered discretionary or mandatory, and themes derived from investment optimization and prioritization tools such as feedback from customer surveys.
b) See a) above.
c) All expenditures are subject to OPUC's procurement policy. The policy ensures incurred costs are prudent through market competition (i.e. obtaining multiple quotations). Further work is being done to improve benchmarking for various industry comparisons.
d) Every year, OPUC establishes a corporate scorecard with threshold, target and stretch objectives. Reliability metrics (SAIDI and SAIFI) are included. Typically, a five year rolling average sets the target for Reliability metrics, with +/- percentages that set threshold and stretch. OPUC is striving for continuous improvement.

e)

Prioritization

In the previous DSP, OPUCN determined investment prioritization based on a qualitative assessment of risk, using asset condition health indices (as proxy for probably of asset failure) and a final project ranking that took into consideration expected consequence to safety and reliability of the distribution system. In this DSP, OPUCN further improved the investment prioritization process by introducing AM objectives. AM objectives seek to qualitatively assess and prioritize all projects based on corporate strategic objectives, whether projects are considered discretionary or mandatory, and themes derived from investment optimization and prioritization tools. Additionally, discretionary projects were subject to change assessments that challenged their necessity, scope, budget or timing; and the Grid Modernization Plan helped to identify and further inform on the prioritization of System Service investments.

2-Staff-27
OEB Directions from Previous OEB Decisions and/or Orders Ref 1: Exhibit 1, Pages 19-20
Ref 2: Exhibit 2, Page 30
Ref 3: DSP, Page 79

Oshawa PUC Networks notes that in 2016 it developed and implemented the use of an internal corporate scorecard to provide insights into its performance. These performance measures cover the categories of financial earnings, cost control, reliability, customer service, and safety and people. These targets are embedded in the management at-risk compensation plan to ensure alignment between corporate and individual performance outcomes. The scorecard, along with departmental level metrics that directly or indirectly feed the metrics in the scorecard, is reviewed by Oshawa PUC Networks executives and management at monthly meetings.

a. Please provide the results from the internal corporate scorecard from 2016 to the most recent available.
b. Please provide the departmental metrics within each category that directly or indirectly feed the metrics in the scorecard.
c. Please explain in more detail how the scorecard is linked to management at-risk compensation.
d. Have the results from the internal corporate scorecard shaped any of the proposals in this application, specifically in relation to capital? If so, please provide a table linking the metrics to those specific proposals.
e. As shown in Table 2-AB and Oshawa PUC Networks' approved vs. actual net fixed assets, Oshawa PUC Networks has generally underspent in its capital projects in historical years and deferred projects/programs. How has the internal corporate scorecard helped address the issue of program underspend and under-delivery?

Response:

a. See attached document Scorecard 2016-2019 filed as Appendix B with these responses.
b. Departmental metrics that impact Scorecard Categories
   - EBITDA – Departmental Budgets, Overtime, Capital Projects Spend status
   - Reliability – Capital Projects Completion Status, Attendance, Crew Response Time, Equipment Infrared Heat Testing
   - Customer Service – Grade of Service, Attendance, New Meter Installation days, Public Outreach events, Network Systems Uptime, Call volume, Average call handle time, Agent Productivity Report, Email Volume, Email handle time
   - People and Safety – Total Reportable Injury Rate, Loss Times injuries, Near Miss, Incident reporting, Employee Culture Change Initiative status, Number of site visits, Number of Tailboards, Incident investigations
c. The management at-risk compensation program is based on corporate results in the following areas: financial (EBITDA), delivery and cost control of capital program, reliability, customer service, safety and cultural transformation initiatives. The corporate performance scorecard represents up to 60% of individual management at-risk compensation through achievement

of three levels of measure – threshold, target and stretch performance values. i.e. Threshold = 90% (54/60), Target = 100% (60/60) and Stretch = 110% reward.
The remaining 40% is determined through the annual performance evaluation process which determines successful completion of both individual performance goals and objectives (4) and a development goal (1) which comprises 25% of individual management at-risk compensation. The remaining 15% is based on demonstration of management competencies assessed through the annual performance evaluation process.

d. The internal corporate scorecard has provided the visibility and has identified the short comings of current performance management systems and, as mentioned in our DSP, these shortcomings are going to be addressed as part of future performance management programs.
e. OPUCN does not agree with the ‘underspend’ or ‘under-delivery’ reference.
Capital expenditures differ from budget for a wide range of reasons, including third party delays, and unexpected contingencies that lead to reprioritization of projects between years and within a given year. Given this wide range of uncertainty, over the period 2015-2019 OPUCN spent its total capital spend within a margin of just $1.35m or 2%.

2-Staff-28
Ref 1: Exhibit 2, Page 51-57
Ref 2: Exhibit 1, Page 24-25

The DSP shows the variance between Oshawa PUC Networks' actual capital expenditure amounts versus OEB-approved amounts. For system renewal, the DSP notes a variance (net of capital contributions) of:

- 2015: ($1.3) million
- 2016: ($0.9) million
- 2017: $0.9 million
- 2018: ($1) million
- 2019: $1.2 million

OEB staff notes the sum of the variances above is ($1.1m), which indicates cumulative underspending; however, Exhibit 1 states that Oshawa PUC Networks overspent in system renewal between 2015-2019 by $1.3m and therefore there is a balance of $0 in Account 1508, Sub-account Revenue Requirement Differential Variance Account related to System Renewal Capital Additions.

a) Please provide a continuity schedule showing the annual actual and approved capital expenditure amounts, net of capital contributions, including 2020 capital expenditures to date for each of the System Access, System Renewal, System Service and General Plant categories. Please reconcile the variances shown in the Exhibit 2 with the statement in Exhibit 1 with respect to System Renewal.
b) Please confirm whether Oshawa PUC Networks has changed capitalization policy since its last rebasing application. If so, please provide the continuity schedule requested in part (a) above based on both the old capitalization policy used in the last rebasing application as well as the new capitalization policy used in the current application.
c) Per the accounting order[2] for the Account 1508 – Revenue Requirement Differential Variance Account "The purpose of this account is to record the revenue requirement associated with the difference between actual and forecasted cumulative capital additions (net of capital contributions) for 2015- 2019, should in-service capital additions be lower than, or the pacing of capital additions be slower than, forecast over the 2015-2019 period." If Oshawa PUC Networks underspent in system renewal (net of capital contributions), please calculate the appropriate balance in the sub-account, provide the calculation and update the DVA Continuity Schedule.

Response:

a) Please see below continuity schedule in format similar to Chapter 2 Appendix 2-BA, but showing amounts net of capital contributions. The 2015 variance reference of $1.3m for 2015 above is incorrect and should read $1.1m.

Capital by Category (Net of Capital Contributions)	2015		2016		2017		2018		2019		2015-2019			2020	
	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual[2]		Plan	Actual[2]
	$ '000		$ '000		$ '000		$ '000		$ '000		$ '000			$ '000	
System Access	3,684	3,071	2,285	2,505	2,075	676	2,340	(587)	2,350	4,844	12,734	10,509	(2,226)	3,832	1,226
System Renewal	5,943	7,074	4,932	4,052	4,472	5,385	4,761	3,732	4,851	6,067	24,959	26,310	1,351	8,129	3,939
System Service	1,068	722	1,380	1,192	420	941	10,455	8,514	15,763	11,621	29,086	22,991	(6,096)	2,508	1,146
General Plant	1,675	988	1,180	1,448	755	874	889	1,299	510	704	5,009	5,312	303	2,124	223
Net Capital Expenditures	12,370	11,855	9,777	9,197	7,722	7,876	18,445	12,957	23,474	23,236	71,788	65,121	(6,667)	16,593	6,534

b) No, OPUCN has not changed the capitalization policy. Please see Exhibit 1, page 32 where OPUCN declares no change to the accounting standards specified in the previous rate filings.

c) No Balance should be in the sub-account. System Renewal was overspent.

2-Staff-29
Ref 1: Exhibit 1, OPUC Business Plan, Page 19
Ref 2: DSP, Page 28

Customer engagement revealed that 78% of customers supported increasing investment in tree trimming to help reduce the number of outages.

a) Oshawa PUC Networks' tree trimming cycle is currently three-years. Has Oshawa PUC Networks considered increasing the frequency of the tree trimming cycle given the preferences of its customers?

   The DSP notes a Major Event outage involving a major windstorm in 2018. In part, high winds uprooted and broke limbs off trees and contributed to outages.

b) Given the increasing impacts of climate change, has Oshawa PUC Networks adapted its tree management strategies to help mitigate the impact of major weather events in the future?

Response:

a) OPUCN has determined that increasing the cycle for trimming would obviously increase the cost significantly, yet not affect our SAIDI and SAIFI metrics enough to warrant the expense. We will however continue to follow up with any customer specific requests for trimming throughout the cycle.

b) Through a scheduled system patrol, OPUCN staff inspects proximity of trees to distribution circuitry and makes recommendations for further trimming based upon individual circumstances.

2-Staff-30
Ref 1: EB-2014-0101, Oshawa PUC DSP (2015-2019), Page 51
Ref 2: DSP, Page 79

Page 51 of Oshawa PUC Networks' 2015 DSP noted: "OPUCN's critical system renewal capital investment requirements have stabilized, with future capital expenditures on existing assets being more at a "sustaining" level (i.e. in line with annual depreciation expense) of $4.5-$5 million per year."

Page 79 of the current DSP notes that: "In the System Renewal Investment Category forecast net expenditure is expected to increase by 51% from historical net actual expenditure to support the renewal of assets that are at or near, or at the end of Typical Useful Life as per the ACA (Asset Condition Assessment)".

A budget of $4.5m-$5m was characterized as sufficient to sustain Oshawa PUC Networks' distribution system in its 2015 DSP. Please explain what has changed to necessitate a 51% increase.

Response:

OPUCN's 2015 DSP was characterized by an urgent need for system access and system service investments, and as a prudent asset manager OPUCN temporarily scaled back its system renewal expenditures over that period of time to manage overall capital spend. Page 51 of OPUCN's 2015 DSP notes: "Customer growth and related capacity requirements are the main drivers for OPUCN's significant incremental capital investment requirements over the planning period."
Unsurprisingly, now that the urgent need for system access and system service investments have passed, the backlog of system renewal work is resurfacing. The ACA Report supporting this application has identified a backlog of assets that are near or at end of TUL that need to be addressed in System Renewal.

This DSP represents a transition from systematic underspending in system renewal category to provide budgetary room for priority system access and system service spending to a more normal and sustainable level of system renewal expenditures.

2-Staff-31
Ref: DSP, Pages 40, 74, 105

The DSP describes all System Renewal projects that are recommended by the ACA as mandatory projects and the list of System Renewal Projects on page 105 are all listed as “high” priority. The DSP also notes that Oshawa PUC Networks does not currently have any formal analytical tools or methods for risk management.

Without a process for risk management, please explain how Oshawa PUC Networks compares different System Renewal projects and ranks their relative priority.

Response:
See Response to 2-Staff-26(e).

2-Staff-32
Ref: DSP, Pages 39, 44, 105

On page 44, the DSP explains that Oshawa PUC Networks does not currently have processes to quantitatively prioritize its investments. Instead, Oshawa PUC Networks prioritizes its investment based on a set of qualitative criteria presented on page 39.

a) Given the lack of quantitative assessments, please explain how Oshawa PUC Networks calculated the Asset Management (AM) scores found in table 43 on page 105.
b) If two projects achieve the same the AM objectives, how does Oshawa PUC Networks determine which project has higher priority?
c) Without quantitative assessments, how does Oshawa PUC Networks determine the cost effectiveness of a project?

Response:

a) On page 44, the DSP explains that OPUC does not have formal analytical tools and methods used for risk management i.e. a formal process to calculate risk based on identified consequences and probabilities. This is different from the predominantly qualitative categorizations and other supporting quantitative processes described in the DSP used to prioritize investments.

Refer to the interrogatory response to Question 2-Staff-26(e) for further details on investment prioritization.

Additionally, Asset Management scores in Table 43 on page 105 were calculated using the following weights and values, such that a maximum AM score is 10:

Corporate Objectives	Weight	Asset Management Objectives	Value
Enhance customer experience	30%	Provide more relevant, real time, accurate and useful information & tools	4
		Improve interaction response and resolution times	4
		Transition from reactive to proactive customer relationship	2
Modernize infrastrucuture & enhance public safety	40%	Reliability	3
		Safety	3
		Security	2
		Minimize operational costs	1
		Optimize asset usage	1
Demonstrate environmental stewardship & community involvement	10%	Mitigate environmental risk	4
		Long term sustainability	2
		Address public policy/social/community needs	2
		Helps advance economic development	2
Enhance business, regulatory & financial processes Invest in people	20%	Costs are reasonable and controllable	4
		Improves business effectiveness	3
		Improves business efficiency	3

b) Projects with the same AM score have equal priority and are addressed in a balanced manner.

c) All expenditures are subject to OPUC's procurement policy. The policy ensures incurred costs are prudent and cost effective through market competition (i.e. obtaining multiple quotations). Further work is being done to improve benchmarking for various industry comparisons.

2-Staff-33
Ref 1: EB-2014-0101, Decision and Order, November 12, 2015, Pages 18-19
Ref 2: DSP, Page 105
Ref 3: Exhibit 1, Page 23

The OEB's decision for Oshawa PUC Networks' 2015 Custom IR application, noted specifically:

> The OEB agrees that the Capital Investment Plan requires improvements. The main area of concern is that the investment prioritization process resulted in the majority of the proposed capital projects being ranked equally in terms of priority. Of 103 projects identified over the 2015-2019 period, 89 were assigned a high priority and only 3 projects were identified as being less than "high priority." […] The OEB finds that these prioritization results are an indication that the tools used by Oshawa PUC lack the necessary refinement to classify the relative priority of the projects involved.

OEB staff notes there are 34 material projects identified on page 105 of Oshawa PUC Networks' current DSP, of which 31 projects are assigned a "HIGH" prioritization, and only three projects being identified as less than "HIGH."
On page 23 of Exhibit 1, Oshawa PUC Networks notes that it improved the investment prioritization process by introducing AM objectives.

a) Please explain how introducing AM objectives has improved Oshawa PUC Networks' ability to classify the relative priority of the projects involved.
b) Given that most projects have been classified as "HIGH" priority (31 out of 34), please explain how Oshawa PUC Networks has addressed the OEB's comments from the previous Decision.
c) Does Oshawa PUC Networks use any quantitative measures to rank the priority of its projects?
d) Has Oshawa PUC Networks made any other improvements to its capital planning process to help classify the relative priority of projects, other than the introduction of AM objectives?

Response:

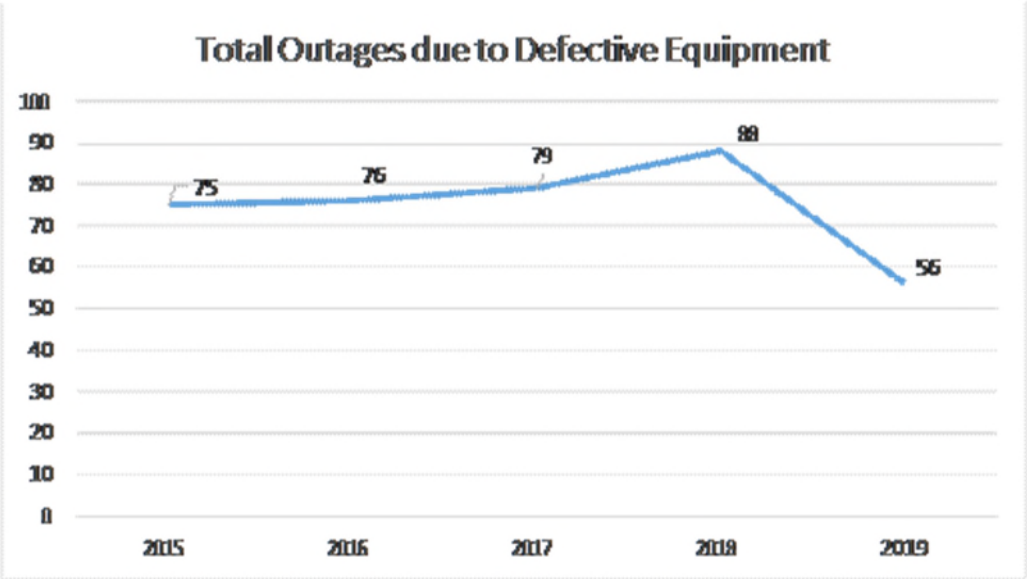
a) The introduction of AM Objectives has allowed OPUC to show clear alignment between OEB RRF Outcomes, OPUC's Strategic Objectives, and OPUC's Asset Management Objectives. Additionally, AM Scores have been calculated to improve investment prioritization and differentiate projects with similar, HIGH, MEDIUM or LOW classifications. Health indices from Asset Condition Assessments are still calculated and used in the prioritization process as well.
b) Of the 31 projects classified as HIGH priority, each has an AM score to guide prioritization. A quick analysis of AM Scores, shows that no more than 3 projects in any given investment category, has the same score.
c) Yes. Refer to the interrogatory response to Question 2-Staff-32 for further details on investment prioritization.
d) Yes. Projects submitted in this rate filing represent a final list of projects, after undergoing an iterative internal process to whittle down all contemplated projects to only those of greatest priority. Additionally, discretionary projects were subject to change assessments

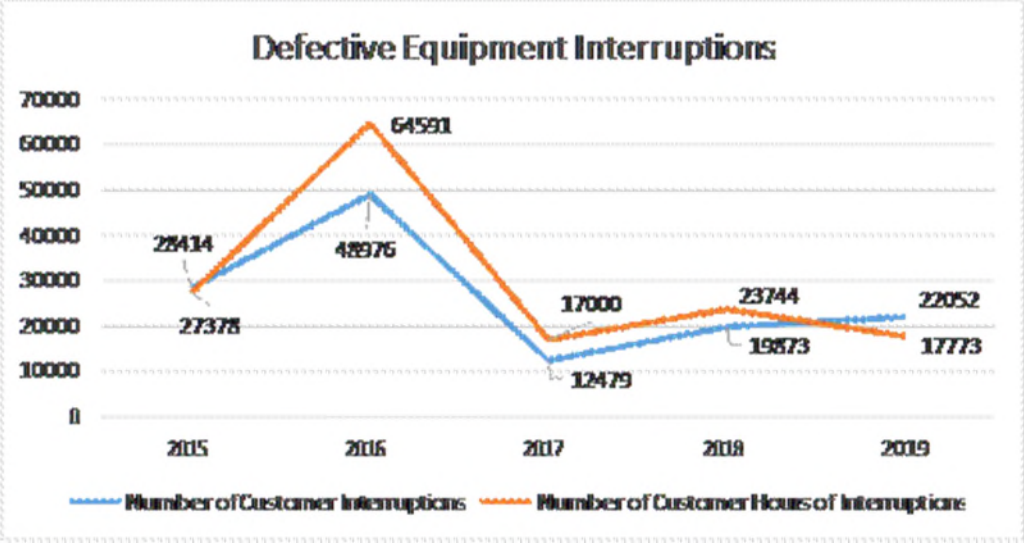
that challenged their necessity, scope, budget or timing; and the Grid Modernization Plan helped to identify and further inform on the prioritization of System Service investments.

2-Staff-34

Ref 1: DSP, Pages 29-31, 79
Ref 2: Customer Engagement Report, Page 6

OEB staff has graphed Oshawa PUC Networks' statistics on outages due to defective equipment:





OEB staff notes that total outages due to defective equipment have improved in 2019, and the number of interruptions to customers/customer-hours due to defective equipment have generally improved over the historical period.

a) Given the improvement, please explain why it is necessary for Oshawa PUC Networks to increase system renewal spending by 51% over historical levels of spending.

b) In quantitative terms, what impact on SAIDI and SAIFI does Oshawa PUC Networks expect to achieve through its planned System Renewal spending over 2021-2025?

According to Oshawa PUC Networks' customer engagement, customers' top two priorities are continuing to improve the safety and reliability of the electricity network and keeping costs low.

c) Please explain how Oshawa PUC Networks has balanced the incremental benefits against the incremental costs of increased System Renewal spending.

Response:

a) See the response to 2-Staff-30 for the reason that references to historical spending patterns is misleading for system renewal work. Please refer to the interrogatory response to Question 2-EP-10
The predominant driver for increase in system renewal spending is a greater number of station assets at end of life. Failure to renew station assets will result in an increased likelihood of asset failure, and previous gains made to reliability performance will be lost. Station assets are situated further upstream in the distribution system, and affect the supply of electricity to greater numbers of customers, and thus have a larger impact on reliability performance.

b) Direct overall impact on reliability performance, based on a project-by-project assessment, is difficult to forecast, given a multitude of changing factors, including aging equipment and system configuration year over year. When an optimal mix of assets in useful life is achieved, and a number of strategic system service and modernization improvements are made, reliability performance targets should be reached and maintained.

c) OPUCN considers system renewal investments to be mandatory in order to maintain status quo performance and public safety. Any incremental benefits due to better designs and equipment modernization is an added bonus, and isn't the main driver for investment decisions in this category.
Refer to the interrogatory response to 2-Staff-32 for project prioritization methodology and asset management scoring.

2-Staff-35

Ref 1: DSP, Pages 42, 54
Ref 2: DSP, Appendix A, Page 50
Ref 3: EB-2014-0101, Exhibit 2, Tab B, Schedule 7, Attachment D, Page 5

Oshawa PUC Networks proactively replaces poles through two programs: the Pole Replacement Program and the Overhead Line Renewal Program.

a) Please explain how Oshawa PUC Networks determines which poles are suitable for replacement under the Pole Replacement Program and which are suitable for replacement under Overhead Line Renewal.
b) How does Oshawa PUC Networks determine which areas of its distribution system require Overhead Line Renewal?
c) In the previous 2015 DSP, Oshawa PUC Networks' Pole Replacement Program paced the replacement at 10-15 poles per year based on the results of the ACA. The Pole Replacement Program proposed in the current DSP is 35-40 poles per year. Please explain why the rate of pole replacement has more than doubled.
d) Please explain why there was no capital spending in the pole replacement program in 2015 and 2016.

Response:

a) Poles that are deemed suitable for replacement under the pole replacement program are poles that have been tested via the pole testing program. These poles are prioritized based on the condition rating via the testing.

    i. Poles that are deemed suitable for replacement under the overhead line renewal program are poles that have tested poor via the pole testing program and are within close proximity to each other combined with poor area reliability and equipment age. By taking all these factors into consider, along with a heat map noted in b. below, the pole line will be deemed a candidate for replacement.

b) Considerations of pole condition, reliability and equipment age. A heat map is then created and projects are created based on hot spots within the service territory.
c) See the response to 2-Staff-30 for the reason that references to historical spending patterns is misleading for system renewal work. There are 198 poles that are poor or very poor, therefore in order to replace all during the DSP period, an estimated 35-40 will need to be completed each year.
d) 2015 and 2016 pole replacement program was delayed due to other priorities at the time (see 2-Staff-30), yet it was completed in 2017 in conjunction with that years budgeted pole replacement.

2-Staff-36
Ref 1: DSP, Page 55
Ref 2: EB-2014-0101, Exhibit 2, Tab A, Page 148

Oshawa PUC Networks is implementing a new program to replace all porcelain switches and insulators due to repeated failures of these assets. On page 55 of the DSP, Oshawa PUC Networks notes that it had a previous program to replace porcelain type units, but the program was not able to address all porcelain assets.

In Oshawa PUC Networks' previous application, it noted that it had implemented a program to replace porcelain switches and insulators (i.e. the previous program). Page 148 of Exhibit 2 of the previous application noted that it was "…a 2-3 year program that was intended to replace ***all*** porcelain insulators and switches with polymer type units." [emphasis added]

Please explain why Oshawa PUC Networks was not able to completely replace all porcelain type units under the previous program.

Response:

Three phase porcelain insulators were replaced. Currently single-phase insulators are being targeted in this DSP.

2-Staff-37
Ref 1: DSP, Page 79
Ref 2: Exhibit 2, Page 30

Based on Table 2-AB, Oshawa PUC Networks has underspent in terms of net capital expenditures in every historical year (2015-2019) except 2017. The variance analysis on page 30 of Exhibit 2 shows that Oshawa PUC Networks' 2019 actual Gross Assets are $8.43 million less the 2019 OEB-approved amounts. In part, Oshawa PUC Networks explained that underspent can be attributed to deferred projects, including third-party driven System Access projects.
Please explain what steps Oshawa PUC Networks has taken to address and prevent underspending in future years.

Response:
Please refer to Appendix 2-AB, total actual gross capital expenditures 2015-2019 are largely consistent with plan over the historical period. OPUCN will work on solidifying projects on yearly bases, however, there is no control over third party driven system access jobs and associated capital contributions.

2-Staff-38
Ref: Oshawa PUC Networks 2019 Scorecard

Oshawa PUC Networks' benchmarking metrics from its 2019 scorecard are reproduced below (the columns correspond to 2014-2018):

Total Cost per Customer	3	$519	$545	$546	$532	$569
Total Cost per Km of Line	3	$29,881	$31,719	$31,962	$31,280	$33,915

Oshawa PUC Network's total cost per customer and total cost per km of line have been trending upwards from 2014-2018. Please explain why Oshawa PUC Networks' unit costs are becoming more expensive.

Response:
Over the reporting period 2014 through 2018, Oshawa Power's Total Cost per Customer has increased by an average annual rate of just 2.5%. In addition to inflationary pressure, the renewal and growth of the distribution system, Province wide programs and costs required to address higher than normal customer growth in Oshawa have all contributed to the increase in capital expenditures and operating costs. The increase is in line with the increase in predicted costs as per the PEG Report, thereby continuing to position Oshawa Power in Cohort 2.

In accordance with the OEB's decision on our Custom IR (incentive regulation) Cost of Service rate application, Oshawa Power will continue to replace distribution assets proactively along a carefully managed timeframe in a manner that balances system risks and customer value and add new infrastructure to address capacity constraints resulting from growth. Oshawa Power will also continue to implement productivity and improvement initiatives to help offset some of the costs associated with future system improvement, enhancements and growth.

With regards to Total Cost per Km of Line, this measure uses the same total cost that is used in the Cost per Customer calculation above. The total cost is divided by the kilometers of line that Oshawa Power operates to serve its customers. Oshawa Power's 2018 rate is $33,915 per Km of Line which represents an
increase of 8.4% over the prior year. The average annual increase over the reporting period is 4.7%. The increase is in line with the increase in predicted costs as per the PEG Report, thereby continuing to position Oshawa Power in Cohort 2.

OPUCN's 2019 rate is $35,041 per Km of Line which represents an increase of 3.2% over the prior year. The average annual forecasted increase for 2020-2021 is 2.2%. The increase is in line with the increase in predicted costs as per the Benchmarking Forecast, thereby continuing to position OPUCN in Cohort 2.

2-Staff-39
Ref: DSP, Appendix A, Page 1

The reference notes that detailed planning with respect to third party driven relocation projects are not yet available at this time.

a) Please explain how Oshawa PUC Networks determined the yearly budgets for these projects without detailed plans.
b) Please explain why the 2021 budget is significantly higher (i.e. more than double) than the annual budgets for the rest of years (2022-2025).

Response:

a) OPUCN used input from major relocation stakeholders to develop budgets. These stakeholders include the Region of Durham, the City of Oshawa, and the Ministry of Transportation. The plans available were used to budget these projects but there still exists uncertainty in the scope. OPUCN has taken steps to mitigate.
b) OPUCN is expecting large municipal relocation projects to begin in 2021(detailed in table below). Specifically, the Gibb street interconnection which will be greatly affecting our system. This project can be seen in 2020, 2021, and 2022 road programs on the Region's 9 year plan.

2021 Relocations	Gross	Contributions	Net
City - Widen Conlin - Simcoe - Ritson	$500,000	-$125,000	$375,000
Glenwood Cres. - South limit to Winona Ave	$80,000	-$20,000	$60,000
MTO - 401 Widening - Simcoe and Albert bridges	$140,000	-$35,000	$105,000
Region widening - Gibb St from Stevenson to Simcoe	$1,100,000	-$275,000	$825,000
	$1,820,000	-$455,000	$1,365,000

2-Staff-40
Ref 1: DSP, Page 8
Ref 2: DSP, Appendix A, Page 16

The DSP on page 8 notes that the projected customer growth rate over the DSP period is 1.4% and is slightly lower than the annual customer growth rate between 2015-2019.

Oshawa PUC Networks' annual system expansion budget is increasing by $847k on average from the historical period, which will allow it to connect approximately 791 lots per year at $2,100 per lot.

a) How many lots did Oshawa PUC Networks connect annually over the historical period 2015-2019?
b) Given that the customer growth rate over the DSP period is projected to be lower than the growth experienced over the historical period, please explain why the system expansion budget is increasing by almost double.

Response:

a) The following are the number of lots designed for connection:
   2015
   Approx. 1263

   2016
   Approx. 1255

   2017
   Approx. 307

   2018
   Approx. 505

   2019
   Approx. 1107

b) OPUCN used the growth rate to determine the forecast for lot connections per year. Historical costs shown are reflective of accounting adjustments. By using recent historical average costs per lot and the lot quantities derived from the growth rate, the expansions budget was created. Unit costs for developments are based on actual costs incurred in 2017-2019. The system expansion budget for 2021 of $1,662K is marginally lower than actual 2019 cost of $1,892K.

2-Staff-41
Ref: DSP, Appendix A, Page 55

Oshawa PUC Networks notes that quick sleeves were historically used to splice 44kV conductors and that it is replacing all quick sleeves because they are prone to failure.

Does Oshawa PUC Networks continue to use quick sleeves to splice conductors, or what other method is currently being used?

Response:

OPUCN no longer uses quick sleeves to splice conductors. Compression Sleeves are used.

2-Staff-42
Ref 1: ACA, Pages 45, 49, 97
Ref 2: DSP, Appendix A, Page 60

The ACA assesses vault transformers based on three criteria: service age, overall condition and peak loading. Based on these criteria, none of Oshawa PUC Networks' vault transformers are in "Poor" or "Very Poor" condition. Further, the ACA on p. 97 recommends that:

> ...it is recommended for OPUCN to continue to inspect transformers planned for replacement. It is recommended for a transformer to be replaced if the condition of the transformer has deteriorated, **otherwise OPUCN should consider continuing to operate and maintain the existing asset until a later date. [emphasis added]**

Given the conclusions of the ACA, please explain why Oshawa PUC Networks has budgeted to replace 12 vault transformers annually.

Response:

OPUCN has budgeted to replace 12 vault transformers annually as per recommendation from the ACA report. Please see the ACA on p. 97:

The replacement plan for distribution transformers largely prioritizes assets that are beyond the TUL since there are limited numbers of transformers found in the Poor and Very Poor category.

Table 5-11: Projected replacement for distribution transformer

Quantity of Assets Recommended for Replacement							
Year	2019	2020	2021	2022	2023	2024	2025
Pole-mount transformer	56	38	38	38	38	38	38
Pad-mount transformer	51	50	50	50	55	55	55
Vault transformer	11	11	12	12	11	12	11
Submersible transformer	0	1	1	0	0	0	0

Please see the ACA report p. 94 which states the following [emphasis added]:

> In addition to the condition of the assets, the asset's age, specifically the Typical Useful Life (TUL), can be a determining driver for asset renewal **because as the asset reaches and passes the TUL, the rate at which the asset's condition deteriorates increases**. Furthermore, visual inspection records may result in a calculated Health Index to be in a favorable condition for an asset reaching or exceeding its TUL. **However, the asset may carry an increased risk of failing and quickly deteriorating from a favorable condition (Very Good/Good) to an unfavorable condition (Very Poor) within a short period of time**. Minimum, maximum and TUL values for OPUCN are assumed based on the *Asset Depreciation Study for the Ontario Energy Board* in 2010, as summarized in Table 5-2.

The planned replacement of transformers recommended by Metsco have already passed their Maximum TUL and Oshawa PUC Networks agrees with Metsco's recommendation that there is "an increased risk of failing and quickly deteriorating from favorable conditions" despite the asset's health index.

2-Staff-43
Ref 1: ACA, Page 68
Ref 2: DSP, Page 51
Ref 3: DSP, Appendix A, Page 76

According to the ACA, all of Oshawa PUC Networks' substation power transformers are in "Fair" condition or better. Further, Oshawa PUC Networks operates a primary loop distribution system, which offers more flexibility in switching loads and dealing with outages.

Given the above, please explain why the proactive replacement of three substation power transformers is preferable to keeping a spare transformer (e.g. maintaining one spare transformer rather than replacing three).

Response:

Please see the below ACA report p. 100:

> Assets that are past or approaching the TUL may have positive visual inspection records resulting in an assets health to be in Fair condition. However, the asset carries an increased risk of failing and can quickly deteriorate from Fair to Very Poor. Therefore, it is beneficial for OPUCN to replace the power transformer prior to failing.

The reference to OPUCN's primary loop distribution system speaks primarily to its flexibility in dealing with outages on any given feeder. If a power transformer fails, station capacity is halved, affecting three feeders at once, and may require significant load rebalancing efforts amongst a number of other stations (if at all possible) in order to restore outages, which may not be achievable during peak loading periods. Compounding the issue, protection systems at existing stations do not have distinguishable zones of protection for transformers and buss. As a result, both station transformers will be lost during a single transformer failure. This protection issue will be addressed during switchgear renewals.

Maintaining a spare transformer is not a practical alternative. It requires indoor storage or a fully connected installation, so it can sit outdoors in an energized, unloaded state. Mobilizing a reactive repair would take up to a week in the best case scenario, assuming readily available engineering installation designs, materials, cranes, permits and labor. More realistically, it would take 4 to 8 weeks to replace, with considerable effort put toward organizing all the above, specific to the affected station and time of year.

2-Staff-44
Ref: DSP, Appendix A, Page 91

Oshawa PUC Networks is implementing a Municipal Substation Transformer Monitoring Telemetry project to better monitor its municipal substation power transformers.

Has Oshawa PUC Networks considered installing the Municipal Substation Transformer Monitoring Telemetry technology on the three power transformers being slated for replacement (under the SR-07 project) to provide for better monitoring and to defer replacement of the three transformers?

Response:

The ACA Report page 100 indicates the following:

The remaining identified power transformers have also received a less than acceptable oil quality analysis and should be targeted for asset replacement or rejuvenation. In addition, three identified transformers in the table will reach the TUL of 45 years. Assets that are past or approaching the TUL may have positive visual inspection records resulting in an assets health to be in Fair condition. However, the asset carries an increased risk of failing and can quickly deteriorate from Fair to Very Poor. Therefore, it is beneficial for OPUCN to replace the power transformer prior to failing.

As a part of the MS Transformer Monitoring project SS-01 OPUCN will be installing monitoring on transformers that have not reached TUL and require more frequent oil testing. The use of this technology is best utilized on transformers that require frequent oil tests and will have a significant lifespan left for monitoring and trending results. The three power transformers show poor or fair test results and are at TUL. OPUCN is in agreement with ACA report that these three transformers should be replaced prior to failing.

2-Staff-45
Ref: DSP, Appendix A, Page 101

Oshawa PUC Networks is continuing to replace 13.8kV manual “dumb” switches with “smart” switches that have remote and automatic capabilities.

a) What benefits has Oshawa PUC Networks gained from historical installation of smart switches in its distribution system?
b) Please explain why this project is considered “High” priority; do existing “dumb” switches no longer work?

Response:

a) Installation of smart switches have reduced customer outages. Historically, an outage occurring on a feeder where smart switches are able to perform fault isolation and restoration through a radio communication, Oshawa Power has seen an average reduction of 39% and 52% reduction in customers interrupted and customer hours interrupted respectively.

b) This project is considered “High” priority due to the ability of smart switches to reduce customers interrupted and customer hours interrupted. Existing manual, non-smart switches do not have the function of performing automatic fault isolation and restoration to reduce customers interrupted and customer hours interrupted.

2-Staff-46
Ref: DSP, Appendix A, Page 113

The DSP notes that the implementation of SCADA operated 44kV switches will help accommodate and integrate DERs/REGs.

Please further elaborate what benefits SCADA operated 44kV switches provide to DERs/REGs. In particular, will the introduction of SCADA operated 44kV switches allow for the connection of new DERs/REGs that cannot currently be accommodated on Oshawa PUC Networks' system?

Response:

OPUCN's largest DERs/REGs are connected on the 44kV distribution lines. SCADA operated 44kV switches allow for faster switchover of 44kV lines to alternative lines and shorter downtimes for DERs/REGs connected on the system.

SCADA operated 44kV switches reduce downtimes of DERs/REGs and does not specifically accommodate connection of new DERs/REGs.

2-Staff-47
Ref: DSP, Appendix A, Page 137

Oshawa PUC Networks has several planned capital expenditures to upgrade/enhance its GIS. One of the expenditures is to upgrade the GIS every 2 years at a cost of $50,000 per upgrade.

a) How was it determined to update the GIS software every 2 years? What are the benefits/tradeoffs to updating the software on a shorter or longer timeframe?
b) How did Oshawa PUC Networks select the vendor for the GIS software and what processes are in place to ensure the best pricing for the GIS software?

Response:

a) See Ex 2 – DSP Appendix A page 138:

Year	Actual	Budget
2016	$38,089	$60,000
2017	$43,817	$60,000
2018	$13,762	$60,000
2019	$37,028	$60,000
2020		$57,500
2021		$142,500
2022		$110,000
2023		$5,000
2024		$55,000
2025		$155,000

The table above shows the historical and forecast capital expenditure on the GIS over the period of 2016 – 2025. The capital expenditure during this time frame was to maintain the system without any enhancements to its functionality. The majority of the work done on the GIS historically have been done on an as-needed basis which made predicting the actual expenditures difficult when the original budgets were implemented. Some enhancements that were identified in this way, such as the mobile mapping enhancement or the design suite integration enhancement, were quoted above the original budget and had been delayed until a new budget could be created. Additionally, the cadence of system updates to the latest version was driven on an as-needed basis, often in response to a system interruption due to obsolescence or incompatibility with windows security updates. The most recent system upgrade was performed in 2017. As a result, OPUCN experienced 2 system interruptions that required the rollback of windows security updates which introduces vulnerabilities in the corporate network. To avoid this in the future, the system will be updated to the latest version every 2 years.

The additional capital expenditure above system updates is to expand the functionality of the system to meet evolving business needs or improve operational efficiency. The table below

illustrates the proposed timeline and expenditure for each initiative under this project based on the scope of work provided by vendor and past experiences. 2020 is a budget cost and will be part of historical capital expenditures.

b) OPUCN discussed options with alternate vendors. The GIS supplies the OMS with the connectivity of our distribution system. Other vendors at this time are unable to provide this connectivity to our OMS system without substantial work. It was determined that the OMS and GIS vendors would need to be changed at the same time.

Due to the cost and investment in a new OMS system, it would not be done in this DSP. As a result, the GIS vendor change would not be done in this DSP.

2-Staff-48
Ref: DSP, Appendix A, Page 156

Oshawa PUC Networks intends to implement a new Operational Data Store (ODS).

a) What is Oshawa PUC Networks currently using as its ODS system?
b) What are the quantitative benefits from implementing the new ODS system?
c) How did Oshawa PUC Networks select the vendor for the ODS system and what processes are in place to ensure the best pricing for the ODS?

Response:

a) Jomar
b)

- ability to determine transformer loading
- ability to determine loss calculations in comparison to feeder supply from MS and Wholesale supply points to narrow down source of energy losses by using up-to-date connectivity model as provided by the OMS.
- ability to voltage monitor / trend at the meter level. and send notifications to internal staff.
- ability to combine Weather data with loading, combine HOEP pricing for comparison analytics.
- estimation automation built in for meter data gaps.
- VEE analysis to assist staff in determining fault / errors.
- web presentation of meter/transformer data in graphical format.
- data analytics for next level automation.
- automatic connection to AMI and SCADA for data transfer.
- automatic import of CIS information, and OMS connectivity model.

c) Pricing from 3 Vendors with COTS solutions which could connect to Scada, AMI to receive real time data were sourced based upon procurement processes.

2-Staff-49
Ref: DSP, Appendix A, Pages 184-185

Please explain how Oshawa PUC Networks determined the annual budget of $100k for the Major Tools and Equipment project.

Response:

It was determined over the course of the last DSP that the tool budget was insufficient to purchase the required amount of tools and test equipment that has been aging and require replacement.

As OPUCN moves towards a program of full substation maintenance internally, further testing equipment is required to ensure that the substation(s) and associated equipment is tested per ANSI/NETA MTS-2015 **Standard for Maintenance Testing Specifications for Electrical Power Equipment and Systems**.

2-Staff-50
Ref: DSP, Appendix A, Pages 190-195

Oshawa PUC Networks notes that it is procuring an in-house Customer Information System (CIS) solution to stop being reliant on a third party to host the existing CIS.

a) If Oshawa PUC Networks were to stay status quo and continue to pay for third party hosting, what is the likelihood that the third party for the CIS system ceases its business or terminates its business relationship with Oshawa PUC Networks?
b) Please explain the difference between the "do nothing" alternative versus the "Acquire CIS Hosted by a Third Party" alternative. Under the "Acquire CIS Hosted by a Third Party" option, if Oshawa PUC Networks continues to pay for hosting fees, what would be the benefit of "acquiring" the CIS?
c) What is the anticipated lifespan of the in-house CIS solution? Will there be ongoing capital costs to periodically upgrade the CIS system?

Response:

a) The third party agreement states that the means used to perform the services are in the sole discretion and control of them. If the agreement with our third party should ever terminate all of the data will be returned to OPUCN except we do not have a system in which to take over the file transfers. The third party can end the agreement one hundred and eighty (180) calendar days with written notice. OPUCN is unable to speculate on the likelihood of this occurring.
b) Acquiring a CIS means that should our relationship with our third party end we would own a CIS that we could transfer our customer data to. We could then just carry on business as usual. With the "do nothing" alternative, if the agreement with our third party terminates, OPUCN does not have a system to take over the data transfer from the third party.
c) We have used the same CIS system vendor since approximately 2002.

2-Staff-51
Ref: DSP, Appendix A, Page 196

Oshawa PUC Networks is proposing to invest in a "Document Management System."

a) How does Oshawa PUC Networks currently archive and capture documents?
b) Please quantify the benefits of implementing this new system. Specifically, how much efficiency savings does Oshawa PUC Networks expect to achieve?

Response:

a) OPUCN is currently leveraging FileNexus that is hosted by ERTH.

b) **Benefits:**

1) All departments, not just billing, would be able to leverage the system.

2) Physical Paper records would not be required for archive, only electronic copies resulting in reduced storage space.

3) Easy and quick document retrieval.

4) Improved regulatory compliance.

5) Enhanced Security.

6) Improved backup and disaster recovery.

Efficiency Savings:

1) Ability to search for documents via any criteria.

2) Reduce clerical mistakes via OCR and automated indexing.

3) Streamline document distribution.

4) Ability to access documents from anywhere.

5) Respond quickly to customer inquiries and instantaneously answer information requests.

6) Minimize cost of paper storage space and physical backup copies.

7) Eliminate the time required to physically file documents.

8) Reduce downtime in case of fire, flood or theft.

2-Staff-52
Ref: ACA, Page 95

The ACA notes that:

> …the condition data collected to date does not support that wood poles past the TUL are experiencing unfavorable conditions and require attention for replacement. METSCO recommends for OPUCN to conduct a visual inspection on a subset of wood poles past the TUL to determine if the wood poles are in fact in acceptable service conditions or require asset intervention (i.e. asset renewal.)

Please discuss how Oshawa PUC Networks has applied METSCO's recommendations. Has Oshawa PUC Networks considered deferring pole renewals in favor of more testing to avoid replacing poles that are in acceptable service conditions?

Response:
Using ACA data, OPUCN owns approximately 10,453 poles where approximately 198 of the poles are rated poor and very poor in the ACA and it is recommended that approximately 330 poles are replaced annually to address the end of TUL (45 years).

During the forecast period 35-40 poles will be replaced annually under the Pole Replacement Program to address poor and very poor rated poles past TUL (55 years) instead of the 330 poles recommended in the ACA report. OPUCN is deferring poles that are not poor or very poor and have not reached TUL but does not expect savings from deferring poor and very poor rated poles that are past 55 years. OPUCN will implement additional inspection of wood poles past TUL but presently has not completed these inspections.

2-Staff-53
Ref: ACA, Page 96

The ACA recommends that Oshawa PUC Networks test cables slated for replacement using proven test techniques to validate that the condition of the cable is unfavorable and should be replaced.

Has Oshawa PUC Networks started testing the conditions of its cables as suggested by the ACA? If yes, how have the results of testing affected the underground cable renewal program? If no, why not?

Response:
The Underground Line Renewal project is comprised of renewing underground primary lines in poor condition and past their TUL that were originally installed between 1970 and 1980. Results of the ACA, and primary cable fault analysis have determined that complete replacement of these underground assets is required due to their condition.

At this moment Oshawa PUC Networks does not have additional testing information.

3-Staff-54
Load Forecast
Ref: Exhibit 3, Page 4

Oshawa PUC Networks states that there are no COVID-19 related impacts forecasted for inclusion in rates in this application on the assumption that the costs of those impacts will be tracked in the generic deferral and variance accounts established by the OEB and disposed of by the OEB at a later date.

a. What impacts does Oshawa PUC Networks anticipate resulting from the COVID- 19 pandemic?
b. Has there been a consideration of Oshawa PUC Networks' exposure to certain business sectors or customers and corresponding risk?

Response:

a. Using September year to date as the measure, OPUCN is seeing an overall increase in consumption of 5%, with a 9% increase in the Residential class offsetting decreases in the commercial and small industrial sectors. Demand customers overall are down just over 3% year over year with the biggest impacts among the GS>1,000 class (down 5%) and the large use class (down 14%).
b. OPUCN does monitor its customer base by class, but has no control over which sectors or customers it distributes electricity to.

3-Staff-55
Load Forecast
Ref: Exhibit 3, Pages 11-14

The regression model used includes variables for heating degree days, cooling degree days, number of days in the month, and a spring/fall flag. Oshawa PUC Networks notes that it tested variables for employment and unemployment in Oshawa as well as the population of the service territory, but found that none of these had a statistically significant relationship to energy use.

The graph "OPUCN Purchases (GWh)" on the top of page 14 indicates that in every year from 2010 to 2015, actual purchases exceeded predicted purchases, and in every year from 2016 to 2019, predicted purchases exceeded actual purchases.

a. Has Oshawa PUC Networks considered other variables such as a trend variable that would capture changes in energy consumption over time?

b. Please provide a regression model and load forecast results scenario where a trend variable is used. The trend variable should have a value of 1 in January 2010, incrementing by 1 each month, to a value of 144 in December 2021.

Response:

a. Oshawa PUC has not run the regression with a trend variable, however please see response to b) below.

b. As instructed Oshawa PUC has included a regression model which includes a trend variable attached at Appendix C. Here are the results.

Month	Predicted Purchases As filed (without trend variable)	Predicted Purchases Updated (with trend variable)	% Difference
Predicted Energy (GWh)			
January-21	108.0	105.1	-2.6%
February-21	97.4	94.4	-3.1%
March-21	97.1	94.1	-3.0%
April-21	86.9	83.9	-3.4%
May-21	83.4	80.5	-3.5%
June-21	87.7	84.8	-3.4%
July-21	104.0	100.8	-3.0%
August-21	98.9	95.8	-3.2%
September-21	82.6	79.5	-3.8%
October-21	84.5	81.4	-3.7%
November-21	89.5	86.2	-3.6%
December-21	102.9	99.7	-3.1%
	1,122.8	**1,086.2**	**-3.3%**

3-Staff-56
Load Forecast
Ref 1: Exhibit 3, Pages 20, 21, 31, 34, 2021
Ref 2: Chapter 2 Appendices, Tab 2-IB – Load_Forecast_Analysis
On pages 20 and 21, the Street Lighting rate class is forecasted to demand 12,504 kW in 2021, while on pages 31, 34, and in Tab 2-IB of the Chapter 2 Appendices, it is forecasted to demand 12,698 kW.

Please explain the difference between the two values, and indicate how much demand is forecasted for 2021.

Response:

The demand for streetlights in test year 2021 is 12,504 kW.
Table 3-20 on page 31 in Exhibit 3, and Table 3-24 on page 34 of Exhibit 3 are showing the incorrect demand. Tables are updated and provided below:

TABLE 3-20: STREET 1 LIGHTING CUSTOMER CLASS

		Connections		Demand (kW)				Demand (kW) per Connection			
	Year	Actual	OEB-approved	Actual (Weather actual)	Actual Weather-normalized	OEB-approved Weather-normalized		Actual (Weather actual)	Actual Weather-normalized	OEB-approved Weather-normalized	
Actual	*2015*	12,676	12,710	26,032	26,192	23,912		2.1	2.1	1.9	
Actual	*2016*	12,955	12,960	26,568	26,273	14,599		2.1	2.0	1.1	
Actual	*2017*	13,171	13,215	13,693	14,189	13,528		1.0	1.1	1.0	
Actual	*2018*	13,828	13,466	12,085	11,972	13,785		0.9	0.9	1.0	
Actual	*2019*	13,934	13,722	11,969	11,840	14,047		0.9	0.9	1.0	
Bridge Year	*2020*	14,161			12,304				0.9		
Test Year	*2021*	14,391			12,504				0.9		

Variance Analysis	Year	Year-over-year	Actual / Test Year Versus OEB-approved	Year-over-year	Actual Weather-normalized Year-over-year	Actuals Versus OEB-approved	Actual Weather-normalized Versus OEB-approved	Year-over-year	Actual Weather-normalized Year-over-year	Actuals Versus OEB-approved	Actual Weather-normalized Versus OEB-approved
	2015		-0.3%			8.9%	9.5%			9.2%	9.5%
	2016	2.2%	0.0%	2.1%	0.3%	82.0%	80.0%	-0.1%	-1.6%	82.0%	80.0%
	2017	1.7%	-0.3%	-48.5%	-46.0%	1.2%	4.9%	-49.3%	-47.0%	1.6%	4.9%
	2018	5.0%	2.7%	-11.7%	-15.6%	-12.3%	-13.2%	-15.9%	-17.2%	-14.6%	-13.2%
	2019	0.8%	1.5%	-1.0%	-1.1%	-14.8%	-15.7%	-1.7%	-3.0%	-16.1%	-15.7%
	2020	1.6%			3.9%				0.7%		
	2021	1.6%			1.6%				0.0%		
2021 Test Yr Vs 2019 Approved			4.9%		5.6%				0.7%		
CAGR (2019 v 2015)		3.2%	2.6%	-22.8%	-23.3%			-25.2%	-25.2%		
CAGR (2021 Test v 2015)		2.6%	2.5%		-13.7%	-12.2%			-15.9%		

TABLE 3-24: 2021 DISTRIBUTION REVENUE AT EXISTING 2020 RATES

Class	Annual kWh	Annual kW	Annualized Customers / Connections	Monthly Fixed Charge Previous Year (2020)	Volumetric Charge Previous Year (2020)	Dist. Rev. Including Transformer	Trans-former Allowance	Distribution Revenue
Residential	496,495,068		674,277	24.67	0.0000	16,634,415		16,634,415
GS Less Than 50 KW	128,706,195		51,230	17.39	0.0177	3,168,984		3,168,984
GS 50 To 999 KW	328,035,469	825,711	6,423	58.43	4.9998	4,503,684	49,056	4,454,629
GS 1,000 To 4,999 KW	76,465,711	182,480	153	1,227.87	2.6132	664,721	108,971	555,750
Large Use	38,878,939	86,319	12	9,343.15	2.2526	306,560	47,123	259,438
Street Lighting	4,555,628	12,504	172,696	2.11	32.5022	770,797		770,797
Sentinel Lighting	24,360	81	262	5.88	8.4045	2,216		2,216
Unmetered	2,506,367		3,276	4.87	0.0200	66,082		66,082
	1,075,667,737	1,107,094				**26,117,459**	**205,149**	**25,912,310**
				Proposed 2021 Revenue				27,351,829
				Revenue Deficiency				(1,439,519)

3-Staff-57
Other Revenue
Ref: Exhibit 3, Page 36, Table 3-36

OEB staff is unable to reconcile the OEB-approved amounts in the table below to the OEB-approved amounts in Oshawa PUC Networks' previous RRWFs filed as part of its Custom IR draft rate order for the following:

- 2015: Specific Service Charges line item
- 2016: Specific Service Charges line item
- 2017: Specific Service Charges line item
- 2018: the total of $1.385m does not reconcile to the 2018 RRWF of $1.395m; Specific Service Charges and Late Payment Charges line items
- 2019: the total of $1.434m does not reconcile to 2019 RRWF $1.456m; Specific Service Charges and Late Payment Charges line items

TABLE 3-26 - SUMMARY OF OTHER OPERATING REVENUE (APPENDIX 2-H)

USoA #	USoA Description	Board Approved					Actual					Bridge	Test
	$'000s	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019	2020	2021
4235	Specific Service Charges	$801	$814	$827	$843	$859	$939	$1,078	$697	$719	$469	$484	$483
4225	Late Payment Charges	$286	$292	$297	$303	$310	$285	$326	$309	$254	$247	$254	$257
4086	SSS Administration Revenue	$155	$159	$164	$169	$173	$165	$175	$181	$190	$196	$190	$197
4210	Rent from Electric Property	$176	$176	$176	$176	$176	$184	$184	$184	$195	$294	$200	$346
4084	Service Transaction Requests (STR) Revenues	$1	$1	$1	$1	$1	$1	$1	$0	$0	$0	$0	$0
4325	Revenues from Merchandise, Jobbing, Etc.	$1,389	$1,389	$1,389	$1,389	$1,389	$153	$48	$185	$176	$183	$191	$191
4330	Costs of Merchandising, Jobbing, Etc	$(1,376)	$(1,376)	$(1,376)	$(1,376)	$(1,376)	$(134)	$(68)	$(204)	$(119)	$(200)	$(190)	$(190)
4355	Gain on Disposition of Utility/Other Property	$0	$0	$0	$0	$0	$1	$8	$(74)	$34	$10	$0	$0
4360	Loss on Disposition of Utility/Other Property	$(396)	$(265)	$(182)	$(403)	$(381)	$(107)	$(429)	$(440)	$(387)	$189	$(278)	$(278)
4375	Revenues from Non-Utility Operations	$2,377	$2,377	$2,377	$2,377	$2,377	$1,589	$3,209	$2,851	$2,918	$3,483	$3	$3
4380	Expenses of Non-Utility Operations	$(2,369)	$(2,369)	$(2,369)	$(2,369)	$(2,369)	$(1,455)	$(2,933)	$(2,706)	$(2,372)	$(3,482)	$0	$0
4390	Miscellaneous Non-Operating Income	$147	$147	$147	$147	$147	$154	$123	$207	$190	$146	$150	$150
4405	Interest and Dividend Income	$128	$128	$128	$128	$128	$191	$145	$159	$169	$132	$74	$74
4245	Government Assistance & Other Contributions											$22	$66
Total Other Revenue		$1,319	$1,472	$1,579	$1,385	$1,434	$1,965	$1,867	$1,351	$1,968	$1,669	$1,100	$1,300

OEB staff utilized the following documents to compare figures: EB-2014-0101_OPUCN_Rev_Reqt_Work_Form_V4_2015_RUN_6_xlsm_20151123 EB-2014-0101_OPUCN_Rev_Reqt_Work_Form_V4_2016_RUN_6_xlsm_20151123 EB-2014-0101_OPUCN_Rev_Reqt_Work_Form_V4_2017_RUN_6_xlsm_20151123 EB-2014-0101_OPUCN_Rev_Reqt_Work_Form_V4_2018_RUN_6_xlsm_20151123 EB-2014-0101_OPUCN_Rev_Reqt_Work_Form_V4_2019_RUN_6_xlsm_20151123 Please provide an explanation for the discrepancies.

Response:

The files referenced above are not the appropriate files. As part of OPUCN's interim update (EB-2017-0069), updated RRWF files were submitted. These updated files correspond to table 3-26 above.

3-Staff-58
Other Revenue
Ref: 2021 Chapter 2 Appendices, Tab 2-H

Please explain why Oshawa PUC Networks has not entered forecasted amounts in each of 2020 and 2021 for the following:

- Account 4084 – Service Transaction Requests
- Account 4355 – Gain on Disposition of Utility and Other Property
- Account 4380 – Expenses of Non-Utility Operations

Response:

The reasons for no forecast amounts are detailed below:

- Account 4084 – Service Transaction Requests

  The amounts charged to this account in the previous three years (2017-2019) has been negligible at $372 on average. It is not expected to increase.

- Account 4355 – Gain on Disposition of Utility and Other Property

  OPUCN is not planning to dispose of any material utility property in 2020 or 2021.

- Account 4380 – Expenses of Non-Utility Operations

  This account is used for CDM type costs. At this time no CDM costs are forecast in 2021.

3-Staff-59
Other Revenue
Ref: 2021 Chapter 2 Appendices, Tab 2-H – Other_Oper_Rev

For Account 4405 – Interest and Dividend Income, Oshawa PUC Networks is forecasting an approximate 43% decrease for the 2021 test year when compared to 2019 actuals and 2020 forecasted amounts.

Please provide the drivers for this decrease.

Response:

The primary drivers are lower interest income due to lower forecast cash balances, plus reduced regulatory interest improvement as balances are disposed.

3-Staff-60
Other Revenue
Ref: 2021 Chapter 2 Appendices, Tab 2-H – Other_Oper_Rev

Please confirm that any revenue related to microFIT charges are recorded as a revenue offset in Account 4235 and not included as part of the base distribution revenue requirement.

Response:

This revenue is included as a revenue offset in Account 4086.

4-Staff-61
Ref: Exhibit 4, Page 12

Oshawa PUC Networks notes that while the COVID-19 pandemic has had current impacts to its business environment, "it has prepared this application on the assumption the COVID-19 crisis will have abated by 2021."[3]

a. Since the preparation and filing of this application, does Oshawa PUC Networks still consider this to be a prudent decision in the context of its OM&A expenses? If yes, please explain why.
b. Please provide a table showing the planned and actual OM&A costs to date for 2020.

Response:

a. OPUCN continues to monitor Covid-19 impacts and considers its current approach prudent given the forecast for 2021 also drives the years through to 2025.
b. Please see below:

OM&A Expenses YTD at 30th September 2020	2020 Plan 30th Sep YTD	2020 Actual 30th Sep YTD
Operations	1,416,401	1,160,153
Maintenance	996,435	748,040
Billing and Collecting	1,937,067	2,609,697
Community Relations	1,125,039	635,976
Administrative and General	5,018,967	5,163,102
Total	10,493,910	10,316,969

4-Staff-62
Operations, Maintenance, and Administration Summary
Ref 1: 2021 Chapter 2 Appendices – 2-JA OM&A_Summary Analysis Ref 2: 2021 Chapter 2 Appendices – 2-JC OM&A Programs
Ref 3: Revenue Requirement Workform – 9. Revenue Requirement

OM&A expenses proposed for 2021 as listed in the RRWF are $14,107,550. This figure reconciles to Tab-JA of the Chapter 2 Appendices.

OEB staff is unable to reconcile the $14,107,550 figure to a figure of $14,141,923 in Tab 2-JC. OEB staff is also unable to reconcile the 2015 OEB-approved, 2015-2019 actual, and the 2020 bridge year between Tabs 2-JA and 2-JC.

Please provide a reconciliation or make any changes as required.

Response:

The $14,141,923 in Tab 2-JC equals RRWF and Tab 2-JC $14,107,550 less LEAP of $34,374. The difference between Tabs 2-JA and 2-JC in all years is that the Total Recoverable OM&A Expenses figures in Tabs 2-JA do not include LEAP.

4-Staff-63
Ref: 2021 Chapter 2 Appendices – 2-JC OM&A Programs

OEB staff notes that the formula in column M for the total variance between the test year and 2019 OEB-approved amounts is incorrect. The formula is K60-C60 when it should be J60-G60.

Please make the necessary correction to the model.

Response:

Correction has been made to column M of Tab 2-JC and the updated Chapter 2 Appendices has been filed with these interrogatories.

4-Staff-64
Ref 1: Exhibit 4, Pages 5-6
Ref 2: EB-2014-0101, OPUCN_Chapter 2_Appendices_for 2015 to 2019_RUN 6_20151207

Based on the table below populated by OEB staff using reference 2, the proposed OM&A costs in 2021 of $14,107,550 represent an increase of approximately:

- $2.05m or 17% over the 2015 OEB-approved OM&A
- $1.57m or 13% over the 2016 OEB-approved OM&A
- $1.28m or 10% over the 2017 OEB-approved OM&A
- $1.07m or 8% over the 2018 OEB-approved OM&A
- $1.00m or 8% over the 2019 OEB-approved OM&A

	2015 OEB-Approved	2015 Actual	2016 OEB-Approved	2016 Actual	2017 OEB-Approved	2017 Actual	2018 OEB-Approved	2018 Actual	2019 OEB-Approved	2019 Actual	2020 Bridge Year	2021 Test Year
Operations	[illegible]	[illegible]	$ 1,484,147	[illegible]	$ 1,593,497	[illegible]	$ 1,579,144	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Maintenance	[illegible]	[illegible]	$ 1,375,515	[illegible]	$ 1,405,469	[illegible]	$ 1,436,077	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sub-Total	[illegible]	[illegible]	$ 2,859,662	$ 2,917,529	$ 2,998,966	$ 2,721,555	$ 3,015,221	[illegible]	$ 2,537,666	[illegible]	[illegible]	[illegible]
Billing and Collecting	[illegible]	[illegible]	$ 2,715,401	[illegible]	$ 2,780,102	[illegible]	$ 2,846,477	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Community Relations	[illegible]	[illegible]	$ 1,309,846	[illegible]	$ 1,337,732	[illegible]	$ 1,366,218	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Administrative and General	[illegible]	[illegible]	$ 5,647,747	[illegible]	$ 5,707,425	[illegible]	$ 5,804,965	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sub-Total	[illegible]	[illegible]	$ 9,672,993	[illegible]	$ 9,825,260	[illegible]	$10,017,660	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total	[illegible]	[illegible]	$12,532,655	[illegible]	$12,824,225	[illegible]	$13,032,881	[illegible]	[illegible]	[illegible]	[illegible]	$ 14,107,550

a. Please confirm the data OEB staff added to the table above (highlighted) show the correct OM&A amounts approved by the OEB for each of 2016, 2017 and 2018.
b. Please identify what improvements in services and outcomes Oshawa PUC Networks' customers will experience in 2021 and during the subsequent IRM term as a result of increasing the provision for OM&A at the rates indicated.
c. How has Oshawa PUC Networks communicated these benefits and the associated costs to its customers, and how did customers respond? Please provide some examples, including a synopsis of any customer feedback. If no communications took place, please explain why not.

Response:

a. Confirmed.
b. OPUCN will continue to use both internal and OEB performance measures covering the following categories: Financial Earnings, Cost Control, Reliability, Customer Service, and Safety and People. Continuing to improve upon these existing metrics and developing new internal targets, as illustrated in Exhibit 1, will be tangible evidence of improvements in services and outcomes for OPUCN's customers.
c. OPUCN conducts a customer satisfaction survey on a biannual basis to obtain feedback on the overall value of service offered to customers. The latest such survey took place

in 2018 with the 2020 survey process currently taking place. Customers (residential and commercial) are engaged to provide high-level feedback on their perceptions of OPUCN's performance, desired service improvements, customer priorities and communication preferences. OPUCN utilizes this information to help inform future investment planning that will maintain or improve customer satisfaction. The survey results indicate OPUCN's customer service, care, and experience is good and is consistently improving. The 2018 Customer satisfaction survey noted that customers were less concerned about rates as the previous government had reduced rates by 25% and the current government added to the reduction bringing it to a total of 31.8%.

4-Staff-65
Ref: Exhibit 4, Page 9
Oshawa PUC Networks provides an analysis of various metrics with respect to its OM&A costs and notes that its projected OM&A per customer of $231 would rank in the top ten of lowest OM&A per customer expense.

a. Please confirm if this is the top ten lowest OM&A per customer based on a comparison against all Ontario LDCs or against comparable LDCs.
b. If against all Ontario LDCs, please provide a table against comparable LDCs. An example is shown below.

	LDC A	LDC B	LDC C	LDC D	LDC F
Number of Customers					
OM&A					
OM&A/Customer					
Number of FTEs					
Customer/FTE					

Response:

a. All Ontario LDCs
b. Below is a table as requested with comparable LDC's, showing 2019 actuals amounts.

	Oshawa PUC Networks	Burlington Hydro	Greater Sudbury Hydro	Newmarket-Tay Power Distribution	Waterloo North Hydro
Number of Customers	59,183	68,205	11,631	43,931	57,855
OM&A	$13,041,814	$19,654,992	$3,846,105	$10,966,388	$14,959,735
OM&A/Customer	$220	$288	$331	$250	$259
Number of FTEs	90	90	59	65	122
Customer/FTE	656	758	198	676	474

4-Staff-66
Ref: Exhibit 4, Page 13-14

Oshawa PUC Networks notes that it has developed and implemented a People Strategy that is centered on employee engagement and aligning the workforce to business objectives and strategic outcomes. This initiative has been adopted and measured through regular employee engagement surveys, the development of action items to address results and improve drivers of engagement, and implementation of programs to improve workforce engagement, focus, and productivity.

Please explain what types of programs are being implemented to improve workforce engagement, focus and productivity.

Response:

Oshawa Power's Three-year Culture Transformation Plan has been developed to guide our actions to improve employee engagement through identified, measurable efforts that form part of our Corporate Performance Scorecard. Specific areas were identified as drivers of engagement in our 2019 employee engagement survey, including immediate management, professional growth and organizational vision. These will inform established action items and initiatives to be completed on a quarterly schedule and for which progress will be measured and reported on.

Succession planning and leadership development are integral components of our People Strategy as we move through the demographic transition of our current workforce and prepare for future operational requirements supported by highly skilled and competent leaders.

4-Staff-67
Ref 1: EB-2014-0101, Decision and Order, November 12, 2015, Page 25-26
Ref 2: E-2014-0101, OPUCN_ReplyARG_20151112, Pages 27-28
Ref 3: 2021 Chapter 2 Appendices, Tab 2-K – Employee Costs

In its previous Custom IR application, Oshawa PUC Networks indicated the primary driver for the cumulative average growth rate in OM&A for the forecast period of its Custom IR application was the increase of six full-time equivalent employees (FTEs), from 75 to 81, to support the expected increase in customer connections. Forecast customer connections were expected to increase by more than 16% over the same period. The comparable proposed growth in FTEs over the period was forecasted to be 8%.

Further, in its previous Custom IR reply argument (EB-2014-0101, OPUCN_ReplyARG_20151112, Pages 27-28), Oshawa PUC Networks noted that "despite both customer growth and increasing regulatory requirements, FTE's at the end of the rate plan period are to be maintained at today's level, which in the face of forecast customer growth represents the avoidance of 6 FTEs."

In approving the OM&A expenses proposed in Oshawa PUC Networks' last rebasing application, the OEB noted "Despite projected growth, Oshawa PUC proposes to increase OM&A at less than the forecast rate of inflation and does not propose to increase its overall staffing. The OEB finds that this demonstrates a commitment to achieving efficiencies."

OEB staff has calculated the following increases in customer connections between 2015 and 2019 *(Based on Oshawa PUC's 2021 Chapter 2 Appendices, Tab 2 IB – Load_Forecast_Analysis*) :

- Residential connections increased from 51,121 to 54,652 (6.9%)
- Metered customer connections (inclusive of Residential, General Service and Large User classes) increased from 55,663 to 59,396 (6.7%)
- Total customer connections (inclusive of Street Lighting and other Unmetered connections) increased from 68,651 to 73,631 (7.3%)

Based on Tab 2-K of the Chapter 2 Appendices filed in the current application, the actual growth in FTEs over the same period is 14% (from 79 to 90 FTEs).

a. Please confirm the increases in customer connections and FTEs calculated above are correct.
b. Please provide a discussion on the deviations in staffing from what was previously forecasted by Oshawa PUC Networks.

Response:

a. Confirmed.
b. Please refer to the discussion of changes in the affiliate organizational structure and shared services costs in Exhibit 4 (more information on this is provided below). In addition, customer growth over the historical period has driven new workload and the need for new resources. At the same time, we have reduced our dependence on third party contractors in a variety of

functions by moving those resources in-house. Focusing solely on FTE count to the exclusion of these other relevant factors is misleading.
In addition, deviations in staffing forecasts result from fluctuations in the workforce that are unintentional. Shifting demographics, retirements, terminations and voluntary exits provide opportunities to reimagine positions when vacancies occur and help to ensure that job profiles evolve to meet changing organizational needs. Higher operational requirements and the need to deliver more services has resulted in an increased volume of work. Increased training requirements and associated investment in programs to support apprentices and job harmonization within the skilled trades has contributed to staffing variations.
We are also dealing with new skills required to better utilize the various forms of media and communication formats our shifting customer demographic are requiring as our community grows and shifts in needs as well. This increases work volume and skills needed to be successful in meeting our customer needs.

It should be noted the FTE numbers include costs that are allocated to affiliates. When combining labour and parent/affiliate charges, the net results show moderate growth in costs despite the many challenges noted above. The table below illustrates this - the net overall growth rates show average annual increases to 2021 of 1.7% and 1.2% compared to approved amounts for 2015 and 2019 respectively.

Labour incl. Parent/Affiliate Fees $000's	2015 Approved	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Approved	2019 Actual	2020 Bridge	2021 Test
Labour	$7,512	$7,149	$7,131	$7,431	$8,536	$8,290	$8,806	$9,159	$9,201
Parent & Affiliate Fees Net	$327	$292	$168	$160	$(142)	$354	$(344)	$(349)	$(356)
Total	**$7,839**	**$7,441**	**$7,298**	**$7,591**	**$8,394**	**$8,644**	**$8,462**	**$8,809**	**$8,844**
CAGR vs 2015 Approved									1.7%
CAGR vs 2019 Approved									1.2%

4-Staff-68
FTEs
Ref 1: Exhibit 4, Pages 19-21, 30-31, 37-42
Ref 2: Exhibit 4, Page 50

Please provide a summary table of all FTEs added from 2015-2020 similar to that as provided in reference 2, but with added information on whether these FTEs are a result of replacements, retirements, or incremental new hires. For each FTE, please also distinguish whether their position is considered management or non-management.

Response:

Please see table below:

Note: Legends as follows:
R = "Retirement", A = "Replacement", L = "Leaver", T = "Transfer", I = "Incremental"

Program	Category	2014 Actual	R	L	A	T	I	2019 Actual	R	L	A	T	I	2020 Bridge Year Forecast
			2015-2019 Actual						2020 Forecast					
Corporate		1.0	(1.0)	(1.0)	1.3	2.0	1.0	3.3		(0.3)				3.0
General & Administrative														
Finance & Regulatory Affairs	Management	7.3						8.3						8.0
	Non-Management (Union)		(1.0)		2.0					(0.3)				
IT Operations	Management	2.0		(1.0)	1.0			2.0			0.5		0.5	3.0
Community Relations	Management	1.0			0.3	(1.0)	2.0	2.3		(0.3)				2.0
Employee Health & Safety	Management	1.0	(1.0)	(2.0)	2.0			0.0			1.0			1.0
Human Resources	Management	1.0					1.0	2.0						2.0
Purchasing & Stores	Management	3.0			1.0			3.7						3.3
	Non-Management (Union)		(3.0)		1.7		1.0			(0.4)				
Sub-Total General & Administrative		15.3	(5.0)	(3.0)	8.0	(1.0)	4.0	19.0	0.0	(1.0)	1.5	0.0	0.5	19.3
Customer Service	Management	14.0						14.0						15.5
	Non-Management (Union)			(2.1)	2.1						1.5			
Facilities	Management	1.5	(0.5)			1.0		1.0						1.0
	Non-Management (Union)		(1.0)											
Operations & Metering														
Operations Management	Management	5.5	(3.5)		3.0	1.0		6.0	(1.0)		2.0			7.0
Engineering	Management	3.0			2.8	(1.0)	1.0	5.8		(1.8)				4.0
Technical Design	Non-Management (Union)	7.7		(1.4)	3.0	(3.0)		6.3		(1.3)				5.0
Grid Construction and Operations	Non-Management (Union)	26.0	(7.0)	(6.0)	14.0	(1.0)		26.0			3.0			29.0
Meter Reading & Data Manageme	Non-Management (Union)	4.0	(1.0)	0.3	3.0	2.0		8.3						8.3
Sub-Total Operations & Metering		46.2	(11.5)	(7.1)	25.8	(2.0)	1.0	52.4	(1.0)	(3.1)	5.0	0.0	0.0	53.3
Total		78.0	(19.0)	(13.2)	37.2	0.0	6.0	89.7	(1.0)	(4.4)	8.0	0.0	0.5	92.1

4-Staff-69
Operations and Maintenance Costs Ref 1: Exhibit 4, Page 19
Ref 2: 2021 Chapter 2 Appendices, Tab 2-JA – OM&A_Summary_Analysis Ref 3: EB-2014-0101, OPUCN_Chapter 2_Appendices_for 2015 to 2019_RUN 6_20151207

Oshawa PUC Networks is proposing Operations and Maintenance costs 20% higher from those approved by the OEB in 2015, and approximately 10% from the 2019 OEB- approved amount. When compared to 2019 actuals, the increase is 5%.

One of main drivers for the increase in Operations and Maintenance costs is the addition of a new position of Maintenance Planner to implement a new Computerized Maintenance Management System and to lead the planning and scheduling of work activities required to maintain, repair, upgrade, expand, and renew the electrical distribution system.

a) Did Oshawa PUC Networks have an FTE responsible for the planning and scheduling of work activities prior to adding this new position?
b) If yes, please explain why an additional FTE was required.
c) If not, how was Oshawa PUC Networks' scheduling of work activities to maintain its distribution system done historically?
d) Please explain the driver(s) behind the 18% increase in the Maintenance line item between 2019 actuals and the 2020 bridge year.

Response:

a) No.
b) N/A.
c) The duties were divided amongst other FTE, however, the required focus to ensure completion and proper analysis requires this to be an FTE dedicated to this role.
d) Oshawa PUC Networks has altered the maintenance and inspection program from previous years to include, but not limited to the following:
    a. Full internal Substation Maintenance;
    b. Maintenance of recently installed SCADA and Automated devices;
    c. A further focus on System Patrol to identify required maintenance; and
    d. Expanding the Maintenance and Inspection program beyond the minimum required under Appendix C of the DSC.

This additional work is the driver for the 18% increase

4-Staff-70
Community Relations
Ref 1: Exhibit 4, Page 20
Ref 2: 2021 Chapter 2 Appendices, Tab 2-JA – OM&A_Summary_Analysis Ref 3: EB-2014-0101, OPUCN_Chapter 2_Appendices_for 2015 to 2019_RUN 6_20151207
Oshawa PUC Networks is proposing Community Relations costs 34% higher from those approved by the OEB in 2015, and approximately 11% higher from the 2019 OEB- approved amount. When compared to 2019 actuals, the increase is 33%.

Among others, a couple of the main drivers for the increase in Community Relations costs are the addition of 1 FTE to manage website development and maintenance, along with fulfilling additional requirements covering customer engagement and communications, and second, the transfer of 1 FTE from the parent company. This individual was previously dedicated solely to CDM, and will continue with CDM activities but also lead a key account management initiative.

a. Did Oshawa PUC Networks have any FTE's responsible for website development and maintenance, as well as handling customer engagement prior to the addition of this new position?
b. If yes, please explain why an additional FTE was required.
c. What additional activities are required to be undertaken relating to requirements around customer engagement and communications that are not currently done?
d. What was the business decision behind transferring the FTE responsible for CDM activities to Oshawa PUC Networks from the parent company? Please describe the expected efficiencies/benefits behind this decision.
    i. Please confirm the OM&A cost of CDM staff in 2021, and clarify what CDM programs or planned initiatives the FTE will help support in 2021.
    ii. Please explain the appropriateness of including CDM staffing costs in OM&A.

Response:

a. This work was previously contracted out and as a result, we were not achieving the requisite level of customer engagement. In-house resource allows for improved quality and customer satisfaction. Electronic billing numbers have increased from 17% of our customer base to about 40% currently, evidence of increasing numbers of customers who need to be catered for through better online services.
b. N/A
c. Key projects include website development and maintenance, customer touchpoints, community events, customer engagement, public safety initiatives, and contractor safety initiatives.
d. As noted above, this individual was previously dedicated solely to CDM, and will continue with CDM activities but also lead a key account management initiative. These activities are core to the LDC and so the LDC is the logical location for the position.
    i. CDM related costs will be allocated directly to the CDM programs, and thus <u>will not</u> be included in OM&A. Principal CDM activities in 2021 include:

- Administration of all provincially-mandated wind-down activities for the Conservation First Framework, such as fulfilling incentives, reporting to the IESO and undergoing audits. According to the IESO, these activities are anticipated to continue until the second quarter of 2022.
- Wind-down activities associated with the regional Refrigeration Efficiency Program.
- Assisting customers with the annual sign-up/opt-out process for the Industrial Conservation Initiative. This includes modelling, hosting meetings and administering provincially-required paperwork.
- Supporting the development and administration of regional CDM programming under the IESO's new framework or other pilots such as the CDM Auction, where possible, in order to ensure Oshawa has fair access to conservation incentives.

ii. As noted in i. above, CDM related costs will be allocated directly to the CDM programs.

4-Staff-71
Community Relations
Ref: 2021 Chapter 2 Appendices, Tab 2-JA – OM&A_Summary_Analysis

Please explain the driver(s) behind the 29% increase in the Community Relations line item between 2019 actuals and the 2020 bridge year.

Response:

The 29% ($326k) increase, reflects 1.5 open FTE's ($180k) in addition to $146k in allocations to CDM projects in 2019 not forecast in 2020.

4-Staff-72
Administrative and General Ref: Exhibit 4, Page 20

Oshawa PUC Networks added 1 FTE to Human Resources to:

> Accommodate a shift from tactical to strategic resource, necessary due to increased levels of recruitment activity across the company, employee engagement initiatives and development of a strategy to focus efforts on high impact areas to enhance productivity and organizational performance, and assumption of responsibility for Privacy at OPUCN.

a. Please explain what a shift from "tactical to strategic resource" means.
b. How is this change in strategy different from how things were done previously?
c. Would the addition of this Human Resources FTE been required if Oshawa PUC Networks had maintained the level of forecasted FTEs from its previous rebasing application?

Response:

a. Alignment of human resources strategy with organizational business strategy as evidenced by development and execution of OPUCN's people strategy, culture transformation plan and succession planning initiatives. Demographic shift and evolving organizational needs requires an evolution of recruitment activities to align resourcing strategy with a high performing, low cost organizational model.
b. The Board of Directors is fully engaged in setting organizational strategy supported by an enhanced governance model. Improved oversight as evidenced by increase in strategic objectives and action items development and monitoring.
c. Yes – Human Resources has been historically under-resourced in light of organizational requirements. Current added responsibilities under the Human Resources function include Safety and Privacy. The on-going demographic shift and associated workforce regeneration, as well as the execution of culture transformation plan and renewed focus on employee engagement have made it necessary to adequately resource this area of the organization through the addition of an FTE.

4-Staff-73
Administrative and General Ref: Exhibit 4, Page 21

Oshawa PUC Networks added 1 FTE to its purchasing/stores function in order to pursue a modernized and more strategic approach to job planning, buying and securing greater value from the supply base. This position replaced a retired store person position not previously forecast to be re-filled.

a. Please further elaborate on the statement a “modernized and strategic approach to job planning, buying and securing value from the supply base”.
b. What are the associated improvements and efficiencies in job planning and purchasing anticipated?
c. Please explain what necessitated the change to the previous decision to not re- fill this position.

Response:

a. In recruitment for positions in the purchasing/stores function, we have re-assessed business needs and efficiencies to re-design the positions and skills required in that area of our business to modernize our business practices around supply chain management. Current incumbents now require certification in supply chain management and are skilled to manage the purchasing function in a more proactive, strategic, efficient manner.
b. The improvements and efficiencies in job planning and purchasing anticipated are reduced costs, improved vendor assessment and control, just in time delivery of material to job site, reduced shipping costs, improved productivity of internal resources for trades work with less time spent on material handling, and greater rigor around inventory management and less material redundancy.
c. The change in decision to re-fill this position was necessitated by a modernization of our supply chain function and moving the positions in the department from a clerical focus to one that is more aligned with proactive inventory management and efficiency.

4-Staff-74

Administrative and General Ref: Exhibit 4, Page 21

Oshawa PUC Networks notes that there was a transfer of 1 FTE (the CEO position) from the parent company to Oshawa PUC Networks. Although this presents as an FTE increase, the net cost impact is neutralized through adjustments to parent company management fees and service charges to affiliate companies.

a. Why was the decision made to transfer the CEO position from the parent to Oshawa PUC Networks?
b. Are there associated efficiencies and/or benefits for transferring the CEO position to Oshawa PUC Networks?
c. What were the associated reductions in the allocated corporate costs?
d. Is any of CEO's time still allocated to the parent company? If yes, how are the costs allocated to the parent company?

Response:

a. The LDC occupies a significant portion of the CEO position. By situating the position in the LDC duplication of various work is avoided - pension, benefits, payroll etc. Overall, the cost impact is neutral.
b. See a) above.
c. Approximately $160k.
d. Yes, this is done in the same manner as allocations to affiliates is done for all employees. The charge is totalled for each affiliate/parent and billed monthly.

4-Staff-75
Administrative and General Ref 1: Exhibit 4, Page 21
Ref 2: Exhibit 4, Page 29

Reference 1 notes the addition of 0.5 FTE to the IT function to help manage increasingly complex IT infrastructure, and increased cost pressures associated with modernizing IT infrastructure, including new Disaster Recovery site at MS9 and developing and maintaining a cyber-security framework. Reference 2 notes the addition of 1.0 FTE for the same reasoning.

a) Please reconcile. Are these two separate additions?
b) Please explain what the Disaster Recovery site is.
c) Does Oshawa PUC Networks currently have a cyber-security framework in place? If yes, how will it be enhanced as a result of the addition of this FTE?

Response:

a) Entry for both should be 1.0 FTE
b) The Disaster Recovery site is a redundant datacenter located at MS9 and consists of a commercial grade internet connection, direct fiber connection to main campus datacenter, next generation firewall, servers and Storage Area Network for active/active applications, backup storage for all corporate data and virtual servers, and redundant VOIP phone system.
c) OPUCN is working towards the full implementation of the OEB Cyber Security Framework. The FTE will own and drive the implementation of the framework. As the owner, the FTE will ensure compliance, quality and auditing.

4-Staff-76
Ref 1: 2021 Chapter 2 Appendices, Tab 2-JB – OM&A_Cost_Drivers Ref 2: Exhibit 4, Page 23

The cumulative increase for OM&A expenses related to Labour from 2015 to 2021 is approximately $1.68m of the total OM&A budget change, which is slightly greater than $2.0m. The increase in Labour also has a direct impact on Benefits costs. The cumulative increase for OM&A expenses related to Benefits from 2015 to 2021 is approximately $467k.
Tab 2-JC shows significant increases between 2017 and 2018 in relation to replacements and new hires, and in turn increases in the Benefits line item as well.

a. Please explain the drivers that necessitated the increases in new hires between 2017 and 2018.

b. Please explain why new hires and replacements are outpacing retirements and leavers.

c. Please identify what improvements in services and outcomes the applicant's customers will experience as a result of increasing the provision for OM&A at the rate indicated.

d. Please identify any initiatives considered and/or undertaken by Oshawa PUC Networks, including any analysis conducted, to optimize plans and activities relating to hiring from a cost perspective.

Response:

a. The increase in new hires is in response to increased workload in the particular functional areas as well as some internal movement of resources. Prior to 2018, some of these positions were being filled on a contract basis; therefore, the increase in positions in 2018 is partially a reflection of positions moving to a continuous, full time capacity.
b. Demographic shift and evolving organizational needs require an evolution of recruitment activities to align resourcing with business strategy. New business and work requirements, open positions, training time to support succession planning and knowledge transfer are variables that contribute to timing of new hires and replacements as positions are filled.
c. Modernized workforce that is capable of delivering greater value to customers by providing services within a high performance low cost operational model.
d. The war for talent requires us to be diligent in assessing organizational needs and associated recruitment activities. Hiring FTEs allows us to avoid outsourced recruitment costs. Leveraging internal knowledge is essential in times of constant change as we have experienced through managing our organizational efforts in response to pandemic planning. In addition, policy reviews, emergency preparedness plans, and increasing legislative compliance audits (AODA, ESA, IHSA COR) all contribute to our approach to optimize plans and activities relating to hiring from a cost perspective.

4-Staff-77
Ref 1: 2021 Chapter 2 Appendices, Tab 2-JB – OM&A_Cost_Drivers Ref 2: 2021 Chapter 2 Appendices, Tab 2-JC – OM&A Programs Ref 3: Exhibit 4, Page 24
Ref 4: Exhibit 4, Pages 39-40
Ref 5: Exhibit 4, Pages 60-64, Tables 4-36 to 4-40

The cumulative increase for OM&A expenses related to Subcontractors from 2015 to 2021 is approximately $550k of the total OM&A budget change, which is slightly greater than $2.0m.

Oshawa PUC Networks notes that recent years have seen increased levels of theft, attempted thefts, and vandalism which has necessitated additional security measures provided by subcontractors to protect the security of station buildings, pole yard, and head office. At reference 4, Oshawa PUC Networks adds that this increase, plus cost pressures related to waste disposal and recycling are the primary drivers behind the Maintenance, Janitorial & Security increase.

a. Please describe what types of additional security measures these subcontractors are providing.
b. Since the increase in spending on additional security measures, have levels of theft, attempted theft, and vandalism decreased?
c. Please provide any analysis conducted which shows any decrease in trends in accordance with question (b).
d. Did Oshawa PUC Networks conduct a business case to support the increase in spending to confirm that the theft and vandalism outweigh the assets that have been stolen/vandalized? If yes, please provide any documentation.
e. Please explain why waste disposal and recycling costs are increasing at a higher rate than historically.
f. Are the costs for the subcontractors listed in tables 4-36 to 4-40 noted in reference 5 relating to non-affiliate suppliers? If yes, please identify those costs. If not, please explain why.

Response:

a. Principally physical patrols/inspections at OPUC offices, storage and sub-stations, and additional video monitoring.
b. No formal studies have been done, although anecdotally it can be said that thefts have decreased.
c. See b) above.
d. No.
e. The principal drivers behind the increased costs include:
    - Higher volumes of capital work has increased the frequency of garbage and recycling pickups,
    - Increased focus on ensuring recycling is maximized, and
    - Increased janitorial services at substations, including new MS9, disaster recovery location and also a higher level of service for main campus building.
f. No. At an individual level these suppliers do not meet the threshold used in these tables (> $80k).

4-Staff-78
Corporate – Labour and Other Costs
Ref: 2021 Chapter 2 Appendices, Tab 2-JC – OM&A Programs

The Corporate – Labour and Other Costs line item saw an 85% increase between 2016 actuals and 2015 actuals, a further smaller increase in 2017, followed by a 31% increase between 2018 actuals and 2017 actuals.

a. Please explain the drivers between the 2016 actuals and 2015 actuals.
b. Please explain the drivers between the 2018 actuals and 2017 actuals.

Response:

a. The $358k difference is primarily due to a write-back of bad debt provision in 2015 of $166k, followed by a provision expense of $103k in 2016, for a net year over year change of $269k. This type of debt relates to billing for contractor-caused accidents that damage OPUCN equipment. These years were unusual in terms of the cost impacts of these incidents and the provision movements are reflective of the difficulty in resolving these incidents.
b. The $287k increase is a combination of moving the CEO position to OPUCN from the parent company (partially offset by increase in allocations to affiliates) along with the hiring of a new VP Engineering & Operations mid-year, with an overlap with the interim holder of this position until the end of 2018.

4-Staff-79
Operations & Metering
Ref 1: 2021 Chapter 2 Appendices, Tab 2-JC – OM&A Programs
Ref 2: OPUCN_Chapter 2_Appendices_for 2015 to 2019_RUN_6_20151207, Tab 2- JC – OM&A Programs

Under its Operations & Metering Program, Oshawa PUC Networks lists “Materials, Tools & Consumables” in reference 1 but this program was not in the last application (reference 2). The difference between 2016 actuals and 2017 actuals shows an increase of approximately 168%, followed by a further increase in 2018, followed by decreases and then a leveling off. The 5-year historical average (2015-2020) is approximately $132k. Oshawa PUC Networks is proposing an approximate 59% increase over this amount in 2021.

a. Please reconcile the “Materials, Tools & Consumables” program to the OM&A programs provided in reference 2.
b. Please describe what this line item consists of.
c. Please provide an explanation for the bump between 2016 and 2017 and the increase in 2021 over the historical average.

Response:

a. “Materials, Tools & Consumables” were not shown separately in the previous application, but included in the "Grid Construction & Maintenance" program.
b. Included in this item are materials and consumables used in maintenance and operations work, and low cost tools and equipment.
c. It is not unusual for this line to fluctuate given the impacts of differing job types and periodic refreshing of tools. 2019 was unusually low as it included an insurance recovery of $90k for materials stolen in 2017 4th quarter station break-ins, and lower consumable/tools usage. The 2021 test year is in line with the actual average expense incurred over 2017-2018.

4-Staff-80
Ref 1: Exhibit 4, Page 40
Ref 2: Exhibit 2, Page Appendix A DSP, Pages 190 and 192
Ref 3: 2021 Chapter 2 Appendices, Tab 2-JC – OM&A Programs

Reference 1 notes that the customer service department is responsible for activities related to billing (mostly outsourced to a non-affiliated third party), call centre, collections, and other back office functions.

Reference 2, page 190 states that currently, Oshawa PUC Networks does not own the CIS software in use, and that the acquisition will remove risk from its current operating model and will allow Oshawa PUC Networks to operationalize and advance customer service improvements.

Page 192 notes that this acquisition will result in cost efficiencies as the CIS will be hosted in-house **which allows Oshawa PUC Networks to do in-house billing** (**emphasis added**).
Given the above, please explain why the "Customer Billing (outsourced)" line item in reference 3 is increasing by 24% (about $122k) in the 2021 test year over the 2019 OEB-approved amount, and 13% over 2019 actuals.

Response:

The "outsourced" line item reference has been retained in the description to maintain easy comparability for the CIS related expense pre-, during and post-acquisition. Completion of the project to acquire and host in-house the CIS is expected close to the end of Q4 2021, with the 'outsourced' label being redundant from 2022.
The 2019 OEB-approved amount reflects an estimate made in 2014, based on services provided then. Costs have increased more than expected, including incremental improvements to facilitate additional regulatory reporting requirements. For 2021, the costs are forecast to increase further to accommodate further improvements. These are examples of why an in-house CIS is being explored.

4-Staff-81
Ref: 2021 Chapter 2 Appendices, Tab 2-JC – OM&A Programs

Note 1 on Tab 2-JC asks to provide a breakdown of the major components of each OM&A Program undertaken in each year and to ensure that all programs below the materiality threshold are included in the "miscellaneous" line item.

Oshawa PUC Networks has not entered information in the "miscellaneous" line item. Please populate the "miscellaneous" line item, as applicable.

Response:

OPUCN generally allocates all costs to a specific program, leaving no unallocated or miscellaneous costs. OPUCN has reviewed these costs in this context and reallocated relevant items to the Miscellaneous line. An updated Chapter 2 Appendices workbook is filed along with these interrogatory responses.

4-Staff-82
Ref 1: Exhibit 4, Page 47, Table 4-21
Ref 2: 2021 Chapter 2 Appendices, Tab 2-K – Employee Costs
Ref 3: EB-2014-101, OPUCN_Chapter 2 Appendices_for 2015 to 2019_RUN_6_20151207, Tab 2-K – Employee Costs

OEB staff is unable to reconcile the OEB-approved number of Non-Management FTEs for 2015 and 2019 in the current application to those listed in Oshawa PUC Networks' previous draft rate order Chapter 2 Appendices (reference 3).

The following table is from Oshawa PUC Networks' current application:

	Last Rebasing Year (2015 OEB Approved	2015 Actuals	2016 Actuals	2017 Actuals	2018 Actuals	Last Rebasing Year (2019 OEB Approved	2019 Actuals	2020 Bridge Year	2021 Test Year
Number of Employees (FTEs including Part-Time)									
Management (including executive)	19	18	18	20	27	20	27	28	28
Non-Management (union and non-uni	65	60	58	64	63	65	63	64	63
Total	85	79	76	84	90	85	90	92	91
Total Salary and Wages including overtime and incentive pay ($000's)									
Management (including executive)	$ 2,113	$ 1,991	$ 1,994	$ 2,240	$ 2,942	$ 2,351	$ 3,274	$ 3,295	$ 3,287
Non-Management (union and non-uni	$ 5,400	$ 5,158	$ 5,136	$ 5,192	$ 5,594	$ 5,939	$ 5,533	$ 5,864	$ 5,913
Total	$ 7,512	$ 7,149	$ 7,131	$ 7,431	$ 8,536	$ 8,290	$ 8,806	$ 9,159	$ 9,201
Total Benefits (Current + Accrued) ($000's)									
Management (including executive)	$ 668	$ 646	$ 627	$ 707	$ 858	$ 750	$ 899	$ 934	$ 945
Non-Management (union and non-uni	$ 1,666	$ 1,752	$ 1,709	$ 1,737	$ 1,738	$ 1,786	$ 1,730	$ 1,786	$ 1,821
Total	$ 2,334	$ 2,399	$ 2,336	$ 2,444	$ 2,595	$ 2,536	$ 2,628	$ 2,719	$ 2,766
Total Compensation (Salary, Wages, Benefits) ($000's)									
Management (including executive)	$ 2,781	$ 2,637	$ 2,621	$ 2,947	$ 3,800	$ 3,101	$ 4,172	$ 4,228	$ 4,232
Non-Management (union and non-uni	$ 7,065	$ 6,910	$ 6,845	$ 6,929	$ 7,331	$ 7,725	$ 7,262	$ 7,650	$ 7,735
Total	$ 9,846	$ 9,548	$ 9,466	$ 9,875	$ 11,131	$ 10,825	$ 11,434	$ 11,878	$ 11,967

A portion of reference 3 is reproduced below which is from Appendix 2-K of Oshawa PUC Networks' draft rate order from its 2015-2019 Custom IR application:

	2011 Actuals	Last Rebasing Year - 2012- Board Approved	Last Rebasing Year - 2012 - Actual	2013 Actuals	2014 Bridge Year	2015 Test Year	2016 Test Year	2017 Test Year	2018 Test Year	2019 Test Year
Number of Employees (FTEs including Part-Time)[1]										
Management (including executive)	17	18	18	18	18	19	20	20	20	20
Non-Management (union and non-union)	52	57	56	56	56	61	65	64	63	61
Total	69	75	74	74	74	80	85	84	83	81

The current application shows 65 OEB-approved Non-Management FTEs in 2015, whereas the information filed with the draft rate order in Oshawa PUC Networks' previous Custom IR application shows 61. Similarly for 2019, the current application shows 65 OEB-approved Non-Management FTEs, whereas the draft rate order from the previous Custom IR application shows 61. Consequently, OEB staff is unable to reconcile the total approved FTEs (i.e. for 2015, 85 versus 80, and for 2019, 85 versus 81).

a. Please confirm, and provide supporting details, that the number of FTEs approved by the OEB in 2015 and 2019 listed in the current application are correct. If there are any corrections required, please identify and also provide the corrected compensation numbers as well, as applicable.
b. Please provide the number of FTEs (management and non-management) approved by the OEB for 2016, 2017, and 2018.

Response:

a. The numbers listed in the current application, as they relate to OEB approved, are correct. In its 2015 submission OPUCN did not include the count for temporary payroll staff in the FTE count, although it did include the related costs. Below is an extract from Appendix 2-K included as table 4-20 in Exhibit 4, page 43, of the 2015 submission. This table is consistent with the current application.

	2011 Actuals	Last Rebasing Year - 2012 Board Approved	Last Rebasing Year - 2012 Actual	2013 Actuals	2014 Bridge Year (Actual)	2015 Test Year	2016 Test Year	2017 Test Year	2018 Test Year	2019 Test Year
Number of Employees (FTEs including Part-Time)										
Management	17	18	18	18	18	19	20	20	20	20
Non-Management	52	57	56	56	56	61	65	64	63	61
Total	69	75	74	74	74	80	85	84	83	81
Total Salary and Wages including ovetime and incentive pay ($000's)										
Management	$1,543	$1,899	$1,759	$1,935	$1,930	$2,110	$2,217	$2,262	$2,307	$2,353
Non-Management	$4,324	$4,676	$4,711	$5,017	$4,897	$5,402	$5,731	$5,882	$5,977	$5,936
Total	$5,867	$6,574	$6,471	$6,952	$6,827	$7,512	$7,948	$8,144	$8,284	$8,290

b. The table below reflects the number of FTEs (management and non-management) approved by the OEB for 2016, 2017, and 2018.

	2015 OEB Approved	2016 OEB Approved	2017 OEB Approved	2018 OEB Approved	2019 OEB Approved
Number of Employees (FTEs including Part-Time)					
Management (including executive)	19.3	18.3	18.0	19.9	20.0
Non-Management (union and non-union)	65.2	60.4	57.6	64.0	64.9
Total	84.5	78.7	75.7	83.9	84.9
Total Salary and Wages including overtime and incentive pay ($000's)					
Management (including executive)	$ 2,113	$ 1,991	$ 1,994	$ 2,240	$ 2,351
Non-Management (union and non-union)	$ 5,400	$ 5,158	$ 5,136	$ 5,192	$ 5,939
Total	$ 7,512	$ 7,149	$ 7,131	$ 7,431	$ 8,290

4-Staff-83
Management FTEs and Compensation Ref 1: Exhibit 4, Page 47, Table 4-21
Ref 2: 2021 Chapter 2 Appendices, Tab 2-K – Employee Costs

OEB staff notes that Oshawa PUC Networks' proposed Management FTEs have increased by 40% in the 2021 test year from 2019 the OEB-approved number. OEB staff notes that the large increase happened between 2017 and 2018. As a result, the increase in Management total compensation from the 2019 OEB-approved total Management compensation is 36%.

a. Please explain the spike in Management FTEs from 2017-2018.
b. How does Oshawa PUC Networks classify management versus non- management FTEs?
c. How does the increase in Management FTEs help Oshawa PUC Networks achieve its corporate objectives?
d. What alternative methods for achieving these objectives were considered and rejected in favour of the proposed headcount and compensation increases.
e. What benefits will Oshawa PUC Networks' customers see as a result of the increase in management level FTEs.

Response:

a. The increase of 7 (rounded) FTEs in 2018 is made up of CEO position transfer, new VP Engineering & Operations, Manager Finance & Regulatory return from maternity leave, Manager Sustainability & Business Advocacy (CDM) position moved from parent company, addition of 2 Engineers in Training, and the filling of a grid construction supervisory vacancy.
b. Union staff, junior level temporary staff and students are considered non-management. The balance are considered management.
c. The focus is not on whether the FTE's are management or non-management but rather whether the FTE has the necessary skills to advance the company's objectives.
d. Subcontracted services and new or enhanced IT systems are the most commonly looked at alternatives.
e. As noted above, OPUCN focuses on the outcomes from adding positions rather than whether management or non-management. The benefit to customers will be the realization of our vision of meeting the evolving needs of our customers as a leading enabler or integrated critical energy and communications infrastructure.

4-Staff-84
Ref: 2021 Chapter 2 Appendices, Tab 2-K – Employee Costs

Please provide the driver(s) behind the 9.8% increase in Management total compensation between 2018 and 2019 actuals, while Non-Management total compensation decreased, given that the number of FTEs in both categories remained constant.

Response:

The FTE's in this schedule are rounded whole numbers, actual change was an increase of 0.5 in 2019. Of the 9.8% increase, 4.2% relates to performance pay which includes over accrual 2018 reversing in 2019. 2.0% relates to the actual FTE increase of 0.5 while 2.0% is due to inflation. The remaining 1.6% is from salary progressions and changes in mix from leavers/joiners.

4-Staff-85
Employee Compensation
Ref: Exhibit 4, Page 44 and 45

Oshawa PUC Networks states that one of the key elements underpinning its workforce planning and compensation strategies is regularly benchmarking compensation planning against relevant industry comparators.
Oshawa PUC Networks also states that with respect to executive and management compensation, each employee's position within their respective pay scale is reviewed based on performance and an inflationary adjustment and is regularly benchmarked against industry comparators.

a. Please explain, and provide specific examples, of what analyses and data Oshawa PUC Networks has utilized to benchmark against industry comparators.

b. Please file any analysis conducted, either by Oshawa PUC Networks or an external party, relating to compensation.

Response:

a. Each year, we participate in the MEARIE Management Salary Survey for the LDC industry. In addition, we share recent collective bargaining settlement agreements with other LDC organizations to provide benchmarking and insight for unionized wages and benefit policies in the industry. This annual process and review provides industry comparators to benchmark our compensation policies and practices and ensure consistency.
b. In order to participate in these surveys, we have signed non-disclosure agreements which means we are not able to provide copies of these annual reports.

In addition, we engaged in a 3rd party review of our management compensation system in 2017, completed by Korn Ferry Hay Group. This process allows an objective review of non-union job descriptions and adjustment of maximum salary rates for each position for purposes of internal equity of our compensation system and alignment with external, industry benchmarks. We are not able to provide a copy of this report for the purpose of this application as most of our management positions are filled by only one person and so provision of the report would amount to the disclosure of individual salaries.

Finally, we regularly compare our compensation rates and policies to wage settlements and collective agreements available on government portals and websites. Most specifically, we benchmark to recent settlements in the Utilities & Construction industries as filed on the Government of Canada - Employment & Social Development website here:

https://www.canada.ca/en/employment-social-development/services/collective-bargaining-data/wages/wages-industry-sector.html

b. See above answer.

4-Staff-86
Employee Compensation
Ref: EB-2015-0101, OPUCN_Ex 4_IRR_20150508, Response to School Energy Coalition Interrogatory 4.0-SEC-33

In its 2015 Custom IR application, an interrogatory was asked about how Oshawa PUC Networks determines the reasonableness of its management, both executive and non-executive, compensation costs. Oshawa PUC Networks noted that it participates in the annual MEARIE Salary Survey, which allows it to review compensation levels with industry trends. Oshawa PUC Networks noted that it planned a compensation review with the Hay Group for management and non-management positions for 2015.

a. What were the results of this survey?
b. Did Oshawa PUC Networks change any part of its compensation strategy as a result of this review?
c. Does Oshawa PUC Networks plan to undertake any further compensation strategies in the near term? If so, when? If not why not?

Response:

a. See the response to 4-Staff-85.
b. We have updated our rewards system for management, both executive and non-executive according to individual performance results. This variable rewards system is based on an individual's competencies and behaviour(s) for the year; resulting in an annual adjustment as well as the potential for a merit increase for those who are currently in progression towards the job rate for their position.
   Recommendations for increases are reviewed and approved by the executive committee with consideration given to performance, competencies, behaviours, and progression towards the full scope (job rate) of the position. Management is tasked with ensuring a fair distribution of results through the assessment ratings and adjusts the % reward such that the total increase applied is within the annual increase budget approved by the Board.
c. We conduct regular review and maintenance on our compensation system. Every five years we will undertake a full compensation review with the next review planned for 2022.

4-Staff-87
Shared Services and Corporate Cost Allocation Ref 1: Exhibit 4, Page 51-57
Ref 2: 2021 Chapter 2 Appendices, Tab 2-N – Corp_Cost_Allocation

Oshawa PUC Networks notes that activity has increased significantly within the affiliate companies, particularly Oshawa PUC Energy Services Inc., and admin fees have been adjusted to reflect this. OEB staff notes that 2019 actual price for services relating to admin fees are over 400% higher than the 2019 OEB-approved amount.

a. What type of activities have increased?
b. Does Oshawa PUC Networks anticipate this level of increased services going forward?

Response:

a. The significant increase has been the provision of energy management services to third parties, whether in management of energy plant operations or the project management of new plant construction.
b. The level of increase is likely to be slower. As affiliate activities have matured, the practice has been to hire permanent staff in the affiliates.

4-Staff-88
Shared Services and Corporate Cost Allocation Ref 1: Exhibit 4, Page 51
Ref 2: 2021 Chapter 2 Appendices, Tab 2-N – Corp_Cost_Allocation Ref 3: Exhibit 4, Page 57

a. Please provide a breakdown of the elements of the management fee.
b. Please explain how the management fee is calculated. Reference 2 notes "Cost Based". Please elaborate.

   Reference 3 notes that a new CEO was appointed in 2016, with the headcount within Oshawa PUC Networks where the previous CEO headcount was in the parent company. This is the primary driver in the management fee reduction in the current application.
c. Please explain why the management fee did not decrease in 2016, but instead decreased significantly in 2019 as shown in reference 2.
d. Please explain how the percentage of corporate costs are derived and the fluctuations in them, specifically from 2016 to 2018, as seen below.

	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 OEB-Approved	2019 Actual	2020 Bridge Year	2021 Test Year
% of Corporate Costs Allocated	51.6%	28.5%	55.6%	68.5%	55.4%	49.8%	51.3%	51.3 %

Response:

a/b. The "Cost Based" works as follows:
The parent company costs are made up of 2 types - (1) Direct Board of Directors costs and (2) general corporate costs.
OPUCN is allocated
- 70% of (1) being full cost for 4 directors independent to OPUCN and 40% of the cost of the other 4 directors, and
- 40% of general corporate costs
The 40% allocation for shared costs is an estimate of the share allocated to OPUCN, the remaining 60% allocated to the affiliates.

c. The management fee increased each year to 2018 based on the OEB approved amount in the 2015 application. The fee was adjusted down in 2019 to reflect the transfer of the CEO position from the parent company to OPUCN.

d. The % fluctuations reference in the table relate to the % of the total corporate costs attributed to OPUCN. The 2016 number is low because there were significant costs in the parent company not allocated.

4-Staff-89
Ref: 2021 Chapter 2 Appendices, Tab 2-N – Corp_Cost_Allocation

Beginning in 2018, Oshawa PUC Networks began charging admin fees to its parent company. Please explain what these consist of, and why these were not charged between 2015-2017.

Response:

These charges were instituted after the CEO position was moved to OPUCN in 2018. The charge relates primarily to the CEO along with the Executive Assistant.

4-Staff-90
Regulatory Costs
Ref: 2021 Chapter 2 Appendices, Tab 2-M – Regulatory Costs

Oshawa PUC Networks estimates that it will incur incremental costs of $687,786 in respect of this application. Of these costs, $344k are for consultants, and $105k for intervenors.

a. Please provide a breakdown of the different types of consultants that make up the $344k cost and the amount spent to date.
b. Please provide the number of intervenors Oshawa PUC Networks used to estimate the $105k amount.

Response:

a. The consultant types are summarised in the table below. These include Compass Renewable Energy, Kinectrics, Metsco, Simul Corp and Tru IT Solutions.

Activity	Budgeted	Actual to Date
Technical writing / Exhibit 1	$66,800	$53,837
Customer Engagement	$100,000	$74,566
DSP / Asset Condition Assessment	$164,000	$70,680
Misc	$13,333	$14,999
Total	$344,133	$214,082

b. OPUCN assumed 5 intervenors.

4-Staff-91
Ref 1: Exhibit 4, Pages 70 and 73
Ref 2: ACA, Page 75

Oshawa PUC Networks has proposed a typical useful life of 8 years for the SCADA system. This is below the minimum useful life of 15 years in the Kinectrics report on useful lives.

As described in Exhibit 4 page 70, the SCADA system consists of several components, including remote terminal units (RTU), software, workstations, etc. OEB staff notes that, according to the ACA, all of Oshawa PUC Networks' SCADA RTUs have an age between 11-15 years.

a. Please explain how a typical useful life of 8 years was calculated. Does the 8 years take into account the useful lives of individual components?
b. Page 70 of Exhibit 4 mentions major upgrades to SCADA systems to incorporate smart grid functions. Once these major upgrades are completed, will the upgraded SCADA system be treated as a new asset with an eight year lifespan?

Response:

a. The 8 year life was calculated by Metsco, who had the objective of establishing the typical useful life (TUL) of major fixed assets employed on OPUCN's distribution system. The resulting report, completed in January 2014, found the typical useful life of the majority of the assets employed on OPUCN's distribution system were accurately reflected in the Kinectrics report, with the exception of six asset classes, one of which was SCADA.
b. OPUCN is proposing to continue using 8 years for the SCADA system, as approved in its previous rate application. This is not a change. As OPUCN has not had an updated Asset Depreciation Study prepared, no change to TULs are proposed.

4-Staff-92
Depreciation Expense
Ref: Exhibit 4, Pages 79-82, Tables 4-49 to 4-52

In the "variance" column of Tables 4-49 to 5-52, the largest variances (between the depreciation calculated in Tables 4-49 to 4-52 and the depreciation in the fixed asset continuity schedules 2-BA) is for Account 1995 Contributions and Grants. The variances range from $232,089 to $420,039 between 2018 and 2021. Please explain the reason for the variances and reconcile the variances.

Response:

OPUCN utilizes a separate Fixed Asset module to maintain capital asset details and calculate depreciation. Although the Fixed Asset module reconciles to the General Ledger in total, at the USA level there are some differences. This leads to the variances noted in this exercise. OPUCN expects to resolve this issue as soon as possible but notes that on a total basis, the variances are not material.

4-Staff-93
PILS
Ref: Exhibit 4, Page 83

In the Chapter 2 Filing Requirements for 2021 Rate Applications, page 38 states:

> Applicants may propose a mechanism to smooth the tax impacts over the five year IRM term. The OEB will assess applicants' smoothing proposals on a case by case basis. If the OEB is satisfied with the smoothing proposals applicants may not be required to use Account 1592 going forward.

The Accelerated Investment Incentive (AII) program is expected to be phased out after 2023.

a. Please confirm that Oshawa PUC Networks is not proposing a mechanism to smooth the tax impacts over the IRM term.
b. If confirmed, please confirm that Oshawa PUC Networks will continue to use Account 1592 going forward to capture the impact of any future CCA rule changes, including the impacts from the phasing out of the AII program.
c. If not confirmed, please discuss and quantify the smoothing mechanism.

Response:

a. Confirmed.
b. Confirmed.
c. N/A.

4-Staff-94
PILS
Ref 1: PILS Workform
Ref 2: Exhibit 4, Appendix 4-5 2019 Corporate Tax Return
Regarding CCA:

a. Schedule 8 CCA of the 2019 tax return shows total ending UCC to be $119,559,086. In the PILS Workform, the ending UCC in the historical year is $113,673,475. Please explain and reconcile the difference. Please update the PILS Workform as needed.
b. Schedule 8 CCA of the 2019 tax return shows $1,008,098 of the total $22,879,547 additions are accelerated investment incentive properties (AIIP) eligible for accelerated CCA (i.e. 0.8%). In the bridge year of the PILS Workform, $15,709,971 of the total $16,289,971 total additions are AIIP (i.e. 96%). In the test year of the PILS Workform, $13,846,782 of the $14,146,782 total additions are AIIP (i.e. 98%). Please explain why the majority of 2019 additions were not AIIP while the majority of assets are AIIP in 2020 and 2021.
c. Please provide Oshawa PUC Networks' interpretation of the eligibility criteria for AIIP and explain how Oshawa PUC Networks determined the amount of AIIP in their 2019 tax filings.

Response:

a. Schedule 8 CCA of the 2019 tax return includes work in progress of $4,305,210, which is not included in the PILS Workform. Deducting the WIP yields a comparative balance of $115,253,877. In the PILS Workform, the corresponding amount of $113,673,475 is the UCC closing balance embedded in the audited 2019 Financial Statements. The tax return filed included some adjustments not reflected in the audited financial statements, hence the difference.
b. Eligibility for the Accelerated Investment Incentive is dependant on the asset being acquired after November 20, 2018. The necessary analysis of 2019 additions to confirm amounts meeting this criteria was incomplete at the time of the 2019 tax filing. At this time, $1,008,098 of the total was confirmed as eligible.
   Unlike 2019, OPUCN is reasonably certain the majority of its capital additions will have been acquired after November 20, 2018 and thus will be eligible for the Accelerated Investment Incentive. This explains the high percentages in 2020 and 2021.
c. See response in b) above.

4-Staff-95
PILS
Ref 1: PILS Workform Ref 2: Exhibit 4, Page 46

The PILS Workform for the bridge and test year do not include changes in reserves for accrued employee future benefits. Please update the PILS Workform to include the change in reserves in accordance with information provided in Exhibit 4.

Response:

A copy of the updated PILs Workform is filed with these interrogatories.

4-Staff-96
Account 1592, Sub-account CCA Changes Ref: Exhibit 4, Page 84

Oshawa PUC Networks indicates that the Account 1592, Sub -account CCA Changes amount pertaining to 2019 was not recorded in Account 1592 until after the 2019 audit was finalized. Oshawa PUC Networks will forward the balance for disposition in a future cost-based rate application.

a. Please explain whether there are any amounts recorded in Account 1592 pertaining to 2018. If no, why not.
b. Please provide the balance in Account 1592 pertaining to 2018 and 2019 and the related calculations.
c. Please explain whether the amount calculated in Account 1592 is based on actual additions in the year or approved capital additions from Oshawa PUC Networks' last rebasing application and provide justification for the approach taken.
d. Please provide the calculation for the Account 1592 entries in 2018 and 2019 on both of the following bases:
    a. The difference in CCA between the calculations embedded in Oshawa PUC Networks' rates and what that calculation would have been had the AIIP rules been applied in its last rebasing application (i.e. based on approved capital additions)
    b. The difference in CCA between the amounts claimed in 2018 and 2019 and what the claims would have been had the AIIP program not been introduced (i.e. based on actual capital additions in the year).
e. If Oshawa PUC Networks were to dispose of Account 1592 balances pertaining to 2018 and 2019, please confirm that Oshawa PUC Networks would be returning the full revenue requirement impact (including any gross-up required) to ratepayers. If not, please explain Oshawa PUC's position.

Response:

a. There are no amounts recorded in Account 1592 pertaining to 2018. No 2018 capital additions were acquired after the start date of November 20, 2018.
b. There is no balance at the end of 2019. The calculation of the 2019 amount was done on filing of 2019 tax return, which was after financial statements for 2019 and related audit were finalised. OPUCN will bring forward the balance for review and disposition in future cost-based rate applications.
c. N/A.
d. N/A.
e. N/A.

5-Staff-97
Affiliated Long-term Debt
Ref 1: 2019 Audited Financial Statement, filed as an attachment to Exhibit 1 Ref 2: Exhibit 5, Page 4
Ref 3: Exhibit 5, Appendix 5-1
Ref 4: 2021 Chapter 2 Appendices, Appendix 2-OB_Debt Instruments
Ref 5: *Report of the Board on the Cost of Capital for Ontario's Regulated Utilities (EB-2009-0084)*

On page 27 of Exhibit 1, Oshawa PUC Networks states that "OPUCN has a note payable to OPUC [the parent company] for approximately $60 million bearing interest at a rate of 7.25% per annum".

The 2019 Audited Financial Statements are filed as an attachment to Exhibit 1. Note 10 of the 2019 Audited Financial Statements (p. 276 of the PDF document of Exhibit 1) documents the following with respect to the debt due to Oshawa PUC Networks' parent company:

> **10. NOTE PAYABLE TO SHAREHOLDER**
>
> The note payable to the shareholder of $60,064 [2018 - $60,064] has an interest rate of 4.54% [2018 - 4.54%] per annum and is due on demand.
> The Corporation does not anticipate that the note will be called upon within one year and, accordingly, the note remains classified as a long-term liability.
>
> In 2019, the Corporation made interest payments of $2,187 [2018 - $1,091] to the shareholder.

On page 4 of Exhibit 5, Oshawa PUC Networks states:

> Funded Debt represents the amount of long-term debt obligations that OPUCN has issued and that are outstanding as at the date of this Application. These amounts represent Notes Payable of $60.064 million to the parent company, Oshawa Power and Utilities Corporation ("OPUC"). The effective interest rate on the Note is 3.65%. The Note is due on demand to the parent company. The rate used for this loan in calculation of the weighted average is the actual rate of 3.65%, which is the effective rate payable by OPUC to the Toronto Dominion Bank on a loan of a similar amount. This loan, for $60.0 million, is due in one repayment obligation at maturity in October 2028. The Loan is structured with a ten-year interest rate swap agreement with the Bank, effectively converting OPUC's obligations to a fixed interest rate of approximately 3.65%. The Note is provided in Appendix 5-1 of this Exhibit.

OEB staff note that Appendix 5-1 contains copies of two agreements between OPUC, Oshawa PUC Networks' parent company with Toronto-Dominion Bank.

a. Please file a copy of the Notes Payable between Oshawa PUC Networks and OPUC.
b. In Appendix 2-OB, the affiliated debt has no documented maturity. Please indicate the term of the Notes Payable between Oshawa PUC Networks and OPUC.

c. Please confirm the interest rate due per the executed Demand Note. If the note has a variable or negotiable rate, please provide a detailed explanation of how the rate is determined for each year or period.
d. Is the Notes Payable only callable by OPUC? Does Oshawa PUC Networks have any rights with respect to retiring this debt? If so, please provide details.
e. If this affiliated debt has no fixed maturity and is callable on demand, please provide further explanation on why Oshawa PUC Networks believes that a long- term debt rate of 3.65% applies to the Notes Payable between Oshawa PUC Networks and OPUC, with reference to the deemed long-term debt rate acting as a ceiling on affiliated debt in accordance with the policies documented on pages 50-54 of the *Report of the Board on the Cost of Capital for Ontario's Regulated Utilities (EB-2009-0084)*, issued December 11, 2009.

Response:

a. A formal document of the Note Payable between Oshawa PUC Networks and OPUC is in process and will be filed later in this proceeding. The intercompany arrangements are documented in the financing presented for approval by the Finance and Audit Committee and the Board of Directors - extract below is from July 2018 financing proposal.

Corporate Financing

Proposal

The Board of Oshawa Power and Utilities Corporation (OPUC) approve the following:

(1) $15 million term loan with TD Bank;
(2) Consolidate and harmonize TD debt into a ten-year, non-amortizing term loan;
(3) Guarantee the term loan under Oshawa PUC Networks Inc. (OPUCN); and
(4) Blend and acquire interest rate swaps to fix rate for the term of the loans.

Purpose

Management requests the Board's approval for $15 million in committed new debt to replenish cash used for capital expenditures.

Concurrent with the acquisition of new debt, management is recommending that TD term loans be consolidated to align maturity dates, mitigate interest rate risk and simplify administration of multiple term loans.

Key Assumptions

1. Planned capital expenditures are in accordance with the OEB's decisions on rate applications for the years 2015 through 2019, and management's latest forecasts.
2. There are currently three term loans, all with TD Bank:
    a. OPUC – $23 million, non-amortizing, with a maturity date of December 21, 2019 and a fixed interest rate of 3.57%.
    b. OPUCN – $7 million, non-amortizing, with a maturity date of December 21, 2019 and a fixed interest rate of 3.57%; and $15 million, non-amortizing, with a maturity date of June 12, 2022 and a fixed interest rate of 2.71%.
3. Consolidate debt into one ten-year, non-amortizing term loan totalling $60 million under OPUC.
4. Interest rate to be fixed under a blend and extend mechanism of interest rate swaps; indicative rate provided by TD Bank was 3.45% on June 22nd, 2018 compared to a blended rate of 3.28% on current loans, and an indicative rate of 3.60% on the new debt before consolidation.
5. Consolidated loan incorporates the existing mark-to-market of each of the existing three loans which are in-the-money by approximately $65 thousand.
6. TD Bank requires a corporate guarantee from OPUCN which is notionally in effect under the terms and covenants of the current banking agreements.
7. Debt/Equity remains below the OEB deemed 60/40 ratio throughout the period.
8. The Company is compliant with TD bank covenants throughout the period.

b) See a) above.
c) As per a) above, interest rate is 3.65%.
d) This is not specified.
e) Had Oshawa PUC Networks borrowed the $60.0m directly from TD, the rate would have been 3.65% also. Given the parent-subsidiary relationship, and that OPUCN is a guarantor for the loan, it is reasonable to apply the 3.65%. In addition, the OPUCN Credit

Facilities agreement includes financial covenants directly tied to the parent company debt.

5-Staff-98
New Long-term Debt in 2020 and 2021 Ref 1: Exhibit 5, Pages 4-5
Ref 2: 2021 Chapter 2 Appendices, Appendix 2-OB_Debt Instruments

With respect to anticipated new Long-term Debt, on pages 4-5 of Exhibit 5, Oshawa PUC Networks states:

> OPUCN anticipates a requirement to issue new long-term debt in 2020 and 2021. OPUCN estimates an issuance of approximately $10.0 million in 2020, and $5.0 million in 2021. The actual timing, amount, and term of a new debt issuance will be influenced by several factors such as actual versus anticipated cash flow and financial market conditions. OPUCN requests that the Long-Term debt rate used to determine distribution rates be updated as necessary in the applicable Test Year, in a manner consistent with Board policy applicable at that time, in the event that OPUCN issues any new long-term debt during this period.

On Appendix 2-OB for the calendar years 2020 and 2021, Oshawa PUC Networks shows the new forecasted debt as commencing on October 1, 2020 for the $10.0 million debt, at a rate of 3.21% and with no identified maturity, and July 1, 2021 for the $5.0 million debt, as a similar rate of 3.21% and with no identified maturity.

a. Please provide further information on the need for, principal, issuance date, maturity, and expected rate, commensurate with the loan term and current market conditions, for the debt forecasted for October 1, 2020.
b. If available, please provide further information on the need for, principal, issuance date, maturity, and expected rate, commensurate with the loan term and current market conditions, for the debt forecasted for July 1, 2021.

Response:

a. The need for new debt issuance is principally driven by average net capital expenditures in excess of operating cash flow. This net outflow is projected as $12.5m (2019), $6.4m (2020), and $2.4m (2021). Discussions regarding this new debt are in progress, with the latest rate estimate in the region of 2.10% for a 10 year term.
b. See a) above.

5-Staff-99
Notional Debt
Ref 1: Exhibit 5, Page 6
Ref 2: 2021 Chapter 2 Appendices, Appendix 2-OB_Debt Instruments
Ref 3: *Filing Requirements For Electricity Distribution Rate Applications, 2020 Edition for 2021 Rate Applications, Chapter 2, Cost of Service*, May 14, 2020, Pages 44-45

On page 6 of Exhibit 5, Oshawa PUC Networks documents the following:

> OPUCN's deemed debt for 2021 is $88.5 million as provided in Table 5-2, and the actual debt, per Table 5-11, is projected to be $75.0 million.
> Accordingly, OPUCN has positive notional debt of $13.5 million. In this application, as directed in the Chapter 2 Filing Requirements for Electricity Distribution Rate Application, the notional debt attracts the weighted actual cost of long-term debt of 3.21%. At the time of this application, this is the
> same rate as the deemed long-term debt rate prescribed by the OEB in its October 31, 2019 letter.

Pages 44-45 of the current Chapter 2 Filing Requirements documents the following:

> Notional debt is that portion of the deemed debt capitalization that results from differences between the distributor's actual debt and the deemed debt thickness of 60% (56% long-term debt and 4% short-term debt).
> Notional debt can arise for a number of reasons such as the difference between actual capital assets and regulatory rate base due to the addition of the formulaic working capital allowance.
>
> Divergence from the deemed capital structure is generally under the control of the utility as it may relate to timing for debt financing for planned capital investments, as well as the interests of shareholders, with regards to dividend policy (paying out earnings) versus reinvesting retained earnings.
>
> Notional debt can be either positive (i.e. deemed debt is greater than actual debt) or negative (where deemed debt is less than actual debt). *Since the factors which cause notional debt to arise are largely under the control of the utility, notional debt should attract the weighted average cost of actual long-term debt rather than the current deemed long-term debt rate issued by the OEB.* This approach has been upheld in several decisions in recent years.[29]
>
> The possible exception to this is that the deemed long-term debt rate should apply as a ceiling in a situation where a utility is 100% equity financed and has no current debt or recent history of debt financing (and thus no current or historical information on actual debt costs for the utility). ***[Emphasis Added]***
>
> 29 December 19, 2014 (Updated August 11, 2016) Hydro One Remote Communities Decision with Reasons, EB-2008-0232, page 12, London Hydro Inc. Decision with Reasons, EB-2008-0235, pages 36-37.

In Appendix 2-OB, Oshawa PUC Networks documents a weighted average cost of long- term debt of 3.63% for 2020 and 3.57% for 2021.

Please explain how Oshawa PUC Networks' proposed treatment of "notional" debt is consistent with the policy as summarized in the Chapter 2 Filing Requirements and originally articulated in *Report of the Board on the Cost of Capital for Ontario's Regulated Utilities (EB-2009-0084)*, issued December 11, 2009.

Response:

The extract above from page 6 of Exhibit 5 should be amended as follows:
"Accordingly, OPUCN has positive notional debt of $13.5 million. In this application, as directed in the Chapter 2 Filing Requirements for Electricity Distribution Rate Application, the notional debt attracts the weighted actual cost of long-term debt of 3.57%. At the time of this application, this is calculated using actual rates for funded debt and the deemed long-term debt rate prescribed by the OEB in its October 31, 2019 letter for unfunded debt. OPUCN believes this treatment of "notional" debt is consistent with the policy as summarized in the Chapter 2 Filing Requirements and originally articulated in Report of the Board on the Cost of Capital for Ontario's Regulated Utilities (EB-2009-0084), issued December 11, 2009".

6-Staff-100
Ref 1: Exhibit 6, Page 4, Table 6-1
Ref 2: Revenue Requirement Workform, Tab 9 – Rev_Reqt

The revenue deficiency/(sufficiency) and gross revenue deficiency/(sufficiency) in reference 1 is the same.

Please confirm that the gross revenue deficiency/(sufficiency) is $1,684,085 and the revenue deficiency/(sufficiency) associated with base revenue requirement is $1,431,472 as noted in reference 2.

Response:

Confirmed.

7-Staff-101
Cost Allocation
Ref: Cost Allocation Model, Tab O1 - Revenue to cost|RR
Ref: Revenue Requirement Workform, Tab 11 - Cost_Allocation

The allocated revenue requirement and revenues in the cost allocation model do not reconcile to the RRWF as identified below:

Revenue Requirement:

	Cost Allocation Revenue Requirement	Revenue Requirement Workform Allocated Class Revenue Requirement	Difference
Residential	19,194,323	19,126,383	67,940
GS < 50 kW	3,112,011	3,097,435	14,576
GS 50 to 999 kW	4,932,042	4,939,274	-7,232
GS 1,000 to 4,999 kW	566,937	568,472	-1,535
Large Use	272,554	273,426	-872
Street Lighting	492,347	495,552	-3,205
Sentinel Lights	1,998	2,008	-10
USL	77,850	78,111	-261
Total	**28,650,063**	**28,580,665**	**69,398**

Distribution Revenue

	Cost Allocation Distribution Revenue at Status Quo Rates	Revenue Requirement Workform LF X current approved rates (1+d)	Difference

Residential	17,553,126	17,552,396	730
GS < 50 kW	3,344,006	3,343,866	140
GS 50 to 999 kW	4,700,655	4,700,460	195
GS 1,000 to 4,999 kW	586,444	586,420	24
Large Use	273,766	273,755	11
Street Lighting	820,015	819,981	34
Sentinel Lights	2,338	2,338	-
USL	69,731	69,728	3
Total	**27,350,082**	**27,348,945**	**1,137**

Miscellaneous Revenue

	Cost Allocation Miscellaneous Revenue	Revenue Requirement Workform Miscellaneous Revenues	Difference
Residential	930,934	880,841	50,093
GS < 50 kW	123,475	116,376	7,099
GS 50 to 999 kW	157,083	148,582	8,501
GS 1,000 to 4,999 kW	23,482	22,509	973
Large Use	9,544	9,069	475
Street Lighting	52,238	51,298	940
Sentinel Lights	125	121	4
USL	3,099	2,925	174

Total	**1,299,981**	**1,231,721**	**68,260**

a. Please reconcile the differences noted above.

b. If model entries are in error, please file corrected models.

Response:

a. and b.

Revenue Requirement Workform has been updated to match the Cost Allocation Model and a copy of the updated Revenue Requirement Workform is filed with these interrogatory responses.

7-Staff-102
Services Weighting Factor
Ref: 2021 Chapter 2 Appendices, Tab 2-H – Other_Oper_Rev

Oshawa PUC Networks states that:

> The weighting factor for customer classes GS<50 kW and Street Lighting have been set to 1.5 and 3.5, respectively, to reflect the additional effort in maintaining, reviewing and auditing data for these customers with associated parameters for billing.
>
> The weighting factors for customer classes GS 50kW to 999 kW, GS 1,000 kW to 4,999 kW, and Large Use, have been set to 7.0, 7.0 and 15.0, respectively, to reflect that billing is significantly more complex due to validating, editing and adjustment of interval data, incorporation of manual reads, and review of global adjustment amounts. From a customer service and collection perspective, these accounts often require escalation to a supervisor, increased follow up, and occasionally face-to-face meetings.

The billing and collecting weighting factor is used to allocate the following account balances:

Account Number	Account Name	Balance
5305	Supervision	$145,880
5315	Customer Billing	$1,228,072
5320	Collecting	$274,283

a. In determining the weighting factors, has Oshawa PUC Networks considered all costs associated with billing and collecting from customers, both internal staff costs as well as external or vendor costs such as postage and financial services?

b. Please provide a derivation of the weighting factors which itemizes internal staffing costs separately from external costs such as postage, financial services, and other service providers.

Response:

a. OPUCN confirms that is has considered all costs associated with billing and collecting from customers, both internal staff costs as well as external or vendor costs such as postage and financial services, in determining weighting factors.

b. OPUCN applies weighing factors to the total cost of these services. Separate factors for internal and external costs are not used.

7-Staff-103
Customer Count
Ref: Cost Allocation Model, Sheet I6.2 Customer Data, I7.1 Meter Capital

Oshawa PUC Networks has populated the Meter Capital worksheet with differing number of meters than customers as indicated in the table below:

	Forecasted Customers per I6.2 Customer Data	Total Meters per I7.1 Meter Capital	Difference
Residential	56,190	56,932	742 (1.3%)
General Service < 50 kW	4,269	4,182	-87 (-2.0%)
General Service > 50 kW to 999 kW	535	557	22 (4.1%)
General Service 1,000 to 4,999 kW	13	13	-
Large Use	1	2	1 (100%)

Please reconcile the differences in meter counts to customer counts.

Response:

a. The number of residential meters is higher than the forecasted customer count in 2021 of residential customers for a few reasons:

i. OPUCN has electric heat meters, generation, and load meters which may be consolidated to one account (one customer count).

ii. OPUCN has meters on multi-customer meter bases with disconnects if the customer has disconnected the service or does not have a service connected.

iii. As well, OPUCN has unoccupied services (transitionary or longer term). The unoccupied properties would continue to have a meter on the building, unless there is a request to demolish the building.

b. The number of GS<50 meters will be updated to reflect the forecasted customer count for 2021 for GS<50 in the updated Cost Allocation Model filed with these interrogatory responses. The meter count in this Meter Capital worksheet was based on actual meters in service as the time of filing.

c. The number of GS 50-999 meters is higher than forecasted customers for 2021 for a similar reason as part a.ii and iii.

d. Each GS 1000-4999 customer only has one meter owned by OPUCN.

e. Large Use customer has two meters attached, one for load and one for generation.

8-Staff-104
Fixed/Variable Proportion
Ref: Exhibit 8, Page 8

Oshawa PUC Networks proposes to maintain the fixed/variable proportions. Table 8-5 indicates that General Service Intermediate 1,000 to 4,999 kW and Large Use have fixed charges that are already above the Minimum System with Peak Load Carrying Capability (PLCC) Adjustment (the Ceiling Fixed Charge from the Cost Allocation Model), and are proposed to increase.

Please calculate the variable charges that would result from the scenario where the fixed charges for the General Service Intermediate 1,000 to 4,999 and Large Use classes were held at the existing rates.

Response:

The variable charges that would result from the scenario where the fixed charges for the General Service Intermediate 1,000 to 4,999 kW and Large Use classes were held at the existing rates are $2.7814 per kW and $2.4186 per kW respectively.

8-Staff-105
Ref 1: RTSR Workform, Tab 3 – RRR Data
Ref 2: EB-2019-0062, Decision and Rate Order, Schedule A – Tariff of Rates and Charges

OEB staff is unable to reconcile the retail transmission rates for network, and line and transformation connection entered in column E to Oshawa PUC Networks' current Tariff of Rates and Charges for all rate classes.

Please provide an updated RTSR Workform to reflect the rates as found on Oshawa PUC Networks' current 2020 tariff.

Response:

The retail transmission rates for network and line and transformation connection are from OPUCN's 2018 approved rate order, as the RRR data is from the 2018 RRR filing. In order to compare the two same years, Oshawa PUC used the 2018 tariff and rate sheet to corroborate the 2018 RRR data.

A new RTSR workform will be filed which uses 2020 RTSR approved rates.

8-Staff-106
Loss Adjustment Factors Ref 1: Exhibit 8, Page 14
Ref 2: Chapter 2 Appendices, Tab 2-R – Loss Factors

Please explain the drivers for the increases in 2018 and 2019 total losses relative to 2016 and 2017 levels.

Response:

The main drivers for the increase in 2018 and 2019 total losses relative to 2016 and 2017 loss levels are as follows:

- Engineering design for new subdivisions and townhouse complexes where underground secondary wiring is longer to accommodate customer requirements giving to higher losses in the system.

- Meter failure due to age of smart meters (meter changes) and meter changes to meet needs of Measurement Canada re-verification program starting in 2018 and 2019, which resulted in under estimation due to meter exchange.

9-Staff-107
DVA Disposition
Ref 1: Exhibit 9, Page 3
Ref 2: Exhibit 1, Pages 18-19 and 59-60

Oshawa PUC Networks is not requesting the disposition of any Group 1 or Group 2 DVA balances however is requesting disposition of Account 1568 – LRAMVA.

In Oshawa PUC Networks' 2020 IRM decision[6], the OEB directed Oshawa PUC Networks to carry out a review by way of external special purpose audit, at a minimum for accounts 1588 and 1589, for the period January 1, 2017 to December 31, 2019. The special purpose audit was to be completed prior to any request for disposition of 1588 or 1589 deferral and variance accounts. The OEB gave the option to extend this special purpose audit to all Group 1 accounts.

In its current application, Oshawa PUC Networks notes that it is exercising that option and is planning an external special purpose audit for **all DVA accounts** for the three year period noted above (**emphasis added**). The Audit is planned for August/September 2020 and is expected to be completed before the end of the year.

a. It is unclear as to whether Oshawa PUC Networks is extending the audit to Group 2 accounts as well as Group 1. Please clarify.
b. If the audit is not being extended to Group 2 accounts, please explain why Oshawa PUC Networks is not proposing Group 2 accounts for disposition.
c. When does Oshawa PUC Networks anticipate requesting disposition of the Group 1 and 2 accounts? Does Oshawa PUC Networks plan to request disposition of the accounts in the current proceeding if the audit is completed prior to the close of record?
d. Please provide a status update of the audit.

Response:

a. The scope of the audit is for Group 1 accounts only.

b. Oshawa PUC did not request disposition of Group 2 accounts as we prefer to see the result of the special purpose audit first, in case any adjustments are necessary to Group 2 accounts. As well, from a materiality perspective Group 2 accounts make up only 12% of the total disposition balance at December 31, 2019.

c. Oshawa PUC will dispose of Group 1 accounts in the next annual IRM filing once the audit is complete. We will dispose of Group 2 accounts in our next rebasing application.

d. Audit is in progress as of the filing of these interrogatory responses. It will continue at the same time as Oshawa PUC's year-end financial statement audit.

9-Staff-108
RSVAs
Ref 1: Exhibit 8, Page 11
Ref 2: EB-2015-0304, Decision and Order, February 14, 2019, Schedule B - Accounting Order - Account 1508 other regulatory assets, sub-account retail service charges incremental revenue
Ref 3: 2021 Deferral/Variance Account Workform
Ref 4: Exhibit 9, Page 11

Reference 1 notes that Oshawa PUC Networks is not using Accounts 1518 - Retail Cost Variance Retail and 1548 Retail Cost Variance STR (RSVAs). Reference 4 states that Oshawa PUC Networks has a zero balance in Accounts 1518 and 1548 and has followed Article 490 of the Accounting Procedures Handbook.

At reference 2, the OEB noted that electricity distributors who have discontinued the use of RCVAs 1518 and 1548 are required to establish the two new variance accounts[7], in order to track the difference between the revenue collected from the current electricity distributor Retail Service Charges (electricity RSCs) and the revenue to be collected when the updated electricity RSCs come into force on May 1, 2019, for eventual disposition to distribution ratepayers.
In the DVA Continuity Schedule, there are no entries on Tab 2b for these accounts.

a. Please explain if Oshawa PUC Networks is using Accounts 1518 and 1548 or the new Account 1508 sub-accounts.
b. If Account 1518 and 1548 are used, why does Oshawa PUC Networks have zero balances in the accounts?
c. Please update the DVA Continuity Schedule for balances pertaining to retail cost variances as needed, including a forecast up to December 31, 2020.
d. Please confirm that amounts can be forecast with reasonable accuracy up to December 31, 2020.
e. Please provide the supporting calculation for the amounts recorded in the accounts.
f. Please confirm that Accounts 1518, 1548 and the 1508 sub-account will be discontinued after December 31, 2020.

Response:

a. OPUCN is not using Accounts 1518 and 1548 for retail costs variance.

b. See response in part a.

c. As indicated in our application, and as a result from an OEB order from our 2020 IRM (EB-2019-0062) OPUCN is undergoing an audit over DVAs. When the audit is complete we will be recording the appropriate amount in new sub-account 1508 Retail Service Charges Incremental Revenue. At our next rebasing we will dispose of the account.
OPUCN estimates this balance will not be significant, with a projected balance of approximately $27,000 at December 31, 2020.

d. As per part c. OPUCN was able to forecast an estimated balance of $27,000 at December 31, 2020.

e. OPUCN has provided schedule “9-Staff-108 - Estimate of Sub Account retail service charges incremental revenue.xlsx” filed with these interrogatories at Appendix D, which estimates the amount in the sub account.

f. OPUCN confirms that accounts 1518, 1548 and the 1508 sub-account will be discontinued after December 31, 2020.

9-Staff-109

Account 1508, Sub-account OEB Cost Assessment Ref: 2021 Deferral/Variance Account Workform

In the DVA Continuity Schedule, Oshawa PUC Networks has a balance of $416,658 in Account 1508, Sub-account OEB Cost Assessment as at December 31, 2019 including forecasted interest.

a. Please update the DVA Continuity Schedule to include the balance recorded in the sub-account including the forecasted balance up to December 31, 2020 as no new transactions are expected to be recorded in the sub-account after rebasing.
b. Please confirm that the amounts can be forecast with reasonable accuracy up to December 31, 2020

Response:

a. OPUCN can provide the balance in Account 1508, Sub-account OEB Cost Assessment, as of September 30, 2020. Principle balance as of September 30, 2020 is $528,890. Interest up to September 30, 2020 is $5,826. The DVA Continuity Schedule itself does not allow for forecast 2020 amounts.

b. Amount as of September 30, 2020 provided. Remaining quarter of 2020 cannot be reasonably estimated.

9-Staff-110
Account 1508, Sub-account Pole Attachment Revenue Variance Ref 1: 2021 Deferral/Variance Account Workform
Ref 2: Exhibit 8, Page 13
Ref 3: Exhibit 9, Page 10

At reference 2, it states that Oshawa PUC Networks has recorded the excess of incremental revenues from the increased pole attachment charge into Account 1508, Sub-account Pole Attachment Revenue Variance. In the DVA Continuity Schedule, there is no balance recorded in the sub-account.

a. Please update the DVA Continuity Schedule to include the balance recorded in the sub-account including the forecasted balance up to December 31, 2020 (Per page 57, Chapter 2 Filing Requirements for 2021 Rate Applications, "In a letter issued March 22, 2018, the OEB instructed distributors to record the excess incremental revenue as of September 1, 2018 until the effective date of its rebased rates in a new variance account related to pole attachment charges. Distributors will need to refund the closing balance in the distributor's next cost of service application.").
b. Please provide a calculation of the amount recorded in the sub-account.
c. Please confirm that the amounts can be forecast with reasonable accuracy up to December 31, 2020.

Response:

a. The DVA Continuity Schedule will be updated to include the balance recorded in Account 1508, Sub-account Pole Attachment Revenue Variance. Estimated balance at December 31, 2020 is $148,068. The current DVA Continuity Schedule does not allow for entering of 2020 balances.

b. A calculation of the amount recorded in the sub-account is provided in excel "Sub Account Pole Attachment Revenue Variance Calculation.xlsx" filed with these response interrogatories at Appendix E.

c. Amounts can be reasonably estimated as of December 31, 2020.

9-Staff-111
Ref 1: Exhibit 9, Page 5 Table 9-3
Ref 2: Exhibit 4, Page 45
Ref 3: 2021 Deferral/Variance Account Workform
Ref 4: Report of the Ontario Energy Board, Regulatory Treatment of Pension and Other Post-Employment Benefit (OPEBs) Costs, May 18, 2017

At reference 2, Oshawa PUC Networks indicates that it uses the default accrual basis for recovery of pensions and OPEBs. Per reference 4, the OEB established Account 1522 to track the difference between the forecasted accrual pension and OPEB amounts in rates and actual cash payment(s) made, with an asymmetric carrying charge in favour of ratepayers applied to the differential. Reference 1 Table 9-3 shows that Account 1522 is not an active account. There is also no balance in for Account 1522 (control account, contra-account and carrying charge account) in the DVA Continuity Schedule.

a. Please explain why Account 1522 is not an active account that will be continued going forward.
b. Please update the DVA Continuity Schedule for Account 1522.
c. Please provide a calculation of the amount recorded in the sub-account(s).

Response:

a. We are tracking the OPEB deferral in Account 1508- sub-account OPEB Deferral. See response to 9-Staff-113. Oshawa PUC will update to place the balances in Account 1522.

b. DVA Continuity Schedule is updated for account 1522.

c. See response to part b. The DVA continuity schedule is updated.

9-Staff-112
Account 1508, Sub-account Lost Revenue for Collection of Account and Reconnection Charges
Ref 1: Exhibit 9, Page 10
Ref 2: Exhibit 1, Page 25

Due to timing of establishment of the sub-account, Oshawa PUC Networks did not record a balance in Account 1508, Sub-Account Lost Revenue for Collection of Account and Reconnection Charges that was effective July 1, 2019. The sub-account will record lost revenue from the elimination of the Collection of Account charge and the waiving of the Reconnection charge to eligible low-income customers from July 1, 2019 to December 31, 2020. Oshawa PUC Networks has proposed that this sub-account be brought forth for disposition in its next rebasing application.

a. Please provide a continuity schedule showing the calculation of the amount recorded in the sub-account for each of the charges to date, including the OEB- approved amount used as the basis to calculate the lost revenues.
b. Please include a forecast of the balance in the sub-account up to December 31, 2020 and discuss the whether this amount can be reasonably forecasted.
c. Please discuss the materiality of the amount recorded in the sub-account in consideration of Oshawa PUC Networks' 2020 IRM Decision and Rate Order[10] and the appropriate Chapter 2 Appendix 2-H to use as a basis to calculate the amount in the sub-account. In particular, the Decision and Rate Order stated:

> With respect to materiality, OEB notes that there are discrepancies between the amounts reported in table 23 of the application and the amounts reported in the Chapter 2 Appendix 2-H supporting Oshawa PUC's 2015 Custom IR decision and order, which lead to different conclusions on whether the amount to be included in the account would be material. The OEB will nonetheless approve the establishment of the account at this time, but the onus will be on Oshawa PUC to demonstrate at the time of disposition that the amounts included in table 23 are the appropriate amounts".

Response:

a. Oshawa PUC has provided a continuity schedule showing the calculation of the amount recorded in the sub-account for each of the charges to date. See "Estimate of Sub Account Lost Rev for Collection of Account.xlsx" attached at Appendix F.

b. A forecasted balance is presented in the workbook named in part a. Estimated ending balance as of December 31, 2020 is $181,839 (including carrying charges).

c. Forecasted amount at the end of 2020 is a debit balance. This produces the following rate rider.

2020 forecasted customer count - residential			55,416
	Rate rider - per customer - per year		$ 3.28
	Rate rider - per customer - per month		$ 0.27

Based on these calculations the balance in the sub-account is material.

9-Staff-113
Continuation of DVAs
Ref 1: Exhibit 9, Page 5 Table 9-3
Ref 2: Exhibit 9, Pages 9-10
Ref 3: 2021 Deferral/Variance Account Workform
Ref 4: Exhibit 1, Page 24

In Oshawa PUC Networks' decision and order[11] for 2015 rates, the OEB approved the continuation of both the Tax Rates Changes and Pension Cost Differential Deferral Accounts, and the establishment of the System Renewal Capital Variance Account.

a. The DVA Continuity Schedule shows an Account 1508, Sub-account OPEB Deferral. Please confirm that this is the Pension Cost Differential Deferral Account. If not, please explain what the 1508 sub-account is and what it is to record. Please also update the DVA Continuity Schedule for the Pension Cost Differential Deferral Account.
b. The DVA Continuity Schedule does not include the System Renewal Capital Variance Account. Please update the DVA Continuity Schedule to include the account for completeness purposes, updating the balance as needed.
c. In reference 2, Oshawa PUC Networks has not discussed the request for continuation or discontinuation of the three noted accounts above.
    i. Please indicate whether Oshawa PUC Networks proposes to continue or discontinue the Pension Cost Differential Account and the System Renewal Capital Variance Account and provide supporting rationale.
    ii. For the Tax Rate Changes, please confirm that Oshawa PUC Networks will discontinue the account and use the generic Account 1592 PILs and Tax Variance for 2006 and Subsequent Years instead to record the tax impact of any differences that result from a legislative or regulatory change to the tax rates or rules that are not reflected in the distributor's rates. If not confirmed, please explain

Response:

a. The Account 1508 OPEB Deferral is the Pension Cost Differential Deferral Account.

b. The balance in account System Renewal Capital Variance Account is Nil. The OEB's decision in OPUCN's 2015-2019 Custom IR application also approved Sub-Account 1508 - Revenue Requirement Differential Variance Account related to System Renewal Capital Additions effective January 1, 2016. The Accounting Order noted that the balance in this account will be refunded to OPUCN's customers at the time of OPUCN's next rebasing. The balance in sub-account 1508 Revenue Requirement Differential Variance Account related to System Renewal Capital Additions has a balance of $0 as of December 31, 2020. From 2015-2019, OPUCN overspent on system renewal compared to OEB approved budget by a cumulative $1.3M. This is an asymmetrical account, in that overspending or faster pace of spending will not result in recording debit balances in this variance account. As OPUCN overspent, by the end of 2019 on system renewal, no balance is available for disposition in 1508 Other Regulatory Asset – Sub-account Revenue Requirement Differential Variance Account related to System Renewal Capital Additions.

c. i. Oshawa PUC proposes to continue the Pension Cost Differential Account until balances are transitioned to Account 1522.

Oshawa PUC proposes to discontinue System Renewal Capital Variance Account. Please see explanation in part b above.

ii. Oshawa PUC confirms that we will use the generic Account 1592 PILs and Tax Variance for 2006 and Subsequent Years instead to record the tax impact of any differences that result from a legislative or regulatory change to the tax rates or rules that are not reflected in the distributor's rates.

9-Staff-114
Continuation of DVAs
Ref: Exhibit 9, Pages 9-10

Oshawa PUC Networks proposes to continue:

- Account 1508, Sub-account OEB Cost Assessment Variance,
- Account 1508, Sub-account Pole Attachment Revenue Variance,
- Account 1508, Sub-account Lost Revenue for Collection of Account and Reconnection Charges

Though Oshawa PUC Networks may be requesting to continue these accounts as Group 2 accounts are not requested for disposition, please confirm that Oshawa PUC Networks will not record any new transactions into these accounts after December 31, 2020 as the expectation for these accounts is that they are to be discontinued after rebasing. If not confirmed, please explain.

Response:
Oshawa PUC confirms that we will not record any new transactions into these accounts after December 31, 2020 and these accounts will be discontinued after rebasing.

9-Staff-115
Account 1509
Ref 1: Exhibit 9, Page 9-10/Exhibit 1, Page 32
Ref 2: Exhibit 3, Page 4
Ref 3: Exhibit 4, Page 12

Per reference 1, Oshawa PUC Networks has requested approval to continue to use Account 1509 – Impacts Arising from the COVID-19 Emergency for the test year. Per reference 2, Oshawa PUC Networks states that it has no ability to forecast 2021 impacts of COVID-19 on the load forecast or other revenue. There are no COVID-19 related impacts forecasted for inclusion in rates in this Application on the assumption that the costs of those impacts will be tracked in the DVAs and disposed of by the OEB later. Per reference 3, Oshawa PUC Networks has noted that while the COVID-19 pandemic has had current impacts to its business environment, "it has prepared this application on the assumption the COVID-19 crisis will have abated by 2021."

a. Oshawa PUC Networks has requested approval to continue the account in the test year. Please confirm that Oshawa PUC Networks is asking that the Account remains open through 2021 even if future OEB guidance that is issued for the account as a result of the consultation is different (e.g. the OEB finds that the deferral account for the COVID-19 impacts is effective until the end of 2020).
i. If yes, please clarify the effective time period for which Oshawa PUC Networks proposes to use the account and the underlying rationale.
b. Please provide the amounts Oshawa PUC Networks has recorded in each of the Account 1509 sub-accounts to date.
i. Please explain the types of costs/savings/lost revenues and the amounts associated that Oshawa PUC Networks has recorded in the sub- account(s).
ii. Please discuss any other types of costs/savings/lost revenues and the amounts associated that Oshawa PUC Networks anticipates recording in the sub-accounts.

Response:

a. Oshawa confirms that it will follow OEB guidance in relation to the effectiveness of Account 1509 -Impacts Arising from the COVID-19 Emergency.

b. Please note, these are estimated amounts as Oshawa is still reviewing the COVID related items in relation to these deferral account. The below amounts are what is known as of August 31, 2020.

Sub-Account	Estimated balance as of Aug 31, 2020	Part i) types of costs included
Account 1509, Sub-account Costs Associated with Billing & System Changes	$0	

Account 1509, Sub-account Lost Revenues	$192,256	Amounts included are for lost interest revenue. Oshawa stopped charging interest on overdue accounts as of March.
Account 1509, Sub-account Other Costs	$160,961	Amounts included are for additional materials for PP&E for health and safety of staff.
Account 1509, Sub-account Bad Debt	$128,843	Amounts included are the increase to the allowance of bad debt provision in August 2020.
Account 1509, Sub-account Forgone Revenues from Postponing Rate Implementation	$0	

ii) As of this time OPUCN cannot estimate other costs that will be included in the sub-accounts.

9-Staff-116
Carrying Charges Ref 1: Exhibit 9, Page 7
Ref 2: 2021 Deferral/Variance Account Workform

As stated in reference 1, the interest forecasted on DVA balances (including LRAMVA) are based on the rates for Q1 and Q2 2020. Please update the Q3 and Q4 2020 forecasted interest to be based on the Q3 and Q4 2020 prescribed rates.

Response:

OPUCN has updated the interest rates for Q3 2020 and Q4 2020 to 0.57% and 0.57%, respectively and updated the projected interest in the DVA Model.

9-Staff-117
LRAMVA
Ref 1: Exhibit 4, Pages 90-93
Ref 2: LRAMVA Workform, Tab 8 (street lighting)
Ref 3: EB-2019-0062, Follow-up Questions Update (dated Nov. 13, 2019)
Ref 4: EB-2019-0062, Report (March 26 2016 City of Oshawa - Investment Grade Audit of Streetlights_20191105)

Exhibit 4 of the application did not include statements confirming the calculations of the street lighting savings as noted in section 2.4.6.2 of the Filing Requirements.

a. Please confirm that the report entitled "March 26 2016 City of Oshawa - Investment Grade Audit of Streetlights_20191105" filed in the 2020 rate application (EB-2019-0062) remains applicable to the review of street lighting savings filed in Tab 8 of the LRAMVA workform.
b. Please confirm that the statements made in relation to the accuracy of the street lighting savings that were previously filed in Questions #8 and 9 of the "Follow-up Questions Update" from the 2020 rate application (dated Nov. 13, 2019) remain applicable to the review of the current application.

Response:

a. OPUCN confirms that the report mentioned in part a. is still applicable to the review of the street lighting savings filed in Tab 8 of the LRAMVA workform.

b. OPUCN confirms that the statements made in relation to the accuracy of the street lighting savings that were previously filed in Questions #8 and 9 of the "Follow-up Questions Update" from the 2020 rate application (dated Nov. 13, 2019) remain applicable to the review of the current application.

9-Staff-118
LRAMVA Ref: LRAMVA Workform, Tab 8 (street lighting)

Annual cumulative savings from street lighting projects increases from 16,233 kW in 2017 to 17,195 kW in 2018, and remains at 17,195 kW in 2019.

a. Please confirm whether the 106% factor to increase street light demand savings of 16,233 kW to 17,195 kW represents the realization rate for street lighting sourced from the IESO verified results report. If not, please clarify the source of this assumption.
b. Please confirm that there were no new street light replacements to LED bulbs in 2018, as the savings resulted from LED replacements took place between October 2016 and August 2017. If this is the case, please provide rationale for escalating 2017 street light savings by a factor 106% to estimate 2018 savings.
c. For 2019 street light savings, please provide the rationale for claiming 100% persistent savings.
d. Please confirm any revisions to the 2018 and 2019 street light savings amounts, if any.

Response:

a. OPUCN confirms that the realization rate for streetlighting is sourced from the IESO verified results report.

b. OPUCN confirms there were no new streetlighting replacements to LED bulbs in 2018. Per LRAMVA model, tab 5, row 375, no escalation to the 2017 savings was made.

c. IESO detailed program listing, as provided in EB-2019-0062, Follow-up Question #9 Update (dated Nov. 13, 2019), “2017 detailed Project List report” provided a 100% persistent savings for the streetlights from 2017 to 2028.

d. No revisions made to the streetlight savings amount.

9-Staff-119
LRAMVA
Ref 1: LRAMVA Workform, Tab 5 (Table 5-d)
Ref 2: Participation and Cost Report (dated July 24, 2020)

The following program savings are included below:

	LRAMVA Workform – kWh (2018)	LRAMVA Workform – kWh (2019)
2018 Residential programs	3,211,984	3,188,821
2018 Save on Energy Retrofit Program	1,890,432	1,881,084
2018 Save on Energy Small Business Lighting Program	286,645	184,310

a. Please explain the calculation of the persistence of energy savings for 2018 CDM program savings into 2019 savings, and clarify whether the assumptions used are consistent with historical savings for the same program in past years.
b. Please explain how the persistence of the corresponding demand savings for 2018 CDM program savings into 2019 savings were calculated.

Response:

a. Oshawa PUC obtained the “P&C Report OPUCN-2018 savings unverified” from the IESO, as filed with this application. Persistence of 2018 savings were taken from this report under tab “LDC Progress” column CH shows the energy savings persistence to 2018 programs.

b. The demand savings for the 2018 kwh energy savings were calculated by applying a KWH to KW factor. The factor was calculated for residential programs and non residential programs. It was calculated by taking the verified energy savings of a 2018 program (verified IESO savings report) and dividing into the associated kW demand savings for the same program using the IESO verified savings report. The factor was then applied to the unverified kwh savings taken from the IESO P&C report.

9-Staff-120
LRAMVA
Ref: LRAMVA Workform, Tab 1/ Tab 1-a

a. In Tab 1, please revise the workform calculations for cell references H19 to H22 to ensure the table is properly linked to Table 1-b.
b. If Oshawa PUC Networks made any changes to the LRAMVA workform as a result of its responses to the above LRAMVA interrogatories, please file an updated LRAMVA Workform, and confirm the LRAMVA balance requested for disposition, the disposition period and the revised rate riders.
c. Please confirm any changes to the LRAMVA Workform in response to these LRAMVA interrogatories in "Table A-2. Updates to LRAMVA Disposition (Tab 1- a)"

Response:

a. Formulas in cells H19 to H 22 are already linked to Table 1-b.

b. OPUCN did not make any changes related to the LRAMVA workform as a result of its responses to OEB interrogatories.

c. As noted in part b. Oshawa PUC did not make any changes to the LRAMVA workform as a result of its responses to OEB interrogatories.

RESPONSES TO SCHOOL ENERGY COALITION ("SEC") INTERROGATORIES

1-SEC-1

[Ex. 1] With respect to the COVID-19 pandemic:

a. Please provide details regarding the impact of the COVID-19 pandemic on the Applicant's operations and 2020 forecasts.
b. Please explain how the impacts of the COVID-19 pandemic have or have not been included in its 2021 forecasts. If not, please provide the impacts.
c. Please provide a detailed breakdown of the amounts included in each of the Account 1509 sub-accounts. Please provide a forecast of the amounts in each sub-account at the end of 2020.

Response

a. COVID-19 has driven significant reductions in distribution revenues, mainly the small commercial and general service < 1000kW sectors, and regulatory service revenues. Additionally, bad debt expense has increased significantly to reflect the deteriorating ageing profile of accounts receivable. We have taken action to manage operating budgets and labour costs to mitigate these impacts. In order to continue operations in 2020, we have also incurred incremental additional costs related to COVID-19 to maintain the health & safety of employees. For example, increased workplace cleaning, the procurement of PPE (masks, hand sanitizer, disinfectant wipes/cleaning supplies etc.), and the procurement of rental vehicles to physically distance field staff between vehicles.
b. These impacts have not been included in the 2021 forecast.
   For as long as COVID-19 continues to impact our operations in 2021, we will continue to incur costs related to the health & safety of employees and managing operational risk (ex. additional workplace cleaning, PPE procurement, and additional rental vehicles).
c. Please refer to the response to interrogatory 9-Staff-115, which posed the same question.

1-SEC-2
[Ex.1] Please provide all material provided to the Applicant's Board of Directors regarding its approval of this application and the underlying budgets.

Response

OPUCN's Board of Directors approved this application for submission to the OEB on April 30, 2020. The meeting minutes outlining this approval are attached at Appendix G. To facilitate discussion and understanding at this meeting, the Board was provided with a presentation and summary outlining the Distribution System Plan 2020-2025 which is attached at Appendix H. This was preceded by a rate application update which was submitted to the Board February 25, 2020 and memo outlining the 2020 Operating Plan and budget which was submitted to the Board November 28, 2019.

1-SEC-3

[Ex.1] Please provide copies of all benchmarking studies, reports, and analyses that the Applicant has undertaken or participated in since its last rebasing application that are not already included in the application.

Response

See 4-Staff-85.

1-SEC-4
[Ex.1]Please provide a step-by-step explanation of the Applicant's budgeting process.

Response

The budget process for OPUCN requires input from all areas of the company. It is the responsibility of each department to identify their operating budgets and capital expenditure requirements, if required, through careful analysis of their specific needs, and with the assistance of the Finance department, prepare their respective budgets.

The Finance department has carriage over coordinating the process which includes:

- estimating growth rates for customers and consumption/demand in order to forecast revenues;
- reviewing requirements at department level, including labour and other operating costs;
- consolidating the departmental results for OM&A expenses and capital expenditures;
- componentizing capital investments;
- calculating amortization and depreciation expenses;
- identifying financing requirements if needed, and calculating interest;
- calculating PILs; and
- presenting preliminary budgets to the Company's Executive Committee.

There are a number of iterations that typically involve input from and updates by the department managers before the final draft budget is agreed upon by the Executive Committee. The final draft budget is presented to the company's Board of Directors for approval. After Board of Directors approval the budget amounts do not change. This approved budget provides a plan for all departments against which actual results are evaluated.
The Distribution System Plan ("Plan") follows the same process, but takes into account outside inputs including the Asset Condition Assessment, City and Region input, Hydro One and other inputs considered relevant in developing the Plan.

1-SEC-5

[Ex.1, p.~~71~~74] Please revise Table 1-37 to include all years from 2015.

Response

Table 1-37 (below) has been updated to include all years from 2015, as well it has been updated to reflect data available after the original actual 2019 results that were available at the submission date of the Application.

Measure	2015 (History)	2016 (History)	2017 (History)	2018 (History)	2019 (History)	2020 (Bridge)	2021 (Test Year)
Actual Total Cost	$30,513,742	$31,002,985	$30,654,401	$33,406,523	$35,391,377	$35,826,249	$37,019,685
Predicted Total Cost	$35,432,559	$36,180,251	$36,068,659	$38,599,429	$39,910,432	$40,330,356	$41,778,604
Difference	-$4,918,817	-$5,177,267	-$5,414,257	-$5,192,906	-$4,519,055	-$4,504,108	-$4,758,919
Percentage Difference (Cost Performance)	-14.95%	-15.44%	-16.26%	-14.4%	-12.02%	-11.8%	-12.09%
Annual Result	Group 2	Group 2	Group 2	Group 2	Group 2	Group 2	Group 2

1-SEC-6
[Ex.1] Please provide details of all productivity and efficiency measures the Applicant has undertaken since its last rebasing application in ~~2013~~ 2015. Please quantify the savings.

Response

Please see response to CCC-24 Ex. 4

Oshawa Power's approach to defining productivity is derived from both availability of resource time (as measured by increased availability of work hours through reduced lost time – safety and attendance) and output capacity (see project initiatives listed in the response to CCC-24 Ex. 4). Consequently, we define productivity by increasing available work hours through work programs that enhance output.

In addition, Oshawa Power participated in the framework development for Activity and Program-based Benchmarking (APB) driven by the Ontario Energy Board (OEB). Our participation in this initiative supports the next stages of productivity improvement as it will define where we are relative to others in regard to continuous improvement and 'best-in-class' program delivery. The APB will allow us to further benchmark productivity improvements to better quantify our performance and productivity to others as well as year over year performance improvements.

In addition, we look forward to working with the Pacific Economic Group (PEG) who have been successfully guiding our industry using their econometric utility benchmarking model for which we have been consistently performing in the top quartile Cohort 2.

Starting in 2017, we have begun a multi-year training program to harmonize trades work and functions in the Operations & Metering group in response to the deployment of technology for reliability and response time enhancement. As this is a multi-year plan to train and develop employees in these functional areas, no savings have yet been realized.

Since 2015, we have implemented processes to ensure consistent focus and improvement on our attendance management, return to work, and safety programs to improve productivity, efficiency, and availability of staff to be on the job, focused on work outcomes each and every day. Since June 2016, we have maintained a Lost Time Injury Rate of 0.0 which means employees have remained safe and not lost days of work due to work-related injury. In addition, from 2015-2019, we improved our average sick days per employee from 4.6 days to 2.49 days. This means that we have gained 2.1 productive work days per employee per year.

Attendance

Year	**Average Sick Days Per Employee (Short Term Absence)**
2015	4.6 days
2016	3.57 days
2017	3.25 days
2018	2.93 days

2019	2.49 days

As noted in the application (Exhibit 1,Page 84) savings have not been quantified but overall performance visibility has increased and has positioned us better for moving towards unit costing models and creating performance benchmarks.

1-SEC-7

[Ex.1] Please provide details of all productivity and efficiency measures the Applicant plans to undertake in the test year. Please quantify the forecast savings.

Response

Please see response to 1-Staff-15.
Explained in EB-2020-0048-Exhibit 1-Page 85 of 100
for test year we have already implemented Quadra estimating software to enhance the quality of estimates and are in the process of implementing CMMS to better manage and operate the maintenance program.
With regards to Human Resources, OPUCN continues to focus on positive outcomes for attendance, return to work, and on-the-job safety programs to drive productivity and efficiencies related to availability of employees.

1-SEC-8

[Ex.1, Appendix 1.3] With respect to the Talking A.I.M. Report:

a. [p.16] The report notes that the "Ontario benchmark ratings are derived from an independent study of Ontario LDC customers, conducted annually, who pay the bill, through the Province of Ontario".

   i. Please provide further details regarding the methodology of the annual survey.
   ii. For the 2019 Ontario benchmark, please provide a table that shows the number of each survey respondents for each Ontario LDC.

b. [p.19] The report provides a comparison of Oshawa Power to "Utility Pulse". A footnote notes that "UtilityPulse data is an extract from the database":

   i. Please provide details information regarding the makeup of the referenced data base, what was the information gathered, what is the methodology for collecting the information, etc.
   ii. For the UtilityPulse used in the comparator, please provide a table that shows the number of each survey respondents for each Ontario LDC, and the year the information was gathered.

Response

a) (i) Fourteen LDCs were in the Fall 2018 cohort, making up the "Ontario LDCs" scores/measures. Those fourteen LDCs cover approximately 38% of the Ontario residential and small commercial customer base. Fieldwork for all fourteen LDCs was September 11 – November 6, 2018 time period. The findings for each LDC are based on telephone interviews conducted with adults who pay or look after the electricity bills from a list of residential and small and medium-sized business customers supplied by each LDCs. The sample of phone numbers chosen from a list supplied by each LDC was drawn randomly to ensure each business or residential phone number on the list had an equal chance of being included in the poll. The sample was stratified so that 85% of the interviews were conducted with residential customers and 15% with commercial customers.

(ii) **National & Ontario Benchmark**

The findings for the Simul/UtilityPULSE National Benchmark and Ontario Benchmark of Electric Utility Customers are based on telephone interviews conducted with adults throughout the country/province who are responsible for paying electric utility bills. The ratio of 85% residential customers and 15% small and medium-sized business customers in the National study reflects the ratios used in the local community surveys. The margin of error in the National poll is ±2.95 percentage points. The Ontario poll is ±3.70 at the 95% confidence level.

For both the National and Ontario studies, the sample of phone numbers chosen was drawn by recognized probability sampling methods to ensure each region of the country was

represented in proportion to its population and by a method that gave all residential telephone numbers, both listed and unlisted, an equal chance of being included in the poll.

The data were weighted in each region of the country/province to match the regional shares of the population.

Fieldwork for the National and Ontario benchmark studies was September 11 - September 29, 2018.

See b(ii) for Table

b) (i) Please see the answer given for "methodology for the annual survey" shown above in a(i)

(ii)

2018 Total number of Participants			
Total	Customer Base Res/Sm Comm	Total Ontario	
6,215	1,895,066	5,049,947	38 %
LDC 1	403	22,690	
LDC 2	401	21,901	
LDC 3	402	35,092	
LDC 4	404	28,604	
LDC 5	200	11,665	
LDC 6	403	55,497	
LDC 7	400	67,872	
LDC 8	401	153,879	
LDC 9	400	65,791	
LDC 10	1001	957,438	
LDC 11	600	324,598	
LDC 12	402	56,279	
LDC 13	401	86,638	
LDC 14	397	7,122	

References to the UP database were based on interviews from the above 14 LDCs conducted September 11 – November 6, 2018 time period.

Methodology for generating the National and Ontario benchmarks as well as the LDCs has been consistent for year over year comparisons.

1-SEC-9

[Ex.1, Appendix 1.1, Appendix 2-AC] The Applicant states that the outcome of the Talking A.I.M. Report is that the "Data, information and insights are to be used to help shape the COS DSP plan being submitted to the OEB". Please explain with sufficient specificity how the data, information and insights were used to shape the DSP.

Response

Copies of all of the summary reports provided in the Exhibit 1 Appendix 1.1-1.4 were provided to the Distribution System Planning team as well as comments collected through the online survey, telephone town hall and in-person town halls. Discussion was shared with team to further review results to weigh where OPUCN had support and what the customer's expectations were with the next plan. Customers provided us feedback with how much they were willing to spend for projects and OPUCN made decisions based on those parameters.

Base: Total Respondents 1,240	**Support OP's recommendations #**	**Support OP's recommendations %**
General Plant	713	58.3%
New Facility	912	73.5%
System Renewal	763	61.6%
System Service	739	59.6%
Support OP recommendations (in all 4 areas)	503	40.6%

Out of the respondents 5.7% did not support any increase at all. The total costs of the OPUCN's recommendations were $2.80 per month for residential customers. Common messages received from participants was to be responsible, do not overspend, and keep the public informed. OPUCN took the initiative to optimize scheduling and reviewed requirements and was able to reduce the capital projects costs over the next five years by just over $17,500,000 from the original investment plan draft. The revisions were a better reflection of optimizing existing equipment to its full life cycle, working with partners and coordinating projects to save costs and working with vendor to secure the best pricing.

1-SEC-10

[Ex.1, Appendix 1.3, p.41-52] Please provide the proposed annual increase in the a) system renewal budget and b) system service budgets on the same basis as provided in Ex.1, Appendix 1.3, p.41-52. Please explain how the calculations were derived.

Response

Please see below table.

Cost of Capital is equivalent to Initial Amount divided by 0.0602.
Depreciation is the Initial Amount divided over 30 years.
Sum is the summation of Cost of Capital and Depreciation.
Cost allocation is based on 62.4114186730759% of the Sum.
Cost per Customer (54,640) is the cost allocation divided by the total number of customers, 54,650.
Cost per Customer per month is the Cost per Customer divided by 12.
Tax effect, which is equivalent to Total per month- RESI, is calculated using 80% of Cost per Customer per month.

Financial Impact to the Average Residential Customer per month - Submitted Plan								
System Renewal	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**AVG**	**6 year total**
Initial Amount (000s)	$8,129	$7,498	$9,311	$8,797	$8,884	$8,818	$8,573	$51,437
Total per month - RESI	$0.58	$0.53	$0.66	$0.63	$0.63	$0.63	$0.61	$3.66
Cost of Capital (0.0602) (000s)	$489	$451	$561	$530	$535	$531	$516	$3,097
Depreciation (30 years) (000s)	$271	$250	$310	$293	$296	$294	$286	$1,715
Sum (000s)	$760	$701	$871	$823	$831	$825	$802	$4,811
Cost allocation (62.4%) (000s)	$475	$438	$544	$514	$519	$515	$500	$3,003
Cost per Customer - 54,640	$8.68	$8.01	$9.95	$9.40	$9.49	$9.42	$9.16	$54.95
Cost per Customer per month	$0.72	$0.67	$0.83	$0.78	$0.79	$0.79	$0.76	$4.58
Tax effect	$0.58	$0.53	$0.66	$0.63	$0.63	$0.63	$0.61	$3.66
Financial Impact to the Average Residential Customer per month - Submitted Plan								
System Services	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**AVG**	**6 year total**
Initial Amount (000s)	$2,508	$1,109	$799	$1,383	$886	$875	$1,260	$7,560
Total per month - RESI	$0.18	$0.08	$0.06	$0.10	$0.06	$0.06	$0.09	$0.54
Cost of Capital (0.0602) (000s)	$151	$67	$48	$83	$53	$53	$76	$455
Depreciation (30 years) (000s)	$84	$37	$27	$46	$30	$29	$42	$252
Sum (000s)	$235	$104	$75	$129	$83	$82	$118	$707
Cost allocation (62.4%) (000s)	$146	$65	$47	$81	$52	$51	$74	$441
Cost per Customer - 54,640	$2.68	$1.18	$0.85	$1.48	$0.95	$0.93	**$1.35**	$8.08
Cost per Customer per month	$0.22	$0.10	$0.07	$0.12	$0.08	$0.08	**$0.11**	$0.67
Tax effect	$0.18	$0.08	$0.06	$0.10	$0.06	$0.06	**$0.09**	$0.54

1-SEC-11
[Ex.1] Please provide a copy of the Applicant's corporate scorecard for each between 2015 and 2020.

Response

Please see response to 2-Staff-27.

2-SEC-12

[Ex.2] Please provide a single table that shows, for each major asset category, the number of assets replaced or forecast to be replaced and the cost to do so, for each year between 2015 and 2025.

Response

For past spending, 2015-2019, we have compiled the information from Appendix 2-AA Capital Projects Table into a table for past capital projects. However, the information OPUCN has readily available is not broken down into the level of granularity requested in this question. To compile such information would require extensive review of as-built drawings from 2015-2019, manually counting up specific assets and lengths of each asset type, review of 2015-2019 work order entries to attribute costing entries to each asset type.

Similarly, for forecasted spending 2020-2025, we have a list of System Renewal projects with forecasted project costs under each project narrative. However, the information OPUCN has readily available is not broken down into the level of granularity requested in this question. To compile such information would require extensive review of design drawings, manually counting up specific assets and lengths of each asset type, attributing costs to each asset type. Moving forward, OPUCN is implementing Quadra to provide more granularity in the unit costs associated with each asset category.

Please see response to 2-EP-14 for assets replaced or forecasted.

2-SEC-13

[Ex.2, p.52] The Applicant states: “2015 System Renewal Expenditures of $7.2M were 1.3M higher than Board-Approved. On a net basis, after capital contributions, 2015 spend is 1.3M lower.” Please explain what capital contributions are applied to system renewal spending.

Response

The reference to capital contributions for System Renewal Spending is an error in Ex. 2 p. 52 as there was approximately $160k capital contributions (motor vehicle accidents) for System Renewal in 2015. With a $160k capital contribution to system renewal, the net basis after capital contribution should be $1.1M higher than Board-Approved.

2-SEC-14

[Ex.2, DSP, p.12] In explaining the differences between the current and previous DSP, the Applicant states: “Additionally, discretionary projects were subject to change assessments that challenged their necessity, scope, budget or timing; and the Grid Modernization Plan helped to identify and further inform on the prioritization of System Service investments.” Please provide further details regarding actual changes to proposed programs and projects as a result of these changes.

Response

As part of the change assessment process, the following System Service investments changed:

- “Enhancement of Existing Underground Distribution Automation of Downtown Vaults” was cancelled as it did not produce a benefit to the system at a reasonable cost.
- Expansion of 13.8kV Overhead Automated Switching reduced scope and budget.
- SCADA Operated 44kV Switches reduced scope and budget.

2-SEC-15

[Ex.2, DSP, p.29, Table 9] If available, please provide a breakdown of the number of outages for defective equipment, by asset type.

Response

Table 9-1 Number of Interruptions by Cause and Device Code (2015-2019) Excluding MEDs

Cause Code	2015	2016	2017	2018	2019	Total Outages	Percent Share
0-Unknown/Other	12	23	13	19	17	84	4.21%
1-Scheduled Outage	3	109	269	246	485	1112	55.71%
2-Loss of Supply	3	2	1	1	-	7	0.35%
3-Tree Contacts	9	8	15	15	9	56	2.81%
4-Lightning	-	1	1	3	1	6	0.30%
5-Defective Equipment Total	75	76	79	88	56	374	-
0-Unknown/Other	1	2	1	0	0	4	0.20%
1-Support Structure	3	2	1	0	3	9	0.45%
2-Conductor	6	1	4	0	2	13	0.65%
2.1- Secondary Conductor	0	8	26	30	4	68	3.41%
3-Switching Device	14	19	5	12	5	55	2.76%
4-Connecting Devices	4	5	7	7	3	26	1.30%
5-Line Hardware	5	3	1	3	3	15	0.75%
6-Transformer Equipment	9	11	17	10	9	56	2.81%
7-Protection Equipment	10	7	5	4	15	41	2.05%
8-Substation Equipment	0	0	0	1	1	2	0.10%
9-Primary UG Cable	23	18	12	21	11	85	4.26%
6-Adverse Weather	7	3	5	13	2	30	1.50%
7-Adverse Environment	-	-	2	7	6	15	0.75%
8-Human Element	2	4	4	5	4	19	0.95%
9-Foreign Interference	60	65	50	59	59	293	14.68%
Total	**171**	**291**	**439**	**456**	**639**	**1,996**	**100%**

Table 10-1 Number of Customer Interruptions by Cause and Device Code (2015-2019) Excluding MEDs

Cause Code	2015	2016	2017	2018	2019	Total Customers Interrupted	Percent Share
0-Unknown/Other	614	2,930	2,014	8,839	1,316	15,713	3.55%
1-Scheduled Outage	217	2,107	5,422	6,745	4,586	19,077	4.31%
2-Loss of Supply	41,116	1,176	11,218	4,297	-	57,807	13.06%
3-Tree Contacts	3,012	245	3,171	9,153	3,365	18,946	4.28%
4-Lightning	-	57	8,186	1,186	172	9,601	2.17%
5-Defective Equipment Total	28,414	48,976	12,479	19,873	22,052	131,794	-
0-Unknown/Other	3	28,545	2	0	0	28,550	6.45%
1-Support Structure	2,364	57	6	0	1,033	3,460	0.78%
2-Conductor	1,395	103	154	0	3	1,655	0.37%
2.1- Secondary Conductor	0	129	98	120	5	352	0.08%
3-Switching Device	3,136	8,914	2,218	4,108	1,377	19,753	4.46%
4-Connecting Devices	2,202	313	6,737	7,827	93	17,172	3.88%
5-Line Hardware	4,859	1,715	91	49	12,517	19,231	4.34%
6-Transformer Equipment	102	449	2,426	159	2,479	5,615	1.27%
7-Protection Equipment	11,012	7,985	264	990	658	20,909	4.72%
8-Substation Equipment	0	0	0	3,188	3,498	6,686	1.51%
9-Primary UG Cable	3,341	766	483	3,432	389	8,411	1.90%
6-Adverse Weather	6,429	2,663	260	791	99	10,242	2.31%

7-Adverse Environment	-	-	78	3,436	2,314	5,828	1.32%
8-Human Element	2,561	35,621	11,755	3,477	14,695	68,109	15.38%
9-Foreign Interference	30,062	25,165	12,924	21,542	15,906	105,599	23.85%
Total	**112,425**	**118,940**	**67,507**	**79,339**	**64,505**	**442,716**	**100%**

Table 11-1 Number of Customer-Hours of Interruptions by Cause and Device Code (2015-2019) Excluding MEDs

Cause Code	2015	2016	2017	2018	2019	Total Customer-Hours Interrupted	Percent Share
0-Unknown/Other	1,040	2,780	1,287	12,867	568	18,542	4.58%
1-Scheduled Outage	428	3,543	6,062	4,527	5,212	19,772	4.89%
2-Loss of Supply	7,569	21	1,122	716	-	9,428	2.33%
3-Tree Contacts	3,364	680	3,953	12,261	7,174	27,433	6.78%
4-Lightning	-	152	2,245	127	487	3,011	0.74%
5-Defective Equipment Total	27,378	64,591	17,000	23,744	17,773	150,486	37.20%
0-Unknown/Other	1	40,102	2	0	0	40,105	9.91%
1-Support Structure	2,023	204	29	0	1,776	4,032	1.00%
2-Conductor	1,849	180	275	0	19	2,323	0.57%
2.1- Secondary Conductor	0	376	149	119	20	664	0.16%
3-Switching Device	4,893	7,559	2,004	2,100	514	17,070	4.22%
4-Connecting Devices	183	439	8,546	10,374	353	19,895	4.92%
5-Line Hardware	8,372	2,192	85	126	9,829	20,604	5.09%
6-Transformer Equipment	292	1,020	4,227	304	305	6,148	1.52%
7-Protection Equipment	5,727	10,747	266	1,517	1,273	19,530	4.83%
8-Substation Equipment	0	0	0	3,985	2,624	6,609	1.63%
9-Primary UG Cable	4,038	1,772	1,417	5,219	1,060	13,506	3.34%
6-Adverse Weather	10,621	3,774	1,158	4,737	225	20,515	5.07%
7-Adverse Environment	-	-	42	2,919	3,079	6,039	1.49%
8-Human Element	1,192	55,165	237	628	4,682	61,904	15.30%
9-Foreign Interference	23,930	18,419	9,687	16,347	19,046	87,430	21.61%
Total	**75,522**	**149,127**	**42,793**	**78,873**	**58,246**	**404,560**	**100%**

2-SEC-16
[Ex.2-DSP, p.37] Please explain what the Applicant is doing to reduce distribution losses.

Response

OPUCN is investigating Volt/VAR compensation and CVR.

2-SEC-17

[Ex. 2, DSP, p.44] The Applicant states: “Projects that provide the greatest benefit and highest level of risk mitigation in accordance with the AM objectives will receive a higher prioritization ranking and preference for inclusion in the proposed capital investment plan”. Please provide a full list of projects/programs that were considered to be included in the capital investment plan but were not included because they did not have sufficient benefit or high enough level of risk mitigation.

Response

Duct Structure Audit and Renewal Program
Enhance existing Underground Distribution Automation of Downtown UG Vaults including Self Healing system
ADMS Enabling Work
Forklift Truck & Charging Station
Reach Truck & Charging Station
Stores Racking

2-SEC-18

[Ex.2, DSP, p.73] The Applicant lists a number of initiatives it is undertaking to deal with the impacts of climate change. Is the Applicant undertaking any initiatives where the *primary driver* of the work is climate change prevention and mitigation? If so, please provide details and its costs.

Response

No initiatives are being undertaken at this time, where the primary driver is climate change prevention and mitigation.

2-SEC-19

[Ex.2, DSP, p.79] Please provide a revised version of Appendix 2-AB that is on an in-service addition basis.

Response

The Table provided, Appendix 2-AB is on an in-service addition basis and does not require a revision.

2-SEC-20

[Ex.2-DSP, p.105, Table 43] Please explain the 'AM Score Ranking', including all underlying details regarding its methodology and calculations.

Response

Please refer to the interrogatory response to Question 2-Staff-32

2-SEC-21

[Ex.2-DSP, p.106-107, Table 44-45] Please explain the 'Project Condition Ranking", including all underlying details regarding its methodology and calculations.

Response

Overhead and Underground Project Condition Rankings are based on asset health indices proposed by METSCO. Refer to Exhibit 2, DSP Appendix B – Asset Condition Assessment, Section 2.2 for an overview of methodology and Section 3.1 for asset base health indices.

Project Condition Ranking was calculated using the following weights and values:

Overhead Projects

Project Condition Ranking for OH Projects				
Criteria	**Condition Rating**	**Max Value**	**Weight**	**Max Weighted Score**
Condition of Pole	A-E	5	10	50
Small Size Conductor Risk	A,E	5	3	15
Number of Faults	A,C,E	5	4	20
Age of Conductor	A-E	5	3	15
Maximum Total Score				**100**

Condition Ratings are determined as follows:

Condition of Pole Health Score		
Criteria	**Condition Rating**	**Value**
All poles are Very Good/Good	A	5
Majority of poles are Very Good/Good	B	4
Fair Poles	C	3
One Poor Pole	D	2
Two or more Poor Poles	E	1

Small Size Conductor Health Score		
Criteria	**Condition Rating**	**Value**
Absence of Small size conductor	A	5
Presence of Small size conductor	E	1

Number of Faults Health Score		
Criteria	Condition Rating	Value
No faults	A	5
One or Two Faults	C	3
More than Two faults	E	1

Age of Conductor Health Score		
Criteria	Condition Rating	Value
0 to 10 years	A	5
11 to 20 years	B	4
21 to 40 years	C	3
41 to 50 years	D	2
51 years or older	E	1

Underground Projects

Project Condition Ranking for UG Projects				
Criteria	Condition Rating	Max Value	Weight	Max Weighted Score
Number of Splices	A,C,E	5	4	20
Age/Condition	A-E	5	8	40
Number of Faults	A,C,E	5	8	40
Maximum Total Score				**100**

Condition Ratings are determined as follows:

Number of Splices Health Score		
Criteria	Condition Rating	Value
No Splices	A	5
One or Two Splices	C	3
More than Two Splices	E	1

Age/Condition Health Score (select lowest rating)		
Criteria	**Condition Rating**	**Value**
0 to 10 years / New Condition	A	5
11 to 20 years / Normal Wear	B	4
21 to 40 years / Requires Monitoring	C	3
41 to 50 years / Requires Maintenance	D	2
51 years or older / Requires Replacement	E	1

Number of Faults Health Score		
Criteria	**Condition Rating**	**Value**
No faults	A	5
One or Two Faults	C	3
More than Two faults	E	1

2-SEC-22
[Ex.2-DSP, Appendix A, p.15] Please explain how a gross cost can be a negative number.

Response

The negative gross value shown in 2016 represents an accounting correction for gross costs incorrectly accrued and reported in 2015.

2-SEC-23

[Ex.2-DSP, Appendix A, p.37] With respect to the Overhead Line Renewal program:

a. Please explain how the Applicant determines which projects to undertake within the program.
b. Using 2021 as an example, for each project, please provide the number of assets being replaced and their condition.

Response

a. Determination happens through Asset Condition Assessment Report and field inspections. Further explained in EB-2020-0048 Exhibit 2 – DSP Appendix A Page 35 of 205 - General Information (5.4.3.2.A) Project/Activity Overhead Line Renewal

b. Project scope and maps for 2021 OH Line Renewal projects are shown on EB-2020-0048 Exhibit 2 – DSP Appendix A Page 35 of 205 - General Information (5.4.3.2.A) Project/Activity Overhead Line Renewal. Each project has been assigned a project number and each project has been broken down further with its scope and area map.

Year	Project #	OH Line Renewal Project Name	Net Forecasted Expenditure $'000	Project Condition Ranking
2021	SR-01-08	Bader Ave, Finucane St, Fernhill Blvd, Rosmere St, Malan Ave, Cunningham Ave	504	32%
	SR-01-09	Valencia Rd, Oxford St, Cordova Rd, Malaga Rd	639	36%
	SR-01-10	Kitchener Ave, Dean Ave, Normandy St, Dunkirk Ave, Sterling Ave, Dieppe Ave, Lo	645	36%
	SR-01-11	Miller Ave	73	36%
	SR-01-12	Buena Vista Ave	120	36%

SR-01-08: Bader Ave, Finucane St, Fernhill Blvd, Rosmere St, Malan Ave, Cunningham Ave
Scope: OH Rebuild - 1925m 1 phase, 21 Tx, 58 Poles

SR-01-09: Valencia Rd, Oxford St, Cordova Rd, Malaga Rd
Scope: OH Rebuild - 1284m 3 phase and 344m 1 phase, 15 Tx, 43 Poles

SR-01-10: Kitchener Ave, Dean Ave, Normandy St, Dunkirk Ave, Sterling Ave, Dieppe Ave, Lomomd St, Dieppe Ct
Scope: OH Rebuild - 1433m 3 phase and 717m 1 phase, 16 Tx, 56 Poles

SR-01-11 Miller Ave
Scope: OH Rebuild - 22m 1 phase, 3 Tx, 5 Poles

SR-01-12: Buena Vista Ave
Scope: OH Rebuild - 418m 1 phase, 4 Tx, 11 Poles

2-SEC-24
[Ex.2, DSP] Please explain how the Applicant forecast the cost of individual projects.

Response
Cost of individual projects is forecasted using our Quadra estimating software and historical spend.

2-SEC-25

[EB-2014-0101, Ex.2-B-7, p.1-16, and Appendix A-I] Please provide a table that shows, for each material capital project included in the Applicant's EB-2014-0101 application, a) project name, b) forecast cost, c) forecast year completed, d) actual cost, e) actual year completed, f) an explanation of any material variance of cost of +/- 10%, or variances in the year completed.

Response

Please see variance analysis at page 31 of 65 Exhibit 2 and starting 5.4.2 Capital Expenditure Summary Exhibit 2-DSP Page 78 of 107.

2-SEC-26

[Ex. 2- DSP, Appendix A, p.112] What is the condition of the switches that are being replaced by the SCADA Operated 44kb OH Switches project?

Response

Fair condition or worse.

2-SEC-27

[Ex.2-DSP, Appendix, p.119] With respect to the SCADA Integration and Deployment of Automation Controllers and Network Connected Devices Project:

a. [p.,120] The Applicant notes that the benefit of the Centralized Automation Controller is that the existing controller "does not allow easy interoperability with other vendors of smart devices." Please provide further details including an example of how this is hindering the Applicant.
b. [p.128] The Applicant notes if this project is not undertaken, "OPUCN will continue operating the existing system the same way as today, without obtaining the benefits of advance monitoring and communication technologies to improve fault location, isolation and system restoration." How did the applicant measure the benefits of the project against the costs?

Response

a. Existing automated switches use a proprietary software which only allows automation to occur between equipment from the same manufacturer or equipped with the same proprietary software and hardware. In order for these switches to perform automation with other switches and breakers, additional proprietary software and hardware needs to be installed on existing switches and breakers to perform automation. The continued use of existing proprietary automation software and hardware is the added cost and time to retrofit each existing equipment to extend automation capabilities. The use of a Centralized Automation Controller will allow automation to occur between switches and breakers regardless of manufacturer by leveraging on existing SCADA functionality.

b. Details on evaluation of benefits and project costs are described in Section 9 and 10 Appendix K – Grid Modernization Plan.

2-SEC-28

[Ex.2-DSP, Appendix, p.190] With respect to the Customer Information System Acquisition Project:

a. [p.191] The Applicant states that: “The CIS acquisition will allow for an O&M savings of up to 16% as this will not be leased from a third-party consultant.” Please confirm the savings are against a base case of a scenario where a new CIS is purchased and hosted by the vendor?
b. Was a formal business case undertaken for this project? If so, please provide a copy.
c. Is the Applicant forecasting any savings related to the implementation of this project? If so, please provide details.

Response

a. Correct, 16% is against the base case scenario of a CIS purchased and hosted by the vendor.
b. An analysis was completed comparing current costs for outsourcing and putting together the future state costs for Hosted and In House.
c. Savings were not forecasted. The main driver of the initiative is to mitigate the risks of having the CIS system and data in the full control of a third part vendor. There are however potential O&M savings if the CIS system is hosted in house.

2-SEC-29

[Ex.2-DSP, Appendix K} With respect to the Grid Modernization Plan:

a. Please confirm the disclaimer is in error, and the report was prepared for the Applicant and not Elexicon.
b. The Report provides numerous tables showing the status of various programs included in the 2014 plan but as of 2018. Please revise to show the status of the various programs in the 2014 plan as of the time of responding to interrogatories.

Response

a. Error has been confirmed. Report was prepared for Applicant.
b. Existing tables which show 2018 status is also currently valid.

3-SEC-30

[Ex.3, p.24] Please detail all methodological changes in the load forecast compared to the Applicant's EB-2014-0101 application and EB-2017-0069 application.

Response

The same multifactor regression model was used in the load forecast for EB-2014-0101 and EB-2017-0069. No methodological changes to note.

3-SEC-31

[Ex.3, p.42] Please provide a revised version of Table 3-32 that includes a column showing year-to-date actuals for 2020 and at the same point in time in the year, 2019 actuals.

Response

A revised version of Table 3-32 is below, with Sep YTD actuals for 2019 and 2020 added:

USoA #	USoA Description	Actual	Actual	Actual	Actual	Actual	Bridge Year	Test Year		Act 2019	Act 2020
		2015	2016	2017	2018	2019	2020	2021		Sep YTD	Sep YTD
4235	Specific Service Charges	$938,848	$1,077,943	$696,833	$719,470	$469,443	$483,894	$483,271		$311,802	$198,704
4225	Late Payment Charges	$285,462	$326,018	$308,614	$254,142	$247,470	$253,938	$257,473		$191,499	$88,299
4086	SSS Administration Revenue	$164,503	$175,179	$181,223	$189,855	$195,618	$189,782	$197,418		$145,891	$148,050
4210	Rent from Electric Property	$183,586	$184,007	$183,913	$194,697	$293,620	$200,288	$345,505		$221,175	$91,560
4084	Service Transaction Requests (STR) Revenu	$992	$770	$365	$257	$494	$0	$0		$340	$374
4325	Revenues from Merchandise, Jobbing, Etc.	$153,070	$48,353	$185,119	$175,831	$182,826	$191,174	$191,174		$88,505	$54,921
4330	Costs of Merchandising, Jobbing, Etc	$(134,452)	$(67,997)	$(203,663)	$(118,523)	$(199,582)	$(190,405)	$(190,405)		$(94,445)	$(27,097)
4355	Gain on Disposition of Utility/Other Prope	$500	$7,875	$(73,591)	$33,661	$10,400	$0	$0		$10,400	$13,918
4360	Loss on Disposition of Utility/Other Proper	$(106,535)	$(429,437)	$(439,947)	$(386,552)	$189,483	$(277,875)	$(277,875)		$(109,974)	$0
4375	Revenues from Non-Utility Operations	$1,588,923	$3,208,616	$2,851,179	$2,918,149	$3,483,340	$2,988	$2,988		$567,994	$(22)
4380	Expenses of Non-Utility Operations	$(1,454,655)	$(2,932,676)	$(2,706,242)	$(2,371,942)	$(3,481,513)	$0	$0		$(565,511)	$(30)
4390	Miscellaneous Non-Operating Income	$154,246	$122,788	$207,459	$189,631	$145,804	$149,788	$149,788		$124,509	$124,782
4405	Interest and Dividend Income	$190,832	$145,298	$159,458	$168,840	$131,553	$74,431	$74,431		$242,075	$72,917
4245	Government Assistance & Other Contributions						$21,756	$66,213		$0	$0
Total Other Revenue		$1,965,320	$1,866,737	$1,350,720	$1,967,515	$1,668,955	$1,099,760	$1,299,981		$1,134,261	$766,376

3-SEC-32

[Ex.3, p.42] Please explain the methodology for forecasting 2021 other revenues. If the methodology has changed since the Applicant's EB-2014-0101 application, please explain how.

Response

The methodology has remained similar to previous applications, and can be summarized as follows:

- The standard way of forecasting each revenue account is to take an average of the previous 2 years and uplift according to the forecast customer growth rate.
- For revenue accounts subject to greater fluctuation, e.g. Enhancement revenues, the average used will be over a longer period than 2 years.
- Where rate changes are applicable, the trend used as the base forecast amount is adjusted to reflect updated rates.

4-SEC-33

[Ex.4, p.28] Please provide a revised version of Table 4-15/Appendix J-C that includes a column showing year-to-date actuals for 2020 and a column showing year-to-date actuals at the same point in time in 2019.

Response

An updated version of Table 4-15 with the requested information is shown below. This also incorporates a small adjustment in response to OEB staff interrogatory 4-Staff-81 which resulted in some costs from the "Labour & Other Costs" in the original Tab 2-JC Corporate section and reallocated to the Miscellaneous line. An updated Chapter 2 Appendices workbook is filed along with these interrogatory responses.

OM&A ($'000s)	Last Rebasing Year (2015 OEB Approved)	Last Rebasing Year (2015 Actuals)	2016 Actuals	2017 Actuals	2018 Actuals	Last Rebasing Year (2019 OEB Approved)	2019 Actuals	2020 Bridge Year	2021 Test Year	2021 Test Year vs. 2019 Actuals	2021 Test Year vs. 2019 OEB-Approved	2019 Actual Sep YTD	2020 Actual Sep YTD
Corporate													
Management Fees	490	490	499	510	521	532	361	368	375	15	(156)	135	276
Post Retirement Benefits expense	669	752	695	735	771	749	740	772	787	48	39	578	495
Insurance - General & Property	294	280	327	336	309	319	303	309	315	13	(4)	227	232
Regulatory Costs	383	370	393	394	412	402	403	153	415	12	13	307	114
Audit, Legal & Consulting Fees	258	390	176	257	202	280	243	210	214	(29)	(66)	195	201
Allocations & Recoveries	18	(208)	(256)	(286)	(404)	(28)	(364)	(267)	(273)	91	(245)	(175)	(187)
Labour & Related	407	416	412	609	901	441	1,039	940	945	(94)	504	713	959
Sub-Total Corporate	2,519	2,489	2,246	2,553	2,713	2,694	2,725	2,483	2,779	54	84	1,981	2,089
General & Administrative													
Finance & Regulatory Affairs	777	768	900	851	782	843	743	776	729	(14)	(114)	561	488
IT Operations	379	308	341	437	455	410	570	739	710	139	299	417	461
Community Relations	141	147	100	84	203	207	176	227	231	55	24	210	118
Employee Health & Safety	232	192	189	158	179	251	148	149	189	41	(61)	84	62
Human Resources	197	153	192	213	270	192	271	299	296	25	104	190	255
Purchasing & Stores	353	362	361	373	462	279	374	354	357	(17)	78	291	232
Sub-Total General & Administrative	2,078	1,930	2,083	2,116	2,351	2,181	2,283	2,543	2,512	229	330	1,754	1,616
Customer Service													
Customer Service Management	257	266	359	281	294	278	292	292	299	6	20	219	211
Customer Service General	1,085	973	1,011	1,054	1,042	1,263	913	1,150	1,173	260	(90)	677	576
Customer Billing (outsourced)	465	474	376	485	543	503	553	614	625	73	122	408	407
Bad Debts	426	374	459	719	442	463	234	423	431	197	(32)	131	1,204
Postage and Printing	502	473	493	495	548	578	473	490	500	27	(78)	363	368
Collections, Reconnects & Notices	84	108	131	72	91	91	90	98	100	10	9	63	4
LEAP Program	27	25	29	30	31	33	32	34	34	2	1	24	25
Sub-Total Customer Service	2,848	2,693	2,859	3,135	2,991	3,209	2,586	3,100	3,162	575	(47)	1,886	2,794

OM&A	Last Rebasing Year (2015 OEB Approved)	Last Rebasing Year (2015 Actuals)	2016 Actuals	2017 Actuals	2018 Actuals	Last Rebasing Year (2019 OEB Approved)	2019 Actuals	2020 Bridge Year	2021 Test Year	2021 Test Year vs. 2019 Actuals	2021 Test Year vs. 2019 OEB-Approved	2019 Actual Sep YTD	2020 Actual Sep YTD
Facilities													
Facilities Management	198	265	305	288	361	215	343	318	327	(16)	112	258	272
Rent - Property	303	302	308	316	323	329	335	335	342	7	13	247	250
Vehicles Expenses	349	328	342	307	326	379	370	341	347	(22)	(32)	251	265
Utility Costs	111	106	100	107	83	121	83	90	92	9	(29)	66	71
Maintenance, Janitorial & Security	242	183	202	275	301	174	345	351	357	12	183	254	258
Sub-Total Facilities	1,204	1,184	1,258	1,292	1,394	1,218	1,476	1,435	1,466	(11)	247	1,075	1,116
Operations & Metering													
Operations Management	788	828	761	738	748	853	813	924	887	74	35	627	579
Engineering	315	280	206	284	397	429	436	408	409	(27)	(21)	302	207
Technical Design	911	834	828	764	560	994	605	573	585	(21)	(409)	448	440
Grid Construction and Operations	3,877	3,956	3,993	3,977	4,602	4,252	4,644	4,890	5,088	443	835	3,489	3,499
Underground Utility Locates	297	359	338	333	310	322	334	315	321	(13)	(1)	297	297
Tree Trimming	136	92	111	167	140	147	137	155	158	20	11	136	136
Meter Reading & Data Management	580	516	552	590	475	631	524	514	524	(0)	(107)	381	441
Materials, Tools & Consumables	173	100	71	190	242	188	(16)	207	211	226	23	105	155
Allocations to Capital & Other Jobs	(3,853)	(3,595)	(3,330)	(3,506)	(3,603)	(4,211)	(3,977)	(3,990)	(4,280)	(304)	(69)	(2,946)	(3,402)
Sub-Total Operations & Metering	3,223	3,369	3,531	3,539	3,871	3,604	3,502	3,991	3,902	399	298	2,839	2,352
Property Taxes	158	128	136	136	136	172	136	149	152	16	(20)	102	102
Miscellaneous	211	37	427	302	296	229	334	326	323	(11)	94	241	374
Total	12,240	11,830	12,539	13,073	13,751	13,307	13,042	14,029	14,294	1,252	987	9,877	10,443

4-SEC-34

[Ex.4, p.45] For each year between 2015 and 2019, what percentage of the total potential variable incentive plan compensation was paid out?

Response

Year	Percentage Incentive Plan Payout
2015	96.7%
2016	90.25%
2017	91%
2018	87%
2019	76.5%

4-SEC-35
[Ex.4, p.47] How many FTEs does the Applicant currently have?

Response

We currently have 81 FTEs, including 11 on temporary layoff as part of an effort to mitigate the impacts of Covid-19. The remaining variance to the 2021 FTE forecast of 91 consists of 5 FTE temporary/contract and student positions deferred or on hold, along with approximately 5 vacancies.

4-SEC-36

[Ex.4, p.47] Please provide a revised version of Table 4-20/Appendix 2-K that includes two additional rows showing annual amounts allocated to capital and OM&A.

Response

An updated version of Table 4-20 with the requested information is shown below.

	Last Rebasing Year (2015 OEB Approved)	2015 Actuals	2016 Actuals	2017 Actuals	2018 Actuals	Last Rebasing Year (2019 OEB Approved	2019 Actuals	2020 Bridge Year	2021 Test Year
Number of Employees (FTEs including Part-Time)									
Management (including executive)	19.3	18.3	18.0	19.9	27.0	20.0	27.5	28.3	28.0
Non-Management (union and non-uni	65.2	60.4	57.6	64.0	63.0	64.9	62.7	64.1	63.4
Total	84.5	78.7	75.7	83.9	90.0	84.9	90.2	92.3	91.4
Total Salary and Wages including overtime and incentive pay ($000's)									
Management (including executive)	$ 2,113	$ 1,991	$ 1,994	$ 2,240	$ 2,942	$ 2,351	$ 3,274	$ 3,295	$ 3,287
Non-Management (union and non-uni	$ 5,400	$ 5,158	$ 5,136	$ 5,192	$ 5,594	$ 5,939	$ 5,533	$ 5,864	$ 5,913
Total	$ 7,512	$ 7,149	$ 7,131	$ 7,431	$ 8,536	$ 8,290	$ 8,806	$ 9,159	$ 9,201
Total Benefits (Current + Accrued) ($000's)									
Management (including executive)	$ 668	$ 646	$ 627	$ 707	$ 858	$ 750	$ 899	$ 934	$ 945
Non-Management (union and non-uni	$ 1,666	$ 1,752	$ 1,709	$ 1,737	$ 1,738	$ 1,786	$ 1,730	$ 1,786	$ 1,821
Total	$ 2,334	$ 2,399	$ 2,336	$ 2,444	$ 2,595	$ 2,536	$ 2,628	$ 2,719	$ 2,766
Total Compensation (Salary, Wages. Benefits) ($000's)									
Management (including executive)	$ 2,781	$ 2,637	$ 2,621	$ 2,947	$ 3,800	$ 3,101	$ 4,172	$ 4,228	$ 4,232
Non-Management (union and non-uni	$ 7,065	$ 6,910	$ 6,845	$ 6,929	$ 7,331	$ 7,725	$ 7,262	$ 7,650	$ 7,735
Total	$ 9,846	$ 9,548	$ 9,466	$ 9,875	$ 11,131	$ 10,825	$ 11,434	$ 11,878	$ 11,967
Allocated to Capital	$ 3,325	$ 3,197	$ 3,031	$ 3,195	$ 3,655	$ 3,599	$ 3,505	$ 3,575	$ 3,646
Allocated to OM&A	$ 6,521	$ 6,351	$ 6,435	$ 6,680	$ 7,476	$ 7,227	$ 7,929	$ 8,303	$ 8,320

4-SEC-37

[Ex.4, p.50] Please provide a copy of the Applicant's shared services agreement (or similar document) with any of its affiliates.

Response

Copy of Affiliate Shared Services Agreements is filed with these interrogatory responses at Appendix I.

4-SEC-38

[Ex.4, p.67] Please confirm the Applicant has made or not made any changes to its typical useful lives for depreciation purposes since its EB-2014-0101 application.

Response

OPUCN has not made any changes to its typical useful lives for depreciation purposes since its EB-2014-0101 application.

5-SEC-39

[Ex.5, p.4] Please provide an update on the forecast new 2020 debt instrument, including any information regarding the interest rate that will be available by TD Bank.

Response

Discussions regarding this new debt are in progress, with the latest rate estimate in the region of 2.10% for a 10 year term.

5-SEC-40
[Ex.5, p.9] What is the proposed term of the forecast 2020 and 2021 debt instruments?

Response

Current discussions are based on a 10 year term.

5-SEC-41

[Ex. 6] Please provide a table that shows the Applicant's regulated ROE for each year since 2014.

Response

Please see table below:

Measures		2014	2015	2016	2017	2018	2019
Liquidity: Current Ratio		0.84	1.16	1.16	0.99	1.07	1.23
Leverage: Debt to Equity Ratio		0.78	1.12	1.04	0.96	1.21	1.15
Profitability: Regulatory Return on Equity	Deemed	9.42%	9.30%	9.30%	9.19%	9.00%	9.00%
	Achieved	6.41%	7.59%	9.97%	7.62%	7.47%	9.14%

9-SEC-42

[Ex.9] When does the applicant propose to seek disposition of its Group 2 DVAs?

Response

At our next rebasing application.

9-SEC-43

[Ex.9, p.7] With respect to the OEB Cost Assessment Variance Account, please provide a table that shows for each year the principal debits made to the accounts.

Response

Please refer to OPUCN_2021_DVA_Continuity_Schedule_CoS_20200724 as filed with the rate application. Below is a summary.

Year	Principal Debit	Cumulative Balance
Opening		$0
2016	$87,010	$87,010
2017	$115,346	$202,356
2018	$78,530	$280,886
2019	$98,633	$379,519

RESPONSES TO ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO ("AMPCO") INTERROGATORIES

1-AMPCO-1
Ref: Ex 1 P24-25

The OPUCN Board of Directors consists of three (3) Committees of the Board, with each member having a specific set of skills necessary to help Management and the Board make necessary, strategic decisions while ensuring proper Governance procedures are being followed.

a. The Finance and Audit Committee advises the Board with respect to the financial review and oversight, while ensuring that financial reporting is fair, complete, accurate, and timely. Please provide a description of any audits over the 2015 to 2020 period relevant to the application.
b. The Project Monitoring Committee has the job of assisting the Board in relations to practices, policies, and procedures addressing asset management and capital expenditures, and to provide major project investment oversight.
Please provide the Terms of Reference for the Project Monitoring Committee, and any significant directives provided by the Committee over the 2015 to 2020 period.

Response

a. The OEB's Decision and Rate Order for EB-2019-0062 ordered a special purpose audit of accounts 1588 and 1589 be completed prior to disposition of these accounts. The specific requirements are as follows:
    - The OEB directs that a review be conducted by way of an external special purpose audit engagement, at minimum for accounts 1588 and 1589 for the period from January 1, 2017 to December 31, 2019.
    - Oshawa PUC may decide if this special purpose audit should be extended to all Group 1 accounts or whether the company prefers to do an internal review of the remaining accounts.
    - The OEB expects the special purpose audit to assess the accounting process, as well as validate the accuracy of the Group 1 accounts.
    - The special purpose audit of accounts 1588 and 1589 should include a review of the balances and principal adjustments in accordance with the new accounting guidance, as well as Oshawa PUC's accounting and settlement processes to ensure it has implemented the new accounting guidance appropriately.

OPUCN has engaged KPMG to audit the Group 1 regulatory balances commencing for the period from January 1, 2017 to December 31, 2019. This audit is expected to be completed early 2021.
No other audits took place specifically relevant to this application.

b. Please see attached Appendix J for Terms of Reference for the Project Monitoring Committee. 2020 was the inaugural year for the Project Monitoring Committee.

Significant directives:

The Committee reviewed and approved the 2020 Capital Investment Plan for submission to the Board for approval. The Committee reviewed the progress of the Capital Plan throughout the year to ensure the plan was on track and Management was on budget, with the understanding that there are times when scheduled projects must be moved around in the 5 year plan. One example of this occurrence is when the Municipality is doing work, OPUCN's planned work will have to move to be lined up with these occurrences; if there is equipment failure, it has to be looked after in order to provide reliable, safe electricity to our customers.

The Committee has also reviewed the proposed 2021 Capital Investment Plan and has recommended it for approval to the Board at the November meeting.

Distribution System Plan (DSP)
The Committee reviewed, discussed and provided insight into the DSP as it was being created. The Committee reviewed the entire plan and discussed it with Management to fully understand the projects. The Committee recommended the final version of the DSP to the Board for approval. (See appendix for the evolving versions of the DSP, including the final version presented in the rate application.)

1-AMPCO-2

Ref: Ex 2 P86 Table 1-44

With respect to the Proposed Unit-Based Performance Measures related to Cost Control, please explain the purpose of the "Wrench Time" measure, how it will be calculated, how it will be applied, how targets will be set and how it fits under cost control.

Response

Wrench Time is a calculation utilizing the total hours that an FTE is available to the company minus the total hours that an FTE is not "hands on", such as vacation, statutory holidays, sick leave, floater time, job planning, circle checks, travel time and departmental meetings. The final number is represented in a percentage. OPUCN has a target of 47% Wrench Time. This time available for hands on work is then utilized to calculate the estimated completion of assigned projects with the emphasis on ensuring that they will fit under the assigned budget, ultimately assisting with cost control.

2-AMPCO-3
Ref: Ex 2 P39

OPUC states “During the forecast years from 2021 to 2025, the planned capital expenditure has shifted to System Renewal and System Service requirements to improve system reliability and mitigate customer outage impacts. This can be achieved through the required replacement of end of Typical Useful Life (TUL) or high failure risk assets and grid modernization to make the distribution system more responsive in monitoring and locating power outages.”

Please define end of Typical Useful Life (TUL) as it relates to determining System Renewal Investments.

Response

Please see “Appendix B – Asset Condition Assessment” of the DSP starting at Section 5.2.

2-AMPCO-4
Ref: Ex 2-DSP P26 Table 7

Please add: All Interruptions - Excluding Loss of Supply, Major Event Days and Scheduled Outages - to Table 7.

Response

Related questions: 2-SEC-15, 2-AMPCO-4, 2-AMPCO-5, 2-AMPCO-6, 2-AMPCO-7, 2-AMPCO-8, 2.0-VECC -11, 1-EP-6

Table 7-1 OPUCN Service 1 Reliability Statistics Updated for All Interruptions, Excluding Loss of Supply, MED and Scheduled Outages

Year	SAIDI	SAIFI
All Interruptions		
2015	1.35	2.00
2016	2.61	2.08
2017	0.74	1.17
2018	1.98	1.71
2019	0.98	1.08
5 Year Rolling Average	1.53	1.61
All Interruptions, Excluding Loss of Supply		
2015	1.21	1.28
2016	2.61	2.06
2017	0.72	0.98
2018	1.97	1.64
2019	0.98	1.08
5 Year Rolling Average	1.50	1.41
All Interruptions, Excluding Loss of Supply and Major Events		
2015	1.21	1.28
2016	2.61	2.06
2017	0.73	0.98
2018	1.34	1.29
2019	0.98	1.08
5 Year Rolling Average	1.37	1.34
All Interruptions, Excluding Loss of Supply, MED and Scheduled Outages		
2015	1.21	1.27
2016	2.55	2.03
2017	0.62	0.89
2018	1.26	1.17
2019	0.89	1

5 Year Rolling Average	1.31	1.27

2-AMPCO-5

Ref: Ex 2-DSP P29 Table 9

a. Please provide further details to explain the trend in Cause Code 1 - Scheduled Outages as it relates to the capital program in each year.
b. Please provide a breakdown of Cause Code 5 – Defective Equipment by equipment type.

Response

a. Scheduled outages have increased as a result of improved reporting of outages and causes from the Implementation of an OMS system in 2016. This along with improved asset inspection and maintenance scheduling have allowed us to replace and modernize more of our infrastructure prior to failure.
   Scheduled outages show an overall increasing trend. This is primarily due to planned outages that were undertaken to accommodate capital overhead and underground rebuild programs. Generally planned outages occur towards the end of construction phases and this is generally what we see with the statistics.
b. Please see answer to 2-SEC-15 Table 9-1.

2-AMPCO-6
Ref: Ex 2-DSP P30

The evidence states "The number of outages caused by Defective Equipment shows an overall increasing trend over the historical period as a result of being able to capture secondary outages when the OMS was commissioned in 2016. However, it can be inferred from Figure 4 that the number of outages caused by defective equipment including secondary outages has improved in 2019 when compared to 2018. This category is also responsible for the second highest number of outages among the cause code categories. These outages are mitigated through effective maintenance programs and renewal programs.

a. Please define secondary outages.
b. Please provide the data for Cause Code 5 – Defective Equipment in Table 7 excluding secondary outages.
c. Please provide a breakdown of Cause Code 5 – Defective Equipment data by equipment type.

Response

a. A secondary outage is an outage that occurs as a result of defective equipment downstream of the secondary winding of a distribution transformer.

b.

Year	SAIDI	SAIFI
Interruptions Cause Code 5 (excluding Secondary)		
2015	0.49	0.49
2016	1.13	0.85
2017	0.29	0.22
2018	0.41	0.34
2019	0.3	0.37
5 Year Rolling Average	0.52	0.45

c. Please see response to 2-SEC-15

2-AMPCO-7

Ref: Ex 2-DSP P32 Table 11

a. Please confirm if the data for Cause Code 5 – Defective Equipment includes secondary outages.
b. Please provide a breakdown of Cause Code 5 – Defective Equipment by equipment type.

Response

a. Confirmed.
b. See response to 2-SEC-15 Table 11-1.

2-AMPCO-8
Ref: Ex 2-DSP P42

With respect to historical performance data, please provide the number of asset failures by asset type for each of the years 2015 to 2019.

Response
Please see 2-SEC-15 Table 9-1.

2-AMPCO-9

Ref: Ex 2-DSP Appendix A P35 SR-01

a. Please provide the total number of poles, conductors and transformers forecast for replacement over the 2021 to 2025 period.
b. Please provide the total number of poles, conductors and transformers replaced over the 2015 to 2019 period.
c. Please provide the total number of poles, conductors and transformers forecast to be replaced in 2020 and update the total cost.

Response

a.

Year	OH Cond. (mtrs)	Wood Poles	OHPM TX
2021-2025	58642	919	249

b. On average, 328 wood poles, 134 Transformers (Padmount, Polemount, Vault) and 7.031 km of overhead conductor, was replaced in 2017 and 2018. In 2019, 326 wood poles, 56 Transformers (Polemount) and 25.5 km of overhead conductor was replaced. 2015 and 2016 information is unavailable at this time.

c.

Year	OH Cond. (mtrs)	Wood Poles	OHPM TX
2020 Total	11392	187	61

2-AMPCO-10

Ref: Ex 2-DSP Appendix A SR-02

a) Please provide the number of porcelain insulators and switch/cut-out arrestors to be replaced in 2020.
b) Please update the forecast cost in 2020.

Response

a) Please see Project Summary in Ex. 2 – DSP Appendix A SR-02. Annual values of 290 porcelain insulators and 285 Cutouts are also valid for 2020.
b) Please see Comparative Information on Expenditures for Equivalent Projects/Activities in Ex. 2 – DSP Appendix A SR-02. Forecast cost for 2020 is still valid.

2-AMPCO-11

Ref: Ex 2-DSP Appendix A SR-03

a. Please provide the number of poles in poor condition and very poor condition in the ACA in EB-2014-0101 and the recommended quantity to be replaced annually.
b. Please provide the number of poles replaced annually for each of the years 2015 to 2020.

Response

a. Please see EB-2014-0101 Ex. 2, Tab B, Schedule 3, Page 62 of 101. There are 754 and 295 poor and very poor poles respectively identified in the EB-2014-0101.
b. From 2015 to 2019, approximately 20 poles have been replaced annually under the Pole Replacement Program. In 2020 approximately 35-40 poles will be replaced.

2-AMPCO-12

Ref: Ex 2-DSP Appendix A SR-04

Please provide an update on the forecast number of quick sleeves to be replaced with permanent sleeves on the 44kV primary overhead conductor lines in 2020 and the corresponding cost.

Response

Oshawa Power is scheduled to replace ninety three (93) 44kV quick sleeves with a budgeted amount of $100,000.

2-AMPCO-13
Ref: Ex 2-DSP Appendix A SR-05

Please provide an update on the forecast number of vault transformers to be replaced in 2020 and the corresponding cost.

Response
OPUCN is forecasted to replace a total twelve (12) vault transformers in 2020 with no further replacements planned. The corresponding cost of these replacements is approximately 13,500 per transformer.

2-AMPCO-14

Ref: Ex 2-DSP Appendix A SR-06

a) Please provide the km replaced over the 2015 to 2019 period.
b) Please provide an update on the km forecast to be replaced in 2020 and the corresponding cost.
c) Please provide the primary cable fault analysis.
d) Please provide the number of cable failures for each of the years 2015 to 2020.

Response

a)

Year	km cables replaced
2015	19.24
2016	24.33
2017	13.44
2018	4.99
2019	7.05

b) In 2020, Oshawa Power will be replacing 6.6km km of underground cable for a forecasted cost of $900,000.00

c) Cable faults are analyzed by our Engineering Team. We consider number of customers affected, root cause, age, number of failures in the same area and feeder affected. Using this data, we determine areas that require replacement.

d) 2015 – 23 faults; 2016 – 18 faults; 2017 – 16 faults; 2018 – 20 faults; 2019 – 11 faults

2-AMPCO-15
Ref: Ex 2-DSP Appendix A P76 SR-07

Please provide the cost of Alternatives 2 and 3.

Response
Please see response to 2-Staff-43.

Costing for alternatives were not calculated in detailed because scopes for each indicate apparent price ranges that would exceed planned renewal, as described below.

For Alternative 2, a spare transformer must be connected and placed on potential. Costs are equivalent to planned station renewal plus re-deployment costs. Final cost range is expected around 1.5X planned renewal.

For Alternative 3, preventative maintenance does not guarantee failure avoidance beyond TUL. Costs are equivalent to planned station renewal but will likely incur premiums for staff overtime and emergency contractor assistance, in addition to any sunk preventative maintenance costs leading up to failure. Final cost range is expected around 2X planned renewal.

2-AMPCO-16

Ref: Ex 2-DSP Appendix A P79 SR-08

a) Please provide the number of existing switchgears including relays and e-house at MSs – MS2, MS5, MS7, MS11 and MS13 have been identified in the ACA as having a poor condition and exceeding their TUL.
b) Please provide the number of switchgears to be replaced in 2021.

Response

a) There are five switchgears (MS2, MS5, MS7, MS11, MS13) which have been identified as poor and exceeding their TUL.
   MS2, MS5, MS7, MS11, MS13, MS14 are e-houses. No digital relays from the ACA Report are past TUL and poor condition.
b) 1.

2-AMPCO-17

Ref: Ex 2-DSP Appendix A P179 GP-02

a) Please provide the number and type of vehicles forecast to be replaced in each of the years 2015 to 2019.
b) Please provide the forecast costs for the Fleet Replacement Program for each of the years 2015 to 2019.
c) Please provide OPUCN's Vehicle Utilization rate for each of the years 2015 to 2019 and provide the calculation.

Response

a) Please see section on Comparative Information on Expenditures for Equivalent Projects/Activities, Ex 2-DSP Appendix A P179 GP-02
b) Please see section on Comparative Information on Expenditures for Equivalent Projects/Activities, Ex 2-DSP Appendix A P179 GP-02. Please note forecast costs for 2015-2019 is available in EB-2014-0101, Exhibit 2, Tab B, Page 14 of 98.
c) We have data dating back from 2017 as follows: 2017 50%, 2018 45%, 2019 55.3%.

2-AMPCO-18

Ref: Ex 2-DSP Appendix B Asset Condition Assessment (2019)

a) Please provide a list of OPUCN's previous Asset Condition Assessments, the year completed and the party that completed the assessment.
b) Please provide a copy of the most recent ACA prior to Metsco's 2019 Report at Appendix B.

Response

a) 2015 Rate Application Asset Condition Assessment Report & Asset Management Plan Exhibit 2, Tab B, Schedule 3 dated February 2014 prepared by Metsco Energy Solutions; and
Asset Condition Assessment for OPUCN dated March 16, 2006 by Kinectrics Inc.
b) See previous answer.

2-AMPCO-19

Ref: Ex 2-DSP Appendix B Page 9 Table 0-1 Asset Condition Assessment Overall Results

Please provide an excel version of Table 0-1 and add a column that shows the Data Availability Indicator for each asset type, and add columns to provide the number of assets by asset type in very good, good, fair, poor and very poor condition.

Response

Please see tables below and attached file Appendix K.

Asset Category	Pop.	Health Index Distribution (%)					Avg. Health	DAI
		Very	Good	Fair	Poor	Very		
Wood Pole	9,570	581	6,129	2,662	196	2	73	1
Concrete Pole	869	3	108	758	0	0	66	1
Steel Pole	14	6	5	3	0	0	72	1
Overhead Primary	519,869	293,308	195,578	6,177	24,806	0	84	1
Underground Primary	460,325	172,545	68,208	136,462	81,042	2,068	68	1
Pole mount Transformer	2,513	1,219	1,177	117	0	0	84	1
Pad mount Transformer	3,765	2,065	1,600	99	1	0	85	1
Vault Transformer	394	167	201	26	0	0	84	1
Submersible Transformer	20	8	11	1	0	0	83	1
Primary Switch	1,001	588	365	48	0	0	87	1
Smart Switch	15	15	0	0	0	0	100	1
Distribution Switchgear	33	28	5	0	0	0	96	1
Cutout Arrestor	2,830	1,110	989	209	481	41	80	1
Elbow	7,192	4,899	2,032	261	0	0	90	1
Recloser	4	4	0	0	0	0	0	1
Vault	146	16	130	0	0	0	84	1
Manhole	120	0	120	0	0	0	83	1
Substations								
Power Transformer	16	8	6	2	0	0	83	1
Circuit Breaker 13.8kV	72	68	4	0	0	0	96	1
Circuit Breaker 44kV	16	16	0	0	0	0	100	1
Switchgear	8	0	1	2	5	0	43	1
Protection Relay	71	16	9	46	0	0	75	1
SCADA RTU	8	0	0	8	0	0	60	1
Battery	8	5	3	0	0	0	94	1
Ground Grid	16	0	0	16	0	0	62	1
Fence	8	0	0	8	0	0	60	1
Building	8	3	0	5	0	0	75	1

Asset Category	Pop.	Health Index Distribution (%)					Avg. Health Index	DAI
		Very Good	Good	Fair	Poor	Very Poor		
Wood Pole	9,570	6%	64%	28%	2%	0%	73%	100%
Concrete Pole	869	0%	12%	87%	0%	0%	66%	100%
Steel Pole	14	43%	36%	21%	0%	0%	72%	100%
Overhead Primary Conductor (m)	519,869	56%	38%	1%	5%	0%	84%	100%
Underground Primary Cable (m)	460,325	37%	15%	30%	18%	0%	68%	100%
Pole mount Transformer	2,513	49%	47%	5%	0%	0%	84%	100%
Pad mount Transformer	3,765	55%	42%	3%	0%	0%	85%	100%
Vault Transformer	394	42%	51%	7%	0%	0%	84%	100%
Submersible Transformer	20	40%	55%	5%	0%	0%	83%	100%
Primary Switch	1,001	59%	36%	5%	0%	0%	87%	100%
Smart Switch	15	100%	0%	0%	0%	0%	100%	100%
Distribution Switchgear	33	85%	15%	0%	0%	0%	96%	100%
Cutout Arrestor	2,830	39%	35%	7%	17%	1%	80%	100%
Elbow	7,192	68%	28%	4%	0%	0%	90%	100%
Recloser	4	100%	0%	0%	0%	0%	0%	100%
Vault	146	11%	89%	0%	0%	0%	84%	100%
Manhole	120	0%	100%	0%	0%	0%	83%	100%
Substations								
Power Transformer	16	50%	38%	13%	0%	0%	83%	100%
Circuit Breaker 13.8kV	72	94%	6%	0%	0%	0%	96%	100%
Circuit Breaker 44kV	16	100%	0%	0%	0%	0%	100%	100%
Switchgear	8	0%	13%	25%	63%	0%	43%	100%
Protection Relay	71	23%	13%	65%	0%	0%	75%	100%
SCADA RTU	8	0%	0%	100%	0%	0%	60%	100%
Battery and Charger	8	63%	38%	0%	0%	0%	94%	100%
Ground Grid	16	0%	0%	100%	0%	0%	62%	100%
Fence	8	0%	0%	100%	0%	0%	60%	100%
Building	8	38%	0%	63%	0%	0%	75%	100%

2-AMPCO-20

Ref: Ex 2-DSP Appendix B Asset Condition Assessment (2019) P23

The report states “Failure curves are calibrated by analyzing actual failure data against the age and/or condition parameters observed at the time of failure.”

a) Please discuss if OPUNC calibrates failure curves by analyzing actual failure data.
b) Please discuss if OPUNC tracks the age an asset fails.

Response

a) The statement in question is part of an overview for a roadmap for an asset management approach. As part of the Asset Condition Assessment, no failure curves were created or calibrated by analyzing actual failure data.

b) Confirmed. OPUCN tracks the ages of asset failures.

2-AMPCO-21

Ref: Ex 2-DSP Appendix B Asset Condition Assessment (2019)

a) Page 17- Please list the asset classes not covered in the report.
b) Page 19 – Please discuss the maturity level of OPUNC's ACA.
c) Page 19 - Please discuss OPUNC's maturity level with respect to implementation of the ISO 5500X framework.
d) Page 34 Figure 3.1 – Please provide the number of wood poles greater than 51 years from the previous ACA.
e) Page 35 Figure 3.2 – Please provide a version of Figure 3.2 based on data from the previous ACA.
f) Page 44 Figure 3.9 – Please provide the circuit length metres for the cable types depicted in Figure 3.9 greater than 45 years from the previous ACA.
g) Page 44 Figure 3.10 – Please provide a version of Figure 3.10 based on data from the previous ACA.

Response

a) Like any distribution utility, OPUCN operates hundreds of asset types, classes and configurations spanning electrical and civil plant, information technology, fleet, and facilities equipment. All of these assets constitute potential ACA candidates. The scope of the current ACA report covers the largest electrical distribution asset classes the health of which is most impactful to the utility's ongoing operations. Listing all existing asset classes would be impractical.
b) The latest ACA is an improvement in maturity relative to the previous ACA in several ways, including addition of new asset classes and incorporation of empirical data collected from the field to adjust previous assumptions. See response to 2.0-VECC - 14 for a detailed listing of these enhancements, which collectively represent a substantially more mature approach to the ACA
c) While the ACA report mentions the ISO5500X Group of Asset Management Standards, OPUCN has not formally committed to pursuing the implementation of this group of standards. As such, maturity of implementation cannot be assessed.
d) 2,739 wood poles were greater than 51 years in the previous ACA. Unknown ages are assumed to be above 51 years which is the same assumption applied in the current ACA.
e) The previous ACA did not assess wood pole as a separate asset class. Accordingly, the requested figure modification cannot be facilitated.
f) The previous and current ACA age demographics are categorized in age bands of 10 years. In the previous ACA, 106,261 3-ph circuit meters and 16,258 1-ph circuit meters were greater than 41 years of age.
g) The previous ACA did not assess overhead conductors as a separate asset class. Accordingly, the requested figure modification cannot be facilitated.

2-AMPCO-22

Ref: Ex 2-DSP Appendix B Asset Condition Assessment (2019) P35

The report states “The DAI for wood pole data is 100% with assumptions applied.”

Please explain “with assumptions applied” and provide the specific assumptions applied.

Response

Assumptions are applied in instances where a complete data set is not available in its entirety. As stated on p34 of Appendix B, Asset Condition Assessment (2019), the assumption applied is “poles with an unknown installation year are assumed to be 51 years or older.” The effect it has on the HI framework is stated on P35, “wood poles with an unknown age have received a rating of “E” for service age.”

2-AMPCO-23

Ref: Ex 2-DSP Appendix B Asset Condition Assessment (2019) P84

METSCO recommends that OPUCN incorporate a five-level grading scheme for any asset condition inspections, where applicable to bring its practices closer to the ISO5500X recommended approaches. A five-level grading scheme will allow for more discrepancy between assets and their respective Health Index values that will be used for prioritizing assets.

Please provide an example to further explain the five-level grading scheme for asset condition inspections.

Response

An example of a five-level grading scheme for asset condition inspections is currently in use for OPUCN's wood poles. Each wood pole visually inspected receives a result of "Good", "Fair", "Fair-Poor", "Poor" and "Danger" which score from 5 to 1, respectively. Each result is associated with the qualitative assessment of the wood pole, which in turn informs the ACA.

2-AMPCO-24

Ref: Ex 2-DSP Appendix B Asset Condition Assessment (2019) P84

The report states “Furthermore, METSCO recommends for OPUCN to perform annual validations of its ACA model for continuous improvements of the Health Index algorithms. There are several algorithms used by OPUCN that are not in alignment with the industry standard that can be realigned. Furthermore, additional algorithms have not yet fully been matured or developed and require additional data parameters. As OPUCN progresses with its asset inspection and data collection efforts, OPUCN is expected to be able to fully develop its ACA model.”

a) Please provide the algorithms that are not in alignment with the industry standard that can be realigned.
b) Please provide the algorithms that have not yet fully been matured or developed and require additional data parameters.
c) When is OPUCN expected to fully develop its ACA model?

Response

a) The industry standard is a moving benchmark that applies to different sector participants to different degrees. Algorithms and data analytics approaches continue to be developed, tested and improved upon, while different utilities have different levels of operating capabilities, and different Asset Management strategic approaches that affect their choices of Asset Management practices, including ACAs. As such, OPUCN believes that there is no single agreed-upon standard considered superior to others. The differences between OPUCN’s ACA model and the industry standard ACA models (as characterized by METSCO at the time) are highlighted in section 2.3 p30 of Appendix B, Asset Condition Assessment (2019). and apply to all algorithms.

b) Asset Management science is a relatively young field – particularly in terms of its formal application in the utilities sector. OPUCN’s existing ACA model was first developed in 2011 and since then has continued to be developed to reflect OPUCN’s ongoing asset management system development as well as incorporate the information on actual failures observed in the system. Algorithms to date have been developed and adapted to OPUCN’s current data collection and asset testing processes. Being a continuous improvement process, informed by incremental insights observed in operation and analysis, Asset Management capabilities and specific tools such as ACA algorithms are all expected to be tested and adjusted over time – to ensure that their underlying assumptions align with the practical experience in the field. As such, all ACA algorithms are subject to future maturation as a part of continuous improvement work.

c) OPUCN believes its current developed ACA model reflects the distribution system it manages. Furthermore, OPUCN understands ACA models and the use of data analytics continue to be developed and improved in the industry. As such, an ACA

model can be expected to be a living model that incorporates recent improvements that leverage current data analytics. Furthermore, as OPUCN progresses with its inspection and maintenance programs, data gaps that exist can continue to be managed to improve the data availability. OPUCN intends to be cognizant of the developments and improvements that can be made to the ACAs and expects work with industry peers and experts to implement ongoing enhancements where feasible and applicable.

2-AMPCO-25
Ref: Ex 2-DSP Appendix B Pages 84-92

For key asset groups, Metsco provides the End-of-Life Criteria and the priority for each criterion as high, medium or low.

For each asset group, please provide Metsco's assessment of the extent of the data gaps that currently exist with respect to the End-of-Life criteria, i.e. please provide a ranking of high, medium, low where for example "high" indicates that a significant amount of condition information can be collected for future assessments.

Response
Please see tables below for each asset group, where applicable. OPUCN notes that a decision to collect an incremental data point is invariably one that requires allocation of material O&M resources. Absent incremental allocations of rate funding for O&M activities, additional resources expended on data collection therefore have a direct opportunity cost in terms of other O&M work foregone in other dimensions of utility operations.

Wood Poles

Criteria	OPUCN Assessment of Data Collection to be Available
Remaining Pole Strength	High
Wood Rot	High
Out of Plumb	High

Underground Primary Cable

Criteria	OPUCN Assessment of Data Collection to be Available
Cable Failure	High
Field Testing	Low
Condition of Concentric Neutral	Low
Loading History	High

Primary Switch, Smart Switch & Switchgear

Criteria	OPUCN Assessment of Data Collection to be Available
Visual Conditions – All Criteria	High

Recloser

Criteria	OPUCN Assessment of Data Collection to be Available
Visual Conditions for Oil Recloser – All Criteria	High
Visual Conditions for Vacuum Recloser – All Criteria	High

Power Transformers

Criteria	OPUCN Assessment of Data Collection to be Available
Infrared Scanning	High
Dissolved Gas Analysis	High
Oil Quality Test	High
Power Factor	High
Visual Conditions – All Criteria	High
Field Testing – Resistance Testing	Low

Circuit Breakers (SF_6)

Criteria	OPUCN Assessment of Data Collection to be Available
SF6 Gas Analysis	Low
Visual Conditions – All Criteria	High
Timing/Travel Tests	Low
Contact Resistance Tests	Low

Relays & RTUS

Criteria	OPUCN Assessment of Data Collection to be Available
Mean Time Between Failures	Low
Service Age	High

Obsolescence	High
Visual Conditions – All Criteria	High
Defect and Test Reports	Low

Substation Switchgears

Criteria	**OPUCN Assessment of Data Collection to be Available**
Visual Conditions – All Criteria	High
Time/Travel Tests	Low
Contact Resistance Tests	Low

2-AMPCO-26
Ref: Appendix 2-AA

a) Please provide the approved excel version of Appendix 2-AA from EB-2014-0101.
b) Please provide the total number of projects identified over the 2015-2019 period.
c) Of the original projects identified over the 2015-2918 period, please provide the total number of original projects completed during the 2015-2019 period.
d) Please provide the total number of projects identified in the current DSP for 2021.
e) Please provide the total number of projects identified in the current DSP over the period 2021 to 2025.

Response
A) Please note that an excel format of provided table can be obtained from the following link:

http://www.rds.oeb.ca/HPECMWebDrawer/Record/508646/File/document

B)C)D)E)

Appendix 2-AA
Capital Projects Table

	Plan					Actual					Plan					
Projects	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Reporting Basis																
System Access																
Expansions	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1
Connections	1	1	1	1	1	3	4	3	3	4	1	1	1	1	1	1
Revenue Metering	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MIST Metering	1	1	1	1	1	1	1	1	1	1						
Remote Disconnect/Reconnect Metering	1	1	1	1	1	1	1	1								
Third Party Relocations	14	7	5	6	5	12	13	15	20	10	3	4	2	2	1	2
AMI System Upgrade											1	1	1	1	1	1
Sub-Total	19	12	10	11	10	19	21	22	26	18	7	8	6	6	5	6
System Renewal																
Reactive/ Emergency Plant Replacement	9	9	9	9	9	11	11	11	11	11	9	8	8	8	8	8
Overhead Line Renewal	3	4	5	5	4	12	11	8	5	6	7	5	8	7	4	9
Underground Line Renewal	8	5	11	3	4	4	8	4	3	3	4	6	9	7	6	3
Station Renewal	1	3	1	1	0	1	1	2	1		0	0	0	0	0	0

MS14 Metalclad Switchgear Replacment	1					1					0	0	0	0	0	0
Pole Replacement Program	0	1	1	1	1			2	1	1	1	1	1	1	1	1
Porcelain Switch and Insulator Replacement Program											2	2	2	2	2	2
Vault Transformenr Replacement Program											1	1	1	1	1	1
44kV Quick Sleeve Replacement Program											1	1	1	0	0	0
Relay replacement Program											1	1	1	0	0	0
Power Transformer Replacement Program					1						1	0	0	1	1	1
Municipal Substation Switchgear Replacement Program											0	1	1	1	1	1
Sub-Total	22	22	27	19	18	29	31	27	21	21	27	26	32	28	24	26
System Service																
Downtown Automation	2	0	0	0	1	3	3									
Downtown UG Self-Healing Grid	0	1	1	1	1				1							

OH Automated Self Healing Switches	0	0	1	1	0			1	2	1	1	1	1	1	1	1
Neutral Reactors	1	1	0	0	0		1	1	1							
Distribution System Supply Optimization	1	1	1	1	1		1	1	1	1						
Smart Fault Indicators	1	1	1	1	1	1	1	1	1	1						
Non-electric Fence				0	0					1						
MS9 Substation Construction				1	0				1	1						
Enfield Contribution to HONI				1	0					1						
MS9 and Enfield Feeders				1	1					6	1	0	0	1	0	0
Operational Technology (GIS,OMS,ODS,SCADA)											3	3	2	4	2	3
Smart Grid											4	2	2	3	3	3
Municipal Substation Transformer Monitoring and Telemetry											1	1	1	1	1	1
Repair, Improvements and Upgrades of OT and Smart Grid Infrastructure											1	1	1	1	1	1

Ground Grid Upgrades											1	1	0	0	0	0
Voltage Monitoring (Grid Monitoring and Automation)											1	0	0	0	0	0
Sub-Total	5	4	4	7	5	4	6	4	7	12	13	9	7	11	8	9
General Plant																
Fleet	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Facilities	2	1	1	1	1	1	2	2	1	1	7	1	1	1	1	1
Major Tools & Equipment	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1
Office IT & Equipment Upgrades	2	2	1	2	1	3	1	5	3	1	1	1	1	1	1	1
Operational Technology (GIS, MAS)	0	2	2	2	2	2		1	1	1	0	0	0	0	0	0
OMS Implementation and Enhancements	1	1	1	0	0	1	2	3			0	0	0	0	0	0
ODS Replacement and Enhancement	0	1	0	1	1				2	1	0	0	0	0	0	0
Back-up Control Room and Associated IT Infrastructure											2	0	0	0	0	0
Back-Up Generator Replacement											0	0	0	0	0	0

Information Technology General											7	5	2	5	3	3
Customer Self-Serve Online Portal (Green Button Dashboard)											1	0	0	0	0	0
Customer Information System (CIS) Acquisition											0	1	0	0	0	0
Sub-Total	7	9	7	8	7	9	7	12	9	6	20	10	6	9	7	7
Miscellaneous	0	0	0	0	0	21	20	14	6	8	0	0	0	0	0	0
Total	**53**	**47**	**48**	**45**	**40**	**82**	**85**	**79**	**69**	**65**	**67**	**53**	**51**	**54**	**44**	**48**
Less Renewable Generation Facility Assets and Other Non-Rate-Regulated Utility Assets (input as negative)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**53**	**47**	**48**	**45**	**40**	**82**	**85**	**79**	**69**	**65**	**67**	**53**	**51**	**54**	**44**	**48**

2-AMPCO-27

Please provide OPUCN's capital project management process/metrics to mitigate the risk of scope, schedule and cost variances.

Response

In general, project estimates are prepared by OPUCN's capital design team, using burdens and cost rates updated on a yearly basis. Capital projects are assigned to specific departments, and subsequently, construction supervisors or assigned project managers. Supervisors and project managers are assigned the responsibility to track budgets, timelines and quality of work on a daily basis. On a monthly basis, cross-functional capital construction meetings occur. At these meetings, a master capital construction schedule is maintained, tracking the status and progress of all projects against budget and schedule. Deviations from plan and project risks are openly discussed and corrective actions are determined to mitigate any issues. Project forecasts are updated. Additionally, change requests and/or variance analyses may be reviewed or conducted. Furthermore, OPUCN encourages all staff involved in capital projects to pursue professional development opportunities that improve expertise in the application of project management principles and evolving industry best practice.

Aside from tracking budget, schedule, quality of work, and adherence to Ontario Regulation 22/04 (which helps institute additional project oversight controls from a safety perspective), the following corporate KPI's are used:

- Number of Planned Projects Completed
- Percentage of Planned Projects Completed
- Total Planned Projects Actual Costs
- Percentage of Total Planned Projects Actual Costs

4-AMPCO-28
Ref: Ex 4 P75

a. Please provide forecast compared to actual depreciation expenses for the years 2015 to 2019.
b. Please explain any variances.

Response

a. Please see table below summarizing depreciation expense forecast compared to actual depreciation expenses for the years 2015 to 2019:

Depreciation Expense	2015	2016	2017	2018	2019	Total
Board Approved	3,841	4,744	4,820	5,013	5,393	23,810
Actual	3,798	4,437	4,362	4,982	5,703	23,282
Variance	43	306	457	31	(310)	528

b. The total variance for the period is $528k, or 2.2% of the total. Variances are due to timing differences in actual spend versus forecast, plus component level of actual spend will not always be identical to estimates in forecast.

4-AMPCO-29

Ref: Appendix 2-K

a. Please provide an excel version of Appendix 2-K that shows a breakdown in the following categories: Executive, Management, Non-Union and Union.
b. Please provide a breakdown of Salary and Wages including overtime and incentive pay and include in the excel table in part (a).

Response

a. OPUCN categorises employees as Management or Non-Management (Union). Adding the category 'Executive', using VP or higher as definition of Executive, would breach the requirement that no category contains three or fewer employees.
b. See a) above.

4-AMPCO-30
Ref: Appendix 2-K

Please summarize the positions that correspond to the increase in FTEs from 79 in 2015 to 91 in 2021, by program area.

Response

The table below summarizes by program area the movement in FTEs from 79 in 2015 to 91 in 2021:

Program	2015 Actual	2021 Test Year	Change
Corporate	0.3	3.0	2.7
General & Administrative			
Finance & Regulatory Affairs	7.3	7.3	0.0
IT Operations	2.0	3.0	1.0
Community Relations	1.0	2.0	1.0
Employee Health & Safety	1.0	1.0	0.0
Human Resources	1.0	2.0	1.0
Purchasing & Stores	3.0	3.3	0.3
Sub-Total General & Administrative	15.3	18.6	3.3
Customer Service	13.0	15.5	2.5
Facilities	0.5	1.0	0.5
Operations & Metering			
Operations Management	5.5	7.0	1.5
Engineering	3.0	4.0	1.0
Technical Design	7.7	5.0	(2.7)
Grid Construction and Operations	29.0	29.0	0.0
Meter Reading & Data Management	5.0	8.3	3.3
Sub-Total Operations & Metering	50.2	53.3	3.1
Total	79.3	91.4	12.1

4-AMPCO-31

Ref: Appendix 2-JC

Please add a column of 2015 OEB-approved to Appendix 2-JC and provide an excel version of Appendix 2-JC.

Response

2015 OEB-approved is already included in Appendix 2-JC - please see column B. The excel version is included in the Chapter 2 Appendices workbook, filed through RESS and as an attachment with interrogatory responses.

4-AMPCO-32
Ref: Appendix 2-JC

a. Please summarize the increase in IT Operations in 2021 compared to 2015 OEB-Approved.
b. Please summarize the increase in Customer Billing (outsourced) in 2021 compared to 2015 OEB-Approved.
c. Please summarize the increase in Facilities Management in 2021 compared to 2015 OEB-Approved.
d. Please summarize the increase in Grid Construction & Maintenance in 2021 compared to 2015 OEB-Approved.

Response

Please see schedules below summarizing increases:

a)

	2015 Approved	2021 Test	Increase	
IT Operations	378,817	709,601	330,784	11.0%

Labour - increase of 0.5 FTE plus change in seniority/speciality mix compared to plan in 2015.	120,000
Software maintenance & licensing costs associated with increasingly complex IT infrastructure and increased cost pressures associated with modernising IT infrastructure, including new Disaster Recovery site at MS9 and developing and maintaining a CyberSecurity framework.	110,000
Increased communication costs related to IVR system	25,000
Inflation and other	75,784
	330,784

b)

	2015 Approved	2021 Test	Increase	
Customer Billing (outsourced)	464,561	625,052	160,491	5.1%

Cost increases related to additional services (hosting of 'My Account' portal, cheque payment processing) and increase in volume related charges (paper, postage, changes, etc).	102,000
Inflation and other	58,491
	160,491

c)

	2015 Approved	2021 Test	Increase	
Facilities Management	197,627	327,396	129,770	8.8%

Budgeted headcount of 1 FTE fully allocated and 0.5 Management FTE replaced in 2021 with 1 Management FTE only. Net increase in cost of approximately $90k. This is a realignment of internal resources and not a net overall increase in costs.	90,000
Inflation and other	39,770
	129,770

d)

	2015 Approved	2021 Test	Increase	
Grid Construction and Operations	3,876,625	5,087,676	1,211,051	4.6%

Realignment of 2 operations techs from "Technical Design" group to operations	273,000
Labour overtime run rates higher than forecast	252,000
Safety supplies cost increases	45,000
Subcontracted Pole Testing	100,000
Inflation and other	541,051
	1,211,051

4-AMPCO-33
Ref: Exhibit 4 P59

OPUCN purchases many services and products from third parties. Tables 4-36 to 4-40 disclose the expenditures by vendor where the annual amount exceeded $75,000 per year, for the years 2015, 2016, 2017, 2018 and 2019, respectively.

Please provide the totals of Tables 4-36 to 4-40.

Response

Please see table below:

Year	Total
2015	$11,476,017
2016	$15,014,093
2017	$15,025,461
2018	$15,116,533
2019	$16,410,235

4-AMPCO-34
Ref: Appendix 2-JB

Please explain the increase in subcontractor costs for the years 2020 and 2021.

Response

The year over year increases in 2020 and 2021 are $194k and $94k respectively. Excluding inflation the increases are $159k and $55k, or $214k cumulative increase. This principal drivers behind the increase are:

- $100k in higher IT costs associated with modernising IT infrastructure, including new Disaster Recovery site at MS9, developing and maintaining a CyberSecurity framework, additional effort customising billing system to provide data and reporting required to meet regulatory requirements, and
- $100k related to pole testing program planned for 2021 and 2022.

4-AMPCO-35

Ref: Appendix 4-3 Asset Depreciation Study P4

Metsco indicates:

We have independently analysed the actual useful service life for a batch of power transformers that have been retired from service at OPCUN during the past five years. The results of this analysis are summarized in Exhibit 2 and indicate the mean useful life of power transformers at OPUCN to be 39 years.

Station	Transformer	Installed Date	Removal Date	Age (years)
MS 2	T1	1975	2012	37
	T2	1968	2012	44
MS 11	T1	1971	2011	40
	T2	1979	2011	32
MS 13	T1	1968	2011	43
	T2	1968	2013 ….	45
MS 15	T1	1976	2012	36
	T2	1967	2012	36
				Average:39

Please update the table based on transformer removals for the years 2013 to 2019.

Response

Station	**Transformer**	**Installed Date**	**Removal Date**	**Age (years)**
MS13	T2	1968	2013	45
MS5	T1	1983	2015	32
				Average: 38.5

8-AMPCO-36
Ref: Exhibit 8 P7

The proposed fixed charge for the: GS Intermediate 1,000 > 4,999 kW, and Large Use classes are above the ceiling as calculated in the cost allocation study.

Please provide the proposed fixed and variable rates and corresponding fixed and variable proportions if the fixed charge for the GS Intermediate 1,000 > 4,999 kW, and Large Use classes are set at the ceiling.

Response

Please see table below for impact of holding fixed rates for the GS Intermediate 1,000 > 4,999 kW, and Large Use classes at the ceiling.

Rate Class	Fixed Revenue Proportion	Variable Revenue Proportion	Fixed Distribution Rates	Variable Distribution Rates
Residential	100.00%	0.00%	$26.45	$0.0000
GS Less Than 50 KW	28.11%	71.89%	$18.35	$0.0187
GS 50 To 999 KW	8.42%	91.58%	$61.62	$5.2729
GS Intermediate 1,000 To 4,999 KW	2.66%	97.34%	$101.93	$3.7254
Large Use	2.10%	97.90%	$479.34	$3.6508
Street Lighting	46.89%	53.11%	$1.46	$22.5584
Sentinel Lighting	69.45%	30.55%	$6.03	$8.6243
Unmetered Scattered Load	24.14%	75.86%	$5.38	$0.0221

9-AMPCO-37
Reference: Ex 9 P3

i. Please provide the scope of work for the audit.
ii. Please provide the status of the audit.

Response

See response to OEB interrogatory 9-Staff-107.

RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION ("VECC") INTERROGATORIES

1.0-VECC-1
Reference: Exhibit 1

Oshawa Power (OPUCN) provides comprehensive information on financial assistance to its customers on its website: (https://www.opuc.on.ca/need-help-paying-electricity-bill/).

a. Does OPUCN track the number of contacts (on-line, telephone or in-person) inquiries or request for financial assistance? If so please provide the number of contacts in each of the years 2015 through 2019.
b. Please explain how (and from whom) the Compassion Fund and the Rainy Day receive resources for assisting customers in need.
c. OPUCN notes on its site that the Compassion Fund is not funded by ratepayers. Could this program be expanded (i.e. is there the demand) if a modest amount of ratepayer funding was made available? Would an expansion of the program help in any way to minimize other costs incurred due to short term financial difficulties of some customers?

Response

a) OPUCN financial assistance tracking:

a) 2015 Arrears Management Program - 143, LEAP – 50
b) 2016 Arrears Management Program - 184, LEAP – 53
c) 2017 – Arrears Management Program – 359, LEAP – 146, OESP – 1,864
d) 2018 – Arrears Management Program – 57, LEAP – 55, OESP – 2,090
e) 2019 – Arrears Management Program – 240, LEAP – 71, OESP – 2,547

b) and c)

The Rainy Day Fund is funded by donations and is a community program that works with social services. The operations and management of the Rainy Day fund is outside of OPUCN. The Compassion Fund is an OPUCN funded program to help customers who do not qualify for existing hydro financial assistance programs.

The Compassion Fund launched in the summer of 2020. Oshawa Power created it to address customers who did not qualify for other existing assistance programs but are experiencing financial hardship. Without historic data available it is hard to assess if there are benefits to expand the program. All factors will be considered for future funding such as seasonal demands, local economy, and customer demand of the assistance.

2.0-VECC -2
Reference: Exhibit 2, page 2 20-22

Preamble: The Application states (Exhibit 2, page 20): "*OPUCN's wholesale market participant (WMP) customers have been excluded from the calculation of electricity and global adjustment costs, as they transact directly with the Independent Electricity System Operator (IESO) for the purchase of electricity*"

The total kWh used to determine the commodity cost (1,075,667,737 kWh) equals the total volumes per the load forecast (Exhibit 3, page 21). Please indicate where the adjustment is made in the calculation of the commodity costs in order to exclude OPUCN's wholesale market participant customers.

Response

OPUCN has revised appendix 2-ZA and 2-ZB to remove WMP consumption from the cost of power and global adjustments amount.
In doing so, OPUCN also noted a formulaic error with the template which inflated GA cost.
Below is a summary of the change in commodity cost after removing WMP. The commodity cost will decrease by $1.5M.

2021 Test Year - Cop	As filed	With WMP consumption removed	Change
4705 -Power Purchased	$ 97,087,881	$ 96,957,296	$ 130,585
4707- Global Adjustment	$ 37,687,528	$ 36,283,662	$ 1,403,866
4708-Charges-WMS	$ 4,200,014	$ 4,200,014	$ -
4714-Charges-NW	$ 7,780,218	$ 7,780,218	$ -
4716-Charges-CN	$ 6,492,758	$ 6,492,758	$ -
4750-Charges-LV	$ -	$ -	$ -
4751-IESO SME	$ 399,106	$ 399,106	$ -
Misc A/R or A/P	$ (32,373,123)	$ (32,373,123)	$ -
TOTAL	**$ 121,274,382**	**$ 119,739,932**	**$ 1,534,451**

2.0-VECC -3
Reference: Exhibit 2, page 35

Please compare and explain the variance from the original OMS project budget ($825k as estimated in EB-2014-0101) to the actual amount spent on this project.

Response
Customization of the OMS to fit OPUCN and the lack of a 24/7 Control room. The OMS was customized so that the automation from the OMS was improved and adjusted to suit an environment where the OMS dispatched directly to crews and sent notifications to the public without being filtered by an operator. Expansion of scope to include an IVR in the cloud dialer – we call customers. Additional costs to enhance redundancy, backup DB's, backup servers and application servers for real time fail over (critical infrastructure), additional IT infrastructure to incorporate additional servers, backup systems battery fail over. Additional work on AMI to support OMS such as expansion of scope to modify filtering from AMI to OMS. Expansion of scope for IT security additional APN network added for mobile tablets connected cellular.

2.0-VECC -4

Reference: Exhibit 2, page 42 Table 2-23-Appendix 2-AA / EB-2014-0101 Exhibit 2, Tab A, page 84 Table 2-31-Appendix 2-AA

Please compare and contrast the following projects as presented in EB-2014-0101):

i. Thorton TS Capacity ($3.0 million for HONI capital contributions);
ii. Wilson TS Capacity ($3.5 million for HONI capital contributions);
iii. MS9 44kv/13.8 Substation (forecast of $7 million over period 2015-2018);
iv. MS9 Proposed Feeders (forecast of $2 million over period 2018-2019)

Response

Thornton TS Capacity relief on existing Thornton TS T3/T4 (230/44kV) – HONI work
Wilson TS Capacity relief on existing Wilson T1/T2 and T3/T4 – HONI work
Construction of new 44kV lines to supply 13.8kV (MS9) substation – HONI work and OPUCN
Construction of new 13.8kV lines from new 13.8kV substation (MS9) – OPUCN work

Request is not clear. Under limited time to complete responses, OPUCN was not able to reach out for clarification before submission of this response.

2.0-VECC -5

Reference: Exhibit 2, page 42 / EB-2014-0101 Appendix 2-AA

With respect to Durham Region plant relocations OPUCN had forecast the following capital spending and related contributions:

	2010	2011	2012	2013	2014 Bridge Year	2015 Test Year	2016 Test Year	2017 Test Year	2018 Test Year	2019 Test Year
Basis	CGAAP	CGAAP	MIFRS	MIFRS	MIFRS	MIFRS	MIFRS	MIFRS	MIFRS	MIFRS
System Access										
Subdivision Expansions	918	1,300	1,816	1,820	2,100	1,075	1,125	1,150	1,180	1,215
Service connections/requests	430	366	150	160	110	120	110	100	100	100
Service/ Expansion Contributions	(2,034)	(931)	(1,271)	(1,459)	(1,560)	(650)	(675)	(690)	(705)	(730)
Hwy 407 Extension - Plant relocation					430	4,510	700			
Hwy 407 contribution					0	(3,580)	(400)			
Durham Region - Plant relocation	0	447	347	450	250	1,875	935	1,065	1,080	1,055
Durham Region Contribution	(139)	0	0	(150)	0	(506)	(235)	(265)	(280)	(255)
City of Oshawa - Plant relocation										

For the 2015-2019 period please show the actual spending and the actual contributions for the Durham Region relocations.

Response

Projects	2015	2016	2017	2018	2019
Reporting Basis	MIFRS	MIFRS	MIFRS	MIFRS	MIFRS
System Access					
Durham Plant Relocation	615,471	1,368,962	874,232	(849,461)	1,496,871
Durham Region Contribution	(190,196)	(295,845)	(935,438)	263,240	(71,283)

2.0-VECC -6
Reference: Exhibit 2, page 24

Please provide the letter/invoice or agreement with respect to the $4,136, 705 in capital contributions made to Hydro One for "*a new transformer station just east of the City of Oshawa*."

Response
Please see attached invoices at Appendix L.

2.0-VECC -7
Reference: Exhibit 2, page 42

At page 34 of the DSP OPUCN states that "*On a 7 semi-annual basis, OPUCN will review actual capital expenditures to date and will forecast total expenditures to year end."*

Please update Table 2-23 (Appendix 2-AA) to show 2020 mid-year actuals and the projected year-end spending.

Response

Appendix 2-AA
Capital Projects Table

Projects	2020 Forecast	2020 Mid YTD
Reporting Basis	**MIFRS**	**MIFRS**
System Access		
Expansions	1,662,014	386,579
Connections	231,550	435,046
Revenue Metering	223,000	69,685
MIST Metering		
Remote Disconnect/Reconnect Metering		
Third Party Relocations	680,000	386,526
AMI System Upgrade	605,000	299,758
Sub-Total	3,401,564	1,577,594
System Renewal		
Reactive/ Emergency Plant Replacement	1,190,000	1,142,500
Overhead Line Renewal	2,603,000	2,310,290
Underground Line Renewal	1,545,000	771,303
Station Renewal		
MS14 Metalclad Switchgear Replacement		
Pole Replacement Program	400,000	296,445
Porcelain Switch and Insulator Replacement Program	550,000	46,620
Vault Transformer Replacement Program	162,000	0
44kV Quick Sleeve Replacement Program	100,000	4,651
Relay replacement Program	40,000	27,206
MS10 T2 Replacement	1,073,426	1,073,426
Municipal Substation Switchgear Replacement Program		
Sub-Total	7,663,426	5,672,442

System Service		
Downtown Automation		
Downtown UG Self-Healing Grid		
OH Automated Self Healing Switches	50,000	0
Neutral Reactors		
Distribution System Supply Optimization		
Smart Fault Indicators		
Non-electric Fence		
MS9 Substation Construction		
Enfield Contribution to HONI		
MS9 and Enfield Feeders	1,140,400	1,048,883
Operational Technology (GIS,OMS,ODS,SCADA)	273,746	273,746
Smart Grid	450,000	234,384
Municipal Substation Transformer Monitoring and Telemetry	75,000	0
Repair, Improvements and Upgrades of OT and Smart Grid Infrastructure	25,000	33,941
Ground Grid Upgrades	100,694	100,694
Voltage Monitoring (Grid Monitoring and Automation)	450,000	457,392
Sub-Total	2,564,840	2,149,040
General Plant		
Fleet	545,000	223,300
Facilities	445,000	734
Major Tools & Equipment	100,000	62,338
Office IT & Equipment Upgrades	87,000	58,664
Operational Technology (GIS, MAS)		
OMS Implementation and Enhancements		
ODS Replacement and Enhancement		
Back-up Control Room and Associated IT Infrastructure	200,000	84,249
Back-Up Generator Replacement	205,000	32,440
Information Technology General	282,000	34,774
Customer Self-Serve Online Portal (Green Button Dashboard)	140,000	49,650
Customer Information System (CIS) Acquisition	81,605	35,803
Sub-Total	2,085,605	581,951
Miscellaneous	35,833	35,833
Total	**15,751,268**	**10,016,859**
Less Renewable Generation Facility Assets and Other Non-Rate-Regulated Utility Assets (input as negative)	0	0
Total	**15,751,268**	**10,016,859**

2.0-VECC -8
Reference: Exhibit 2, page 42 / Table 2-23/Appendix 2-AA

a) Please explain how the 2021 estimates of "*Expansions*" is estimated.
b) Are the actuals and forecast amounts for this line item net of capital contributions?
c) For each year 2015 through 2021 please provide both the gross capital amount for *Expansions* and the associated capital contribution in the year.

Response

a) Refer to Exhibit 2, DSP Appendix A: 2021-2025 Material Investment Justifications, Page 16 for a summary of Expansions project narrative and cost estimations. On average, OPUCN contributed $2,100 per lot in new residential developments over the historical period and expects to connect approximately 791 lots per year in the forecast period. Note that 791 lots per year is derived using the historic average residential growth rate per year from 2010-2019. These two values ($2,100 per lot and 791 lots) multiplied together produce the forecast amounts.
b) Yes. Values shown in Table 2-23 are net of capital contributions.
c) Please find below, Table 2-23 recast with gross, capital contribution and forecast amounts for expansion projects.

Appendix 2-AA
Capital Projects Table - Expansions recast with Contributions and Forecasts

Projects	2015	2016	2017	2018	2019	2020 Bridge Year	2021 Test Year
Expansion Forecast							
Gross	675,100	725,000	750,000	1,180,000	1,215,000	2,381,621	2,381,621
Contributions	-584,700	-610,000	-635,000	-650,000	-652,125	-719,607	-719,607
Net	90,400	115,000	115,000	530,000	562,875	1,662,014	1,662,014
Expansion Actuals							
Gross	2,189,750	-504,931	47,501	1,835,173	6,470,590	-	-
Contributions	-1,415,641	186,266	881,373	-1,883,092	-2,562,718	-	-
Net	774,110	-318,665	928,874	-47,919	3,907,871	-	-

2.0-VECC -9
Reference: Exhibit 2, page 42, Table 2-23 /Appendix -2AA

a) Please explain how the 2021 forecast of "*Third Party Relocations*" is estimated.
b) Are the actuals and forecast amounts for this line item net of capital contributions?
c) For each year 2015 through 2021 please provide both the gross capital amount for *Third Party Relocations* and the associated capital contribution in each year.

Response
a) Please see Ex. 2 – DSP Appendix A Page 1-2 of 205. To produce 2021 forecasts, each individual Third Party Relocation project (that the Third Party plans to complete in 2021) is estimated and the estimated costs are summated to produce a final amount.
b) Values are net values after capital contributions.
c) Please see response to 2-EP-12.

2.0-VECC -10
Reference: Exhibit 2, DSP page 13

a) At the above reference OPUCN discusses the potential for redevelopment of the GM Plan in Oshawa.
b) Please clarify whether OPUCN is referring to all the General Motors properties (i.e. the Assembly Plant at Stevenson Rd S; Regional Engineering Centre at Wentworth St. W; Metal Stamping Plant at Park St. S; and the Corporate Headquarters at Colonel Sam Dr.)
c) Are all General Motors sites currently served by Hydro One?
d) Why does OPUCN believe that it would be taking over service territories of Hydro One if the properties are redeveloped? Has OPUCN had discussions with Hydro One in this regard?

Response
a) No question is being asked in question (a).
b) Reference to the GM Plant is specific to the Assembly plant and all associated properties in the vicinity at Stevenson Rd South.
c) Hydro One currently services the Assembly plant and all associated properties in the vicinity at Stevenson Rd South.
d) The Assembly plant at Stevenson Rd South, and all associated properties in the vicinity, reside within OPUCN's Service Territory as defined in its Distribution License. The potential for property redevelopment to occur at this location has been discussed with Hydro One's account executive and at Regional Planning engagements. No actions, redevelopments or service changes associated with such have occurred to date.

2.0-VECC -11

Reference: Exhibit 2, DSP, page 29-33

Does OPUCN track Defective Equipment outages by equipment type? If yes please provide the 2015 to 2019 outages by equipment type (number , number of customers interrupted and customer hours interrupted).

Response
Please see answer to 2-SEC-15.

2.0-VECC -12

Reference: Exhibit 2, DSP, page 29-33

In the recently concluded settlement proposal (yet to be opined on by the Board) between Hydro Ottawa and intervenors (EB-2019-0261) the parties agreed on a Performance Outcomes Accountability Mechanism Deferral Account. The account requires that the Utility credit the account in the favour of customers if it fails to meet certain agreed upon targets related to the execution of its distribution plan over the period of the rate plan.

a) What targets over the rate period would OPUCN consider achievable based on its proposed distribution plan for:
    a. Interruptions caused by defective equipment;
    b. SAIDI;
    c. Unit cost of fully dressed wood poles; and,
    d. Unit cost of underground cable replacement?
b) What other metrics does OPUCN believe would provide a good measure of the reliability and cost effectiveness of its distribution system plan?

Response

a) OPUC doesn't have such defined targets right now, however, with the implementation of software like Quadra and accumulation of data over the period of time, OPUC looks forward to implement these targets as part of its future performance management plan.
b) Explained as part of our future performance measurement program. EB-2020-0048 Exhibit 1 Page 85 of 100.

2.0-VECC -13

Reference: Exhibit 2, pages 51- 57 / / EB-2014-0101 Exhibit 2, Tab A, page 84 Table 2-31-Appendix 2-AA

a) Please provide a table showing the actual as compared to Board approved amounts for System Access capital spending which shows gross spending, capital contributions (system access category only) and net spending for the years 2015 through 2019.

b) Please explain any variance in net spending (if any) from the amounts shown in / EB-2014-0101 Exhibit 2, Tab A, page 84 Table 2-31-Appendix 2-AA for the System Access category.

Response

a) Please see below table:

CATEGORY	Historical Period (previous plan[1] & actual)																			
	2015				2016				2017				2018				2019			
	Plan	Actual (Gross)	Actual Contr.	Actual Net	Plan	Actual (Gross)	Actual Contr.	Actual Net	Plan	Actual (Gross)	Actual Contr.	Actual Net	Plan	Actual (Gross)	Actual Contr.	Actual Net	Plan	Actual (Gross)	Actual Contr.	Actual Net
	$ '000				$ '000				$ '000				$ '000				$ '000			
System Access	8,595	6,236	- 3,164	3,071	3,740	3,207	- 702	2,505	3,150	1,793	- 1,117	676	3,435	3,438	- 4,026	- 587	3,455	10,318	- 5,474	4,844

b) EB-2014-0101 Exhibit 2, Tab A, page 84 Table 2-31-Appendix 2-AA for the System Access category are not final values after the rate application process. For variance analysis of approved values please see Variance Analysis on Capital Expenditures, Ex. 2, Page 43 of 65.

2.0-VECC -14

Reference: Exhibit 2, DSP page 7-8, 12 /: Exhibit 2, Appendix B Asset Condition Assessment (ACA),

Please outline any methodological changes in the approach used in the METSCO Assessment Report filed in support of the 2015-2019 Distribution System Plan (EB-2014-0101) and the assessment provided by METSCO in this application.

Response

Changes driven by OPUCN that were applied to the assessment in this application from the assessment report filed in support of the 2015-2019 Distribution System Plan include:

- Distribution Assets
  - Separation of overhead lines into individual asset classes – poles (wood, steel, and concrete), cut-out arrestors, insulators, and overhead primary conductors, which results in new Health Index formulations.
  - Additional asset classes included in the current scope. This includes reclosers, elbows, switchgears, primary switches, and smart switches.
  - Modifications made to existing Health Index formulations to reflect data collected by OPUCN, failures, and industry research. This includes underground cables, vaults, and manholes.
  - Improvements on data collection, storage and consolidation of asset nameplate and condition data captured through inspection and testing tasks.
  - Whereas the previous ACA depended on age data, the current ACA expanded into actual captured condition data. Condition results calculated where supporting data exists.
- Station Assets
  - Additional asset classes included in the current scope. This includes station switchgears and relays.
  - Modifications made to Health Index formulations to reflect data collected by OPUCN, failures, and industry research. This includes power transformers, circuit breakers and ground grids.
  - Improvements on data collection, storage and consolidation of asset nameplate and condition data captured through inspection and testing tasks.
  - Condition results calculated where supporting data exists.

2.0-VECC -15

Reference: Exhibit 2, Appendix B Asset Condition Assessment (ACA), page 9

a) Please provide the equivalent to Figure 0.1 and Table 0-1 (Asset Condition Assessment overall results) using the health indices that were produced by METSCO in its prior ACA for OPUCN (filed in the last cost of service application EB-2014-0101 -Asset Condition Assessment Report and Asset Management Plan, February 2014, Exhibit 2, Tab B, Schedule 3).
b) Comparing the prior (2014) ACA Health Indices to those produced in the 2018 Report filed in this proceeding, please comment on the extent to which OPUCN has been successful (or not) in improving asset conditions as contemplated by the prior DSP.

Response

a) An equivalent and comparable figure and table cannot be constructed as the Health Index framework had been expanded and modified to reflect the current needs and requirements of OPUCN.

b) A comparison between the two assessments cannot be made on the entire system due to the expansion and modifications applied in the current assessment to capture and reflect OPUCN's entire distribution system.

2.0-VECC -16
Reference: Exhibit 2, DSP page 24

Since the METSCO ACA was undertaken (Spring 2019) OPUCN has embarked on significant increase in spending on Underground Line Renewal. (approximately $3 million in 2019 and 2020). Please provide current percentage of underground primary cable that is now considered to be in “Fair”, “Poor” and “Very Poor” condition.

Response
OPUCN has reassessed the cable condition with consideration of its recent investments in 2019 and 2020. The current percentage of underground primary cable in “Fair” is 26.4%, “Poor” in 11.6% and “Very Poor” in 1.0%.

2.0-VECC -17
Reference: Exhibit 2, DSP – Appendix A, page 190

a) OPUCN is planning on spending $736k for a new CIS system. However, we cannot find any business plan or detailed report reviewing the options for CIS replacement or more generally on the information technology plans of the Utility. Has OPUCN engaged a third party to review its IT (CIS, Office Systems and Operational Technology) plans? If yes, please provide the consultant's report(s). If not what due diligence has OPUCN done to ensure it is embarking on a robust IT plan over the next 5 years?
b) What is the basis for the projection of $410K for software and $123K for the licensing for the new CIS system?
c) Has OPUCN tendered or contracted for any of the CIS or Operational Technology (GIS,OMS,ODS,SCADA) work that will be done in 2020 and 2021?
d) Why has OPUCN spend no monies on "Information Technology General" in the years 2015 through 2019 and yet requires spending of $282k and 419k in 2020 and 2021?

Response
a) OPUCN did not engage a third party to review its plans. All requirements and system design were done by the internal OPUC IT team using industry standards and sized according to CIS application requirements. From a due diligence perspective, OPUC IT has implemented a robust back up and DR plan and is leveraging next generation Firewall technology to ensure security. The plan over the next 5 years is to ensure hardware, network, OS and firewall upgrades to ensure a robust current IT environment.
b) The $410 K is for the initial purchase and acquisition of the CIS software. The licensing component is a sum of the CIS, SQL (database software), VMWare (operating system software), Veeam (system backup software), AVG (antivirus software) and certificates (for access security)
c) Yes, CIS is currently contracted out for 2020 and 2021. As for OT, Peterborough Utilities, Trivector and Olameter have been contracted to assist for the balance of 2020 and into 2021 for various systems (MV90, OMS, PI, Kinetiq and ODS)..
d) Please see response to CCC-19.

2.0-VECC -18
Reference: Exhibit 2, Appendix B Asset Condition Assessment (ACA), page 8

At the above reference it states: "*The majority of OPUCN's system is in Fair or better condition, which suggests OPUCN's past renewal investments were effective in maintaining the system health. However, there are some assets that can benefit from an increase in asset renewal to improve the age distribution and the condition of the asset class.* ***This may result in a decrease in cost associated with reactive failures*** *and may reduce the number of assets with a condition graded below Fair*." (emphasis added)

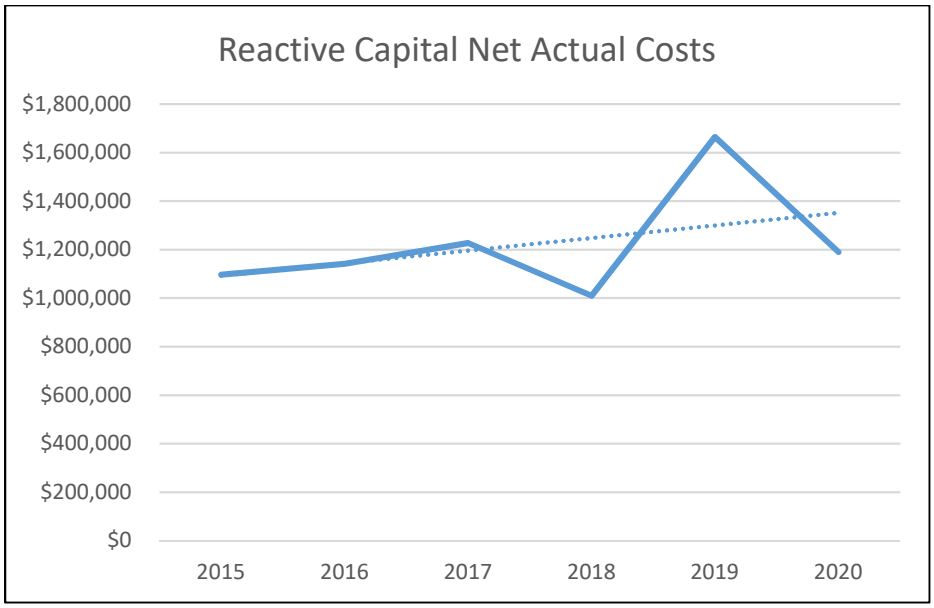
What is the annual estimated decrease in capital and operating costs associated with the improvement in asset condition that has occurred from the execution of the prior DSP and is expected to continue or improve over the time of executing the new proposed DSP?

Response
Year-Over-Year Incremental Reactive Capital Savings

The following table and graph summarizes Reactive/Emergency Plant Replacement expenditures from 2015 to 2020, as reported in Exhibit 2, DSP, Appendix 2-AA Capital Projects Table.

Table 1

Reactive Capital Net Actual Costs						
2015	**2016**	**2017**	**2018**	**2019**	**2020**	**AVG**
$1,097,162	$1,141,696	$1,228,047	$1,010,143	$1,664,882	$1,190,000	$1,221,998

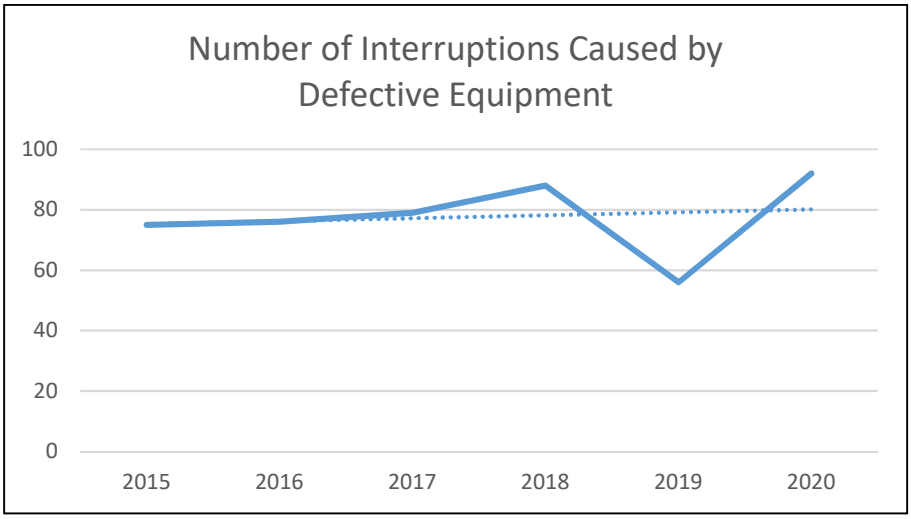


Graph 1

The following table and graph summarizes the number of Interruptions caused by Defective Equipment, including the 2020 forecast. As of November 2020, the count is 77. The 2020 forecast can be estimated as follows: 77/10*12 = 92.

Table 2

Equipment Failures					
2015	**2016**	**2017**	**2018**	**2019**	**2020F**
75	76	79	88	56	92

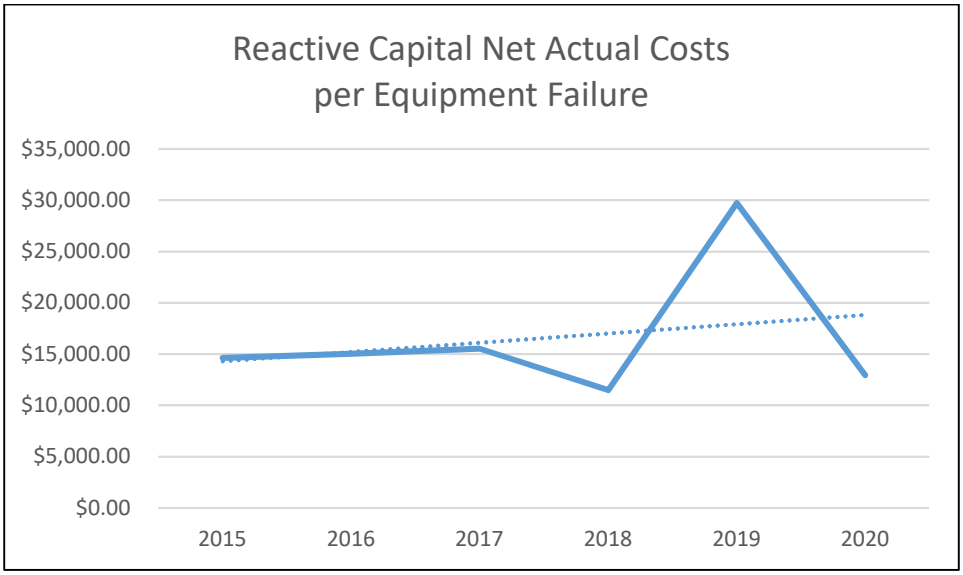


Graph 2

Normalized by the Number of Interruptions Caused by Defective Equipment, Reactive Net Actual Costs are as follows:

Table 3

Reactive Capital Net Actual Costs per Equipment Failure						
2015	**2016**	**2017**	**2018**	**2019**	**2020**	**AVG**
$14,628	$15,022	$15,544	$11,478	$29,730	$12,934	$16,556



Graph 3

Overall, these results are not trending downward. It can be concluded that system renewal efforts during the 2015-2020 time period are somewhat sustaining the status quo (in fact, trend lines are increasing in all graphs). Consequently, there are no realized year-over-year incremental reactive capital savings from a decrease in equipment failures.

Reactive Capital Savings from Equipment Failures Prevented by System Renewals

The following table summarizes the number of planned system renewal projects by year.

Table 4

Planned System Renewal Projects per Year										
2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
14	13	18	10	10	18	18	24	20	16	18

Assuming each project prevents one interruption caused by defective equipment in the year it's planned, and one in each subsequent year, then the cumulative number of prevented failures can be estimated in the following table:

Table 5

Equipment Failures Prevented by System Renewals										
2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
14	27	45	55	65	83	101	125	145	161	179

The numbers in this table are purely speculative and for illustrative purposes only. Failure rates are likely exponential once equipment is beyond useful life, and at some point, all equipment will cease to safely operate, requiring full system renewal expenditures.

Applying normalized costs from table 3 to table 5 (using the average for years 2021 to 2025), yearly reactive capital savings from equipment failures prevented by system renewals can be conservatively estimated in the following table:

Table 6

Reactive Capital Savings from Equipment Failures Prevented by System Renewals										
2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
$204 K	$405 K	$699 K	$631 K	$1,932K	$1,073K	$1,672K	$2,069K	$2,400K	$2,665K	$2,963K

Operational Expenditure Savings

The information OPUCN has readily available for operating costs, does not currently differentiate between reactive and planned maintenance. To compile that information would require additional time for analysis. OPUCN submits the incremental effort required to answer this question greatly outweighs any limited probative value the additional information may have.

2.0-VECC -19
Reference: Exhibit 2, Appendix J – 2018 Scorecard

Please update the Scorecard to include 2019 results.

Response

Please see below.

Scorecard - Oshawa PUC Networks Inc. 9/29/2020

Performance Outcomes	Performance Categories	Measures		2015	2016	2017	2018	2019	Trend	Target Industry	Target Distributor
Customer Focus Services are provided in a manner that responds to identified customer preferences.	Service Quality	New Residential/Small Business Services Connected on Time		95.40%	92.60%	99.47%	99.78%	100.00%	↑	90.00%	
		Scheduled Appointments Met On Time		99.60%	100.00%	98.53%	100.00%	100.00%	↑	90.00%	
		Telephone Calls Answered On Time		70.20%	73.70%	90.52%	90.10%	94.13%	↑	65.00%	
	Customer Satisfaction	First Contact Resolution		149%	521%	277%	103%	238%			
		Billing Accuracy		99.93%	99.94%	99.94%	99.93%	99.91%	↑	98.00%	
		Customer Satisfaction Survey Results		93% satisfied	92%satisfied	92% satisfied	95% satisfied	95			
Operational Effectiveness Continuous improvement in productivity and cost performance is achieved; and distributors deliver on system reliability and quality objectives.	Safety	Level of Public Awareness		85.00%	85.00%	85.00%	85.00%	83.00%			
		Level of Compliance with Ontario Regulation 22/04 [1]		C	C	C	C	C	→		C
		Serious Electrical Incident Index	Number of General Public Incidents	0	0	0	0	0	→		0
			Rate per 10, 100, 1000 km of line	0.000	0.000	0.000	0.000	0.000	→		0.000
	System Reliability	Average Number of Hours that Power to a Customer is Interrupted [2]		1.21	2.61	0.73	1.34	0.98	↑		1.18
		Average Number of Times that Power to a Customer is Interrupted [2]		1.27	2.06	0.98	1.29	1.09	↓		1.06
	Asset Management	Distribution System Plan Implementation Progress		99%	97%	101.3%	70.2%	99%			
	Cost Control	Efficiency Assessment		2	2	2	2	2			
		Total Cost per Customer [3]		$545	$546	$532	$569	$598			
		Total Cost per Km of Line [3]		$31,719	$31,962	$31,280	$33,915	$35,041			
Public Policy Responsiveness Distributors deliver on obligations mandated by government (e.g., in legislation and in regulatory requirements imposed further to Ministerial directives to the Board).	Conservation & Demand Management	Net Cumulative Energy Savings [4]		6.91%	24.21%	71.65%	83.00%	87.00%			73.01 GWh
	Connection of Renewable Generation	Renewable Generation Connection Impact Assessments Completed On Time		100.00%		0.00%	100.00%	100.00%			
		New Micro-embedded Generation Facilities Connected On Time		100.00%	100.00%	100.00%	100.00%		→	90.00%	
Financial Performance Financial viability is maintained; and savings from operational effectiveness are sustainable.	Financial Ratios	Liquidity: Current Ratio (Current Assets/Current Liabilities)		1.16	1.16	0.99	1.07	1.25			
		Leverage: Total Debt (includes short-term and long-term debt) to Equity Ratio		1.12	1.04	0.96	1.21	1.15			
		Profitability: Regulatory Return on Equity	Deemed (included in rates)	9.30%	9.30%	9.19%	9.00%	9.00%			
			Achieved	7.59%	9.97%	7.62%	7.93%	9.14%			

1. Compliance with Ontario Regulation 22/04 assessed: Compliant (C); Needs Improvement (NI); or Non-Compliant (NC).
2. The trend's arrow direction is based on the comparison of the current 5-year rolling average to the distributor-specific target on the right. An upward arrow indicates decreasing reliability while downward indicates improving reliability.
3. A benchmarking analysis determines the total cost figures from the distributor's reported information.
4. The CDM measure is based on the now discontinued 2015-2020 Conservation First Framework. 2019 results include savings reported to the IESO up until the end of February 2020.

Legend: 5-year trend: ↑ up ↓ down → flat
Current year: target met, target not met

2.0-VECC -20

Reference: Exhibit 1, OPUCN Business Plan, page 36/Exhibit 4, page 15

a) Please provide the capital spending in 2021 on building maintenance.
b) How many buildings does OPUCN current operate out of? How many of these buildings are owned by the City of Oshawa?

Response

a) Project Number GP-01, in the General Plant investment category, sets aside $100K in 2021, to deal with a variety of planned and/or reactive building maintenance capital expenditures. Refer to Exhibit 2, DSP Appendix L: Building Condition Assessments for recommended capital work.
b) Located at 100 Simcoe Street South, OPUCN operates out of three (3) facilities owned by the City of Oshawa, its: Head Office Building (housing finance and customer service), Operations Building (housing capital design, metering, IT and stores) and Distribution Building (housing field staff, lunch/training rooms and change facilities). In accordance with the lease agreement, the City of Oshawa is under no obligation to maintain or repair these buildings.

   OPUCN also owns and operates a pole yard at the north end of Fox St in Oshawa. Additionally, OPUCN owns and operates nine (9) in-service municipal substations, and one (1) decommissioned, out-of-service municipal substation, whose building is slated for demolition in 2020.

2.0-VECC -21
Reference: Exhibit 2, Appendix K – Grid Modernization Plan

The above noted Plan states in the Disclaimer: "*This 2020 report has been prepared by METSCO Energy Solutions Inc. ("METSCO") for Elexicon Energy Inc. ("Elexicon").*

a) Please confirm (or correct) that the reference to Elexicon Energy is made in error.
b) Has METSCO produced a similar report for Elexicon Energy?
c) Please update the Table at Section 9 (page 22) which shows the estimated costs of the Modernization Plan.
d) Please reconcile the estimates shown in the Table at Section 9 for 2020 and 2021 ($1.612M and $1.395M respectively) and the amounts shown for "Smart Grid" expenditures in Appendix 2-AA of 335k and 350k for those two years.

Response
a) Confirmed that this was a mistake.
b) OPUCN is not aware of any such report by Metsco.
c) Estimated costs are currently valid.
d) Appendix 2-AA values include MS Network Upgrade (SS-05), SCADA Integration and Deployment of Automation Controllers and Network Connected Devices (SS-04), MS Battery and Battery Charger Upgrades (SS-06) and SCADA Operated 44kV OH Switches (SS-03) while Section 9 includes a more comprehensive list of projects as indicated on the table.

2.0-VECC -22

Reference: Exhibit 2, Appendix K – Grid Modernization Plan

a. Please provide the costs for the:
   a. Peak Performance OEB sponsored TOU Study
   b. Solar Energy Management Study
   c. OSI Pi System
   d. E-Mission
   e. Durham Community Energy Plan
   f. Combined Heat and Power
   g. Electric Bus
b. Please identify those projects listed in a) for which the costs are proposed to be recovered in distribution rates.

Response

a)
   a. Peak Performance: No costs – all flow-through from OEB sponsorship
   b. Solar Energy Management Study - No costs – all flow-through from foreign investment
   c. The acquisition of OSIsoft's PI System occurred in 2017.
      In the previous DSP, a five (5) year total of $1.84M was budgeted in the General Plant investment category for all operational technology projects related to the OMS, MWF, GIS, ODS, CIS and IVR. Of this, the following was spent on Pi System:

      - $121, 411.20 for software acquisition
      - $12,705 for training
      - $15, 440 for system integration services

      Pi System is data aggregator, used today to calculate transformer loading from smart meter data and connectivity models based on GIS data.
   d. E-Mission- $15,000 (estimated costs over 2016 to 2020 years of administration)
   e. Durham Community Energy Plan - $10,000 over 4 years of development
   f. Combined Heat and Power - No costs – incentives are flow-through from Save On Energy, which OPUC is obliged to administer.
      Please Refer to the interrogatory response to Question 2-DRC-5
   g. Electric Bus- Only costs associated with OPUC's obligation to support new connections. Other costs are covered through grants such as one achieved from The Atmospheric Fund.
      Refer to the interrogatory response to Question 2-DRC-5

b) No project costs listed in a) are proposed to be recovered in distribution rates.

3.0-VECC-23
Reference: Exhibit 3, page 4

Preamble: The Application (page 4) states: "*There are no COVID-19 related impacts forecasted for inclusion in rates in this Application on the assumption that the costs of those impacts will be tracked in the DVAs and disposed of by the OEB later*."

a. The Application makes reference to the costs of COVID-19 related impacts. In OPUCN's view is it possible that the utility will experience cost savings as a result of the COVID-19 pandemic?
b. If yes, is it OPUCN's expectation that such savings will also be tracked in the DVA and disposed of later?

Response

a. Yes.
b. OPUCN continues to monitor the situation but prefers to wait on formal confirmation of what impacts will be eligible for recovery through DVA accounts, and how they are to be calculated.

3.0-VECC-24
Reference: Exhibit 3, page 6 (Table 3-1)

Are the values for the Bridge Year (2020) all forecast or are the values partially based on actual results for 2020? If partially based on actuals, for what months were actual results used?

Response

The values for the Bridge Year are all forecast.

3.0-VECC-25

Reference: Exhibit 2, page 20; Exhibit 3, pages 8 and 11
Load Forecast Model, Purchased Power Model Tab, Column B

Preamble: The Application states (Exhibit 2, page 20): "*OPUCN's wholesale market participant (WMP) customers have been excluded from the calculation of electricity and global adjustment costs, as they transact directly with the Independent Electricity System Operator (IESO) for the purchase of electricity*".
The Application states (Exhibit 3, page 8): "*The methodology uses monthly wholesale deliveries for the period January 2010 to December 2019, as metered in kWh's at the wholesale points of delivery, to represent electricity purchases*".

a. Do the purchased power values used in the load forecast model include sales to OPUCN's wholesale market participant(s)? If not, how are the volumes associated with OPUCN's wholesale market participant incorporated into the load forecast?
b. Does OPUCN purchase power from any embedded generators (e.g. MicroFIT)
c. If yes, are these purchases from embedded generators included in the Power Purchased values for 2010-2019 used in the load forecast model?
d. If either i) OPUCN purchases power from embedded generators and these purchases are not included in the Power Purchased values used in the load forecast and/or ii) sales to OPUCN's wholesale market participants have not been included, then please provide a revised load forecast model where the Power Purchased Model Tab includes columns for these as appropriate and the regression model is based on the overall sum.

Response

a. Yes, the purchased power values used in the load forecast model include sales to OPUCN's WMPs.

b. Yes, OPUCN purchases power from embedded generators. As of Dec 2019, there were 340 microfit installations in Oshawa.

c. Yes, purchases from embedded generators are included in the power purchased values for 2010-2019 in the load forecast model.

d. As stated in a to c, both WMP and embedded generation values are included in the Power Purchased values.

3.0-VECC-26

Reference: Exhibit 3, pages 9 and 10
Preamble: The Application states (page 9): "*Cycle billing process is an example of a constraint that makes it difficult to produce the data required to develop individual rate class models to predict future consumption. OPUCN employed cycle billing processes since 2003.*"
The Application also states (page 10): "*While it may be desirable to isolate consumption determinants related to individual rate classes, this is simply not possible with the data available to OPUCN at this time.*"

a. Do all of OPUCN's metered customer classes have smart/interval meters?
b. Would it be possible for OPUCN to use the smart/interval meter data to establish rate class usage on a calendar month basis and use this data to develop individual rate class models in future Applications?

Response

a. Majority of metered customers have smart/interval meters. There is a small handful (approximately 40) that will not allow OPUCN to change the meter to a smart/interval meter.
b. OPUCN cannot comment definitively at this time but we will continue to develop our forecasting abilities along these lines.

3.0-VECC-27

Reference: Exhibit 3, page 17; Load Forecast Model, Rate Class Energy Model Tab, Cell F22
Preamble: The Application (page 17) states: "*As outlined in this Exhibit, OPUCN's proposed loss factor is 4.37%. With this average loss factor the total weather normalized billed energy will be*".
Exhibit 3 states that the loss factor used to convert forecast purchases to forecast billed energy was 4.37%, the same values as proposed for 2021 based on a 5-year average. However, the Load Forecast Model uses a value of 4.382, based on a 10-year average. Please confirm that it was OPUCN's intent to use the 10-year average consistent with the historical period used to estimate the load forecast model.

Response

Yes. It was OPUCN's intent to use the 10-year average consistent with the historical period used to estimate the load forecast model. A historical loss factor was used to adjust the total system normalized purchases forecast. This is stated on page 17, of Exhibit 3, line number 2: "To determine the total weather normalized energy billed forecast, the total system weather normalized purchases forecast is adjusted by a historical loss factor."

3.0-VECC-28

Reference: Exhibit 3, pages 17-18; Load Forecast Model, Rate Class Customer Model Tab

a. Please confirm that the average number of customers/connections for each year was determined based on the average of the 12 monthly values.
b. Is each monthly value, the customer/connection count as of the end of the month?
c. Please provide the actual number of customers/connections for each rate class as of June 30, 2019, July 31, 2109, June 30, 2020 and July 31, 2020.

Response

a. Confirmed, the average number of customers/connections for each year was determined based on the average of the 12 monthly values.
b. The monthly value for the customer/connection count is as of the end of the month.
c.

Actual Customer/Connection Count

	June 30, 2019	July 31, 2019	June 30, 2020	July 31, 2020
R Residential	54,640	54,680	54,870	54,913
C1 Commercial	4,194	4,188	4,205	4,208
I1 Industrial > 50 <200	404	404	406	406
I4 Industrial >200 <1000	130	131	137	138
I2 Industrial > 1000 < 5000	13	13	12	12
I3 Industrial > 5000	1	1	1	1
S Street Lights	13,959	13,959	13,978	13,978
Sent Lights	23	23	23	23
UN Unmetered	277	277	283	283
Total	**73,641**	**73,676**	**73,915**	**73,962**

3.0-VECC-29

Reference: Exhibit 3, page 18; Load Forecast Model, Rate Class Energy Model, Row 36

Preamble: The Application states: "*The following Table 3-5 provides the average annual consumption per customer connection by rate class for OEB-approved 2019 and Actual 2019*." The Application also states: "*The non-normalized weather billed energy forecast has been determined however the results needs to be adjusted based on weather sensitivity factors*".

a. Please provide a reference/source for the OEB-approved 2019 values in Table 3-5.
b. What is the basis for the weather sensitivity factors used in the Load Forecast Model?

Response

a. Customer count OEB approved value can be found in the weather Normalization Regression Model filed with EB-2017-0069, filed with OEB on January 23, 2018 on RESS.

b. OPUCN utilized the HONI weather sensitivity data prepared in the 2006 Load Profile Study. These values are consistent with OPUCN's 2018 Custom IR mid-term update application (EB-2017-0069).

3.0-VECC-30

Reference: Exhibit 3, pages 12 and 19; OPUCN 2017 Final Verified Annual CDM Program Results File

OPUCN P_C Report OPUCN-2018 3-Staff-55

a. It is noted that the OPUCN 2017 Final Verified Annual CDM Program Results file contains the persisting impact of CDM programs implemented in 2015-2017 for the period 2015-2021. Please provide similar reports from the OPA/IESO that indicate the persisting savings from CDM programs implemented in 2010-2014 for the period 2010 to 2021.
b. Please provide the most recent reports from the IESO that document:
    a. The savings from CDM programs implemented in 2018 persisting annually over the period 2018-2021.
    b. The savings from CDM programs implemented in 2019 persisting annually over the period 2019-2021.
c. Please confirm that there are no CDM projects that have been or are planned to be implemented in 2020 that are related to the wind-down of the Conservation First Framework.
    a. If there are, please identify the programs and their anticipated annual savings for the period 2020-2021.
d. Based on the response to the above questions and the CDM reports filed with the Application, please provide a schedule/excel file that for each of the program years 2010 to 2020 sets out the persisting CDM impacts through to 2021 as follows:

Impact of Historical and Forecast CDM					
Calendar Year/ CDM Program Year	2010	Columns for Each Subsequent Year up to 2020			2021
2010 CDM Program Impacts					
Actual CDM impacts for each year to 2009 – one row per year					
2020 CDM Programs Impacts					
Total					

e. Based on the response to part (d) please confirm whether the cumulative impact of CDM (i.e., the column totals) increased annually over the 2010-2019 period.

f. If the response to part (e) is yes, please confirm that this annual increase will have served to decrease the purchased power values for 2010-2019 used to develop the purchased power model.

g. If the response to part (e) is yes, could it be the impact of CDM implemented over the period 2010-2019 that gives rise to the results referenced by ORB Staff in 3-Staff-55 whereby "in every year from 2010 to 2015, actual purchases exceeded predicted purchases, and in every year from 2016 to 2019, predicted purchases exceeded actual purchases"?

h. If the response to part (e) is yes, please confirm whether a similar annual increase in the annual impact of CDM is forecasted to occur over the years 2020 to 2021 and, if not, what adjustments are required to the purchased power forecasts for 2020 and 2021.

Response

a. OPUCN obtained a report for 2011-2014 savings from IESO. The format is different but attempts to show the persistence of the savings from CDM programs between 2011 to 2021. Please see workbook attached as Appendix M.

b. 2018 and 2019 IESO report of persistent savings was filed with the application as "OPUCN_P_C Report OPUCN-2018-20200724". This report shows the new savings from programs in 2018 until April 2019 when CDM was cancelled, and their respective persistent savings.

c. Confirmed, OPUCN is not implementing any new programs associated with the wind-down of CDM.

d. Please find below schedule that for each of the program years 2010 to 2020 that sets out the persisting CDM impacts through to 2021.

Impact of Historical and Forecast CDM (MWH Energy Savings)

						Calendar Year						
CDM Program Year	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
2010 CDM Program Impacts	0	2,557	2,550	2,549	2,480	2,165	2,141	1,829	1,180	785	785	785
2011 CDM Program Impacts		2,584	2,562	2,540	2,516	2,394	2,115	1,775	1,489	1,235		
2012 CDM Program Impacts		0	3,995	3,925	3,800	3,543	3,155	2,522	1,949	1,506		
2013 CDM Program Impacts		0	0	5,248	5,163	5,015	4,635	3,742	2,720	1,975		
2014 CDM Program Impacts (Fcast)		0	0	0	7,426	7,426	7,426	7,426	7,426	7,426		
2015 CDM Program Impacts						15,610	15,568	15,565	15,549	15,543	15,538	15,537
2016 CDM Program Impacts						0	14,012	14,012	14,012	13,851	13,731	13,260
2017 CDM Program Impacts						0	0	26,662	23,085	23,079	23,040	22,994
2018 CDM Program Impacts						0	0	0	5,389	5,254	5,254	5,254
2019 CDM Program Impacts						0	0	0	0	123	109	109
2020 CDM Program Impacts						0	0	0	0	0	0	0
TOTAL	**0**	**5,141**	**9,107**	**14,262**	**21,386**	**36,153**	**49,051**	**73,533**	**72,799**	**70,778**	**58,457**	**57,940**

e. CDM kWh energy savings increased up until 2019. A steady decrease can be seen for 2019 to 2021 since the cancellation of CDM in March of 2019.

f. The impact of the CDM savings are captured in the purchased power values for 2010-2019 as actual purchases from wholesale points was taken for the purchased power values. Actual purchases would reflect the CDM savings ongoing in the City of Oshawa.

g. Agreed. CDM played an impact in the results for actual purchases from 2016 to 2019 where predicted purchases exceeded actual purchases.

h. A similar increase is not expected for the bridge and test year. As mentioned since the cancellation of CDM programs, at the LDC level in March of 2019, there has been no growth in CDM energy savings. Oshawa is still benefiting from the persistence of prior year's savings, which are reflected in the forecast for 2020 and 2021. By using actual purchases over a ten year period, those persistent savings are captured when forecasting 2020 and 2021 in a regression model.

3.0-VECC-31

Reference: Exhibit 3, page 36 (Table 3-26) Chapter 2 Appendices, Tab 2-H

a. It is noted that for 2020 and 2021 there are no forecast revenues for Accounts #4082 and #4084. Please confirm that OPUCN currently has no customers that are served by Retailers. If not confirmed please indicate why the forecast values for these accounts are zero.
b. Please explain why Rent From Electric Property (Acct. #4210) was higher in 2019 than either 2018 or the 2020 forecast.
c. In what account are the revenues from the MicroFit charge (per Exhibit 8, page 13) reported and what are the forecast revenues for 2021?

Response

a. OPUCN does have customers served by retailers. These revenues are included in account 4235 - specific service charges. The table below is from the Chapter 2 Appendices workbook, tab "App.2-H: Other Operating Revenue".

4235 - Specific Service Charges							
	2015 Actual[2]	2016 Actual[2]	2017 Actual[2]	2018 Actual[2]	2019 Actual	Bridge Year	Test Year
	2015	2016	2017	2018	2019	2020	2021
Reporting Basis							
Collection Charge	$ 501,317	$ 606,809	$ 288,867	$ 51,096	$ 27,596	$ 39,837	$ 40,392
Set up Charge	$ 261,450	$ 287,490	$ 290,002	$ 284,790	$ 258,344	$ 274,959	$ 278,786
Enhancement Revenue	$ 55,730	$ 73,821	$ 31,985	$ 272,290	$ 64,584	$ 52,874	$ 52,874
Reconnect Charge	$ 62,145	$ 60,430	$ 42,700	$ 71,757	$ 68,460	$ 70,984	$ 71,972
Retail Charges	$ 45,896	$ 40,594	$ 34,004	$ 28,165	$ 38,278	$ 33,637	$ 27,488
Other	$ 12,311	$ 8,803	$ 9,275	$ 11,371	$ 12,181	$ 11,603	$ 11,758
Total	$ 938,849	$ 1,077,947	$ 696,833	$ 719,469	$ 469,443	$ 483,894	$ 483,271

b. The amount in 2019 included recognition of the increased attachment charges set by the OEB. The decrease in 2020 reflects adjustments made to transfer the increases to Account 1508 Sub Account – Pole Attachment Revenue Variance for future disposition. The 2021 test year includes the new OEB rates.
c. These charges, forecast to be $25,668 in 2021, are included as a revenue offset in Account 4086.

4.0 -VECC -32
Reference: Exhibit 4, page 41

a. Please describe the CDM initiatives that OPUCN intends to continue over the next 5 years.

b. How many key accounts does OPCUN have and which will be monitored by the staff member moving from CDM?

c. Prior to the movement of 1 FTE from dedicated CDM work how many FTEs were assigned to key account work?

d. Please provide the job description of the key account position and when that position was created.

Response

a) The following is a high-level summary of CDM initiatives OPUCN intends to continue over the next 5 years.
   - Administration of all provincially-mandated wind-down activities for the Conservation First Framework, such as fulfilling incentives, reporting to the IESO and undergoing audits. According to the IESO, these activities are anticipated to continue until the second quarter of 2022.
   - Wind-down activities associated with the regional Refrigeration Efficiency Program.
   - Assisting customers with the annual sign-up/opt-out process for the Industrial Conservation Initiative. This includes modelling, hosting meetings and administering provincially-required paperwork.
   - Supporting the development and administration of regional CDM programming under the IESO's new framework or other pilots such as the CDM Auction, where possible, in order to ensure Oshawa has fair access to conservation incentives.
   - Supporting the development of conservation-type programming that exists outside of provincial frameworks, such as energy efficiency programs spelled-out in the Durham Community Energy Plan and the Oshawa Community Greenhouse Gas Reduction Plan.
   - Educational activities that help customers learn about energy efficiency and how to reduce bills.
   - Please note – OPUCN also coordinates a wide variety of other sustainability efforts that are not considered "CDM".

b) OPUCN's Key Account strategy includes 25 accounts that receive multiple touch-points throughout the year. These accounts include very large customers, customers with complex energy needs, customers who are particularly engaged on energy topics and customers who are important stakeholders within the community. The Key Account staff member will monitor all of these accounts. They will also do proactive, value-added outreach with various other account groups as opportunities or challenges arise. An example could be providing a direct-

line of support for a business during a power outage, or presenting to members of the Chamber of Commerce on new provincial or federal energy policy.

c) OPUCN's formal Key Account work was initiated during the Conservation First Framework as a tactic for increasing CDM program participation. No FTEs were previously assigned to this work.

d) The job duties associated with the role, which came into effect in July 2019, are summarized below.

Key Accounts" Job Description (Manager of Sustainability and Business Advocacy)

Key Account Management

- Engage with each segment of the non-residential customer base at least annually, including:
  - Small/Medium Business
  - Industrial/Commercial/Institutional
  - Industrial
- Proactively communicate updates and insights to customers to ensure they have access to lowest possible rates, energy programming, timely information about any policy changes; etc.
- Meet with largest 25 customers 2-4 times a year, to ensure their needs are met and to ensure their fees remain as low as possible
- Provide a single point of contact during unplanned outages and provide proactive communications during emergencies such as ice-storms; etc.
- Connect customers with other departments within Oshawa Power, to create a seamless customer service experience

New Business Development

- Assist in developing information for potential new businesses, looking to settle in Oshawa
- Support local government in understanding rates and estimating costs when undertaking investment attraction activities
- Support local stakeholders in developing innovative energy solutions

Conservation and Demand Management

- Administer annual Industrial Conservation Initiative Opt-in and Opt-out process
- Continue to administer CDM programming as needed, per the Conservation First Framework (CFF) wind-down guidelines, which extend LDC obligations to at least 2022
- Administer CFF wind-down audits
- Support account holders in accessing incentives from the new centrally-run programming
- Apply for and execute initiatives

Sustainability

- Design and execute internal and client-facing sustainability initiatives
- Set sustainability targets and report annually

- Support local policy and programming development
- Apply for grant funding and execute programs

4.0 -VECC -33
Reference: Exhibit 4, page 42

Is OPCUN now being charged or allocated costs related to the work of the 1 FTE who moved from OPUCN Community Relations to Corporate?

Response

The reference to Corporate in this case refers to Corporate within OPUCN. The cost has always been in OPUCN.

4.0 -VECC -34
Reference: Exhibit 4, page 43

The evidence states: "*Actual retirements amongst the skilled trades department totalled 8 FTE's, in line with the forecast approved in 2015. Other retirements in the period totalled 11 FTE's, including 6 management and 5 non-trade staff.*

Other leavers in the period for reasons other than retirement totalled 10, including 6 skilled trades personnel."

a. Please clarify the difference as between "actual retirements" and "other retirements."
b. Is the correct number of job turnovers at OPUCN for the 2015 to 2019 period 29 FTEs (i.e. 8+11+10)? If not please provide the correct number.
c. The numbers suggest that OPUCN has an annual churn or turnover rate of about 6 FTEs. Is that correct? If not please provide the actual annual turnover rate for the last 5 years.

Response

a. There is no difference. The first part of the statement is referring to the skilled trades department, the second part or "other" is referring to all other departments.
b. The total, including temporary or contract staff, is 32.
c. An annual churn rate of about 6 FTEs is correct

4.0 -VECC -35

Reference: Exhibit 4, Table 4-21, page 47

Please amend Table 4-21 (Appendix 2-K) to include the total amount of compensation capitalized in each year.

Response

Please see below Appendix 2-K amended as requested.

	Last Rebasing Year (2015 OEB Approved)	2015 Actuals	2016 Actuals	2017 Actuals	2018 Actuals	Last Rebasing Year (2019 OEB Approved	2019 Actuals	2020 Bridge Year	2021 Test Year
Number of Employees (FTEs including Part-Time)									
Management (including executive)	19.3	18.3	18.0	19.9	27.0	20.0	27.5	28.3	28.0
Non-Management (union and non-uni	65.2	60.4	57.6	64.0	63.0	64.9	62.7	64.1	63.4
Total	84.5	78.7	75.7	83.9	90.0	84.9	90.2	92.3	91.4
Total Salary and Wages including overtime and incentive pay ($000's)									
Management (including executive)	$ 2,113	$ 1,991	$ 1,994	$ 2,240	$ 2,942	$ 2,351	$ 3,274	$ 3,295	$ 3,287
Non-Management (union and non-uni	$ 5,400	$ 5,158	$ 5,136	$ 5,192	$ 5,594	$ 5,939	$ 5,533	$ 5,864	$ 5,913
Total	$ 7,512	$ 7,149	$ 7,131	$ 7,431	$ 8,536	$ 8,290	$ 8,806	$ 9,159	$ 9,201
Total Benefits (Current + Accrued) ($000's)									
Management (including executive)	$ 668	$ 646	$ 627	$ 707	$ 858	$ 750	$ 899	$ 934	$ 945
Non-Management (union and non-uni	$ 1,666	$ 1,752	$ 1,709	$ 1,737	$ 1,738	$ 1,786	$ 1,730	$ 1,786	$ 1,821
Total	$ 2,334	$ 2,399	$ 2,336	$ 2,444	$ 2,595	$ 2,536	$ 2,628	$ 2,719	$ 2,766
Total Compensation (Salary, Wages. Benefits) ($000's)									
Management (including executive)	$ 2,781	$ 2,637	$ 2,621	$ 2,947	$ 3,800	$ 3,101	$ 4,172	$ 4,228	$ 4,232
Non-Management (union and non-uni	$ 7,065	$ 6,910	$ 6,845	$ 6,929	$ 7,331	$ 7,725	$ 7,262	$ 7,650	$ 7,735
Total	$ 9,846	$ 9,548	$ 9,466	$ 9,875	$ 11,131	$ 10,825	$ 11,434	$ 11,878	$ 11,967
Allocated to Capital	$ 3,325	$ 3,197	$ 3,031	$ 3,195	$ 3,655	$ 3,599	$ 3,505	$ 3,575	$ 3,646
Allocated to OM&A	$ 6,521	$ 6,351	$ 6,435	$ 6,680	$ 7,476	$ 7,227	$ 7,929	$ 8,303	$ 8,320

4.0 -VECC -36
Reference: Exhibit 4, page 42

a. Please provide a list of the 9 management positions added since the last rebasing. Please provide: when the position was created; the salary range of each position and indicate whether the position is currently filled.
b. Of the total 91 FTEs shown how many are currently filled?

Response

a. The 9 management positions added since the last rebasing are as follows:

Position Title	**FTE Count**	**When Position Created**	**Currently Filled Y/N**
1. Marketing & Communications Analyst	1.0	2017	Y
2. Purchasing Manager	1.0	2017	Y
3. Human Resources Consultant	1.0	2017	Y
4. Distribution Engineer in Training	1.0 (not a new FTE – internal realignment of employees)	2018	Y
5. Powerline Co-op Student	0.5	2018	N
6. President & CEO	1.0 (not a new FTE – internal realignment of employees)	Transferred from parent company in 2019	Y
7. Manager, Sustainability & Business Advocacy (Key Accounts - formerly CDM)	1.0 (not a new FTE – internal realignment of employees)	Transferred from parent company in 2019	Y
8. Maintenance Planner	1.0	2019	Y
9. Cyber Security Analyst (IT)	0.5	2019	N
10. Marketing Analyst (transferred to Corporate – formerly approved under Community Relations)	1.0	2020	Y

*Note: Salary ranges cannot be disclosed for these positions as there is only one (1) person in the role and would amount to the disclosure of salaries of specific individuals.

b. See the response to 4-SEC-35.

4.0 -VECC -37
Reference: Exhibit 4, page 45

a. Please explain what OEB scorecard metrics are associated with incentive pay and what positions are subject to those incentives.
b. Using 2019 as an example, please show how the OEB scorecard metrics influenced incentive compensation at OPUCN.

Response

a. Each year, we select a number of OEB scorecard metrics to include on our corporate performance scorecard. The results of the corporate performance scorecard equate to 60% of the incentive payout. Other OEB scorecard metrics are reflected on the individual performance goals and objectives for the management team members assigned to manage the achievement of the target metric result. The results of individual performance goals and objectives equates to 40% of the incentive payout. Management and Non-Union positions are eligible for the annual incentive pay program.

b. Using 2019 as an example, the following OEB scorecard metrics were included on our 2019 corporate scorecard with targets set for threshold, target, and stretch.

- Customer Focus & Satisfaction (Composite Score – New Residential/Small Business Services Connected on Time, Scheduled Appointments Met on Time, Telephone Calls Answered on Time, Customer Satisfaction Survey Results)
- Safety (Number of Incidents/Injuries)
- System Reliability (SAIDI/SAIFI – Average Number of Hours/Times that Power to a Customer is Interrupted)

The results achieved on these corporate scorecard metrics contributed to a total score of 47.5/60 which translated to the calculation of 60% of the incentive payout to eligible employees in 2019.

In addition, other OEB scorecard metrics were included on individual goals and objectives/performance plans for management members responsible for metric achievement. Results for achievement of these metrics/objectives translated to the individual's score for the remaining 40% of the incentive payout. Examples of OEB scorecard metrics that were assigned to individual performance goals and objectives are:

- Safety (Level of Compliance with ESA 22/04)
- System Reliability (SAIDI/SAIFI – Average Number of Hours/Times that Power to a Customer is Interrupted)
- Level of Public Awareness (Survey Results, Customer Outreach Events)

4.0 -VECC -38
Reference: Exhibit 4, page 45

a. Please explain what OEB scorecard metrics are associated with incentive pay and what positions are subject to those incentives.
b. Using 2019 as an example, please show how the OEB scorecard metrics influenced incentive compensation at OPUCN.

Response

This question is a repeat of 4.0 –VECC – 37, please see response to 4.0 – VECC-37.

4.0 -VECC -39
Reference: Exhibit 4, page 45

a. Given the change to move the CEO position within OPUCN please describe what remaining management duties are performed by OPUC for OPCUN.
b. Please also explain why it is necessary or financially beneficial to OPUCN to retain these (explained in response to a)) services as opposed to carry them out in-house.

Response

a. The corporate structure consists of a parent company (OPUC) and several subsidiary companies, of which OPUCN is one. Management fees charged to OPUCN include the costs of the Board of Directors, the CFO, and various minor corporate expenses.
b. The existing corporate setup allows for economies of scale or efficiencies in multiple areas such as corporate governance, facilities, audit, strategic planning.

4.0 -VECC -40
Reference: Exhibit 4, page 58

Please provide the forecast membership fees for the Electricity Distributors Association (EDA) in 2020 and 2021.

Response

The forecast fees in 2020 and 2021 are:
2020 $85,000
2021 $86,900

4.0 -VECC -41
Reference: Exhibit 4, page 66

a. Please provide the actual OEB Annual Assessment costs for 2016, 2017 and 2018.
b. Please explain what the 50k in "OEB Section 30 Costs (application related) refers to.
c. Please provide a table showing the one-time regulatory costs for this application (by category legal, consultant etc.) incurred to date.
d. Please provide a breakdown of the consultant costs (344k) into its constituent parts.

Response

a. Actual OEB Annual Assessment charges were $221,840, $251,475 and $236,675 for 2016, 2017 and 2018 respectively.
b. The amount is $5k, not $50k. Typically these relate to allocation of intervenor/OEB costs for general hearings.
c. Please see below:

Activity		Budgeted	Actual to Date
Technical writing / Exhibit 1		$66,800	$53,837
Customer Engagement		$100,000	$74,566
DSP / Asset Condition Assessment		$164,000	$70,680
Misc		$13,333	$14,999
Legal & other support		$168,653	$49,849
Intervenor and OEB costs		$175,000	$0
Total		$687,786	$263,931

d. Please see response to CCC-31.

4.0 -VECC -42

Reference: Exhibit 4, page 71 /Appendix 4-3 Asset Depreciation Study, page 10

a. Please confirm (or correct) that METSCO found only one utility which used a TUL for SCADA systems of 8 years or less (5 years).
b. OPUCN states that the changes to depreciation lives to the various asset considered for change from the Kinetric guidelines would have an impact of increasing depreciation expenses by about 60k. How would this 60k estimated be impacted if a TUL of 15 years for SCADA was used rather than the 8 years proposed?

Response

a. There is no reference to how many utilities METSCO found which used a TUL for SCADA systems of 8 years or less (5 years). The chart on page 10 of the Asset Depreciation Study is an extract from the Kinetrics report.
b. OPUCN is not proposing any changes to the TULs currently in use for any of its asset classes. The TUL's proposed in this application are the same as those approved in OPUCN's 2015 rebasing application. The $60k referred to in b) above relates to the impact in 2015, and was approved by the OEB.

5.0-VECC-43
Reference: Exhibit 5, page 3

Please reconcile the $147,450,670 in total components of rate base shown in Table 5-2 with the $147,471,271 in total rate base shown in the RRWF (e.g. Table 2-1 per Exhibit 2, page 5).

Response

Table 5-2 (Exhibit 5, page 3) was not updated to the final numbers submitted in the RRWF and in the Chapter 2 Appendices workbook (Appendix 2-AO). Below is an updated Table 5-2 corresponding to the RRWF as filed.

	2019 OEB Approved	2021 Test Year
Debt		
Long-term Debt	$73,777,435	$82,583,912
Short-term Debt	$5,269,817	$5,898,851
Total Debt	**$79,047,252**	**$88,482,763**
Equity		
Common Equity	$52,698,168	$58,988,508
Preferred Shares	$0	$0
Total Equity	**$52,698,168**	**$58,988,508**
Total	**$131,745,420**	**$147,471,271**

5.0-VECC-44

Reference: Exhibit 5

Please provide an update as to the current plans for the issuance of $10.0 million and $5.0 million in debt in 2020 and 2021 respectively.

Response

Discussions regarding this new debt are in progress, with the latest rate estimate in the region of 2.10% for a 10 year term.

5.0-VECC-45
Reference: Exhibit 5, page 4-5

The evidence states: "*OPUCN requests that the Long-Term debt rate used to determine distribution rates be updated as necessary in the applicable Test Year, in a manner consistent with Board policy applicable at that time, in the event that OPUCN issues any new long-term debt during this period*."

We are unclear what is being sought. Is OPCUN seeking to adjust the long-term debt component of the revenue requirement subsequent to the end of this proceeding and as part of a later IRM rate change?

Response

This request is to allow for the long term debt rate to be updated to the actual or applicable rate on finalization of the proceeding, not subsequently and not as part of a later IRM rate change.

5.0-VECC-46

Reference: Exhibit 5, page 3

a. Please explain why the affiliated debt held by Oshawa Power & Utilities Corp. does not attract the current Board affiliate long-term debt rate of 3.21%.
b. Please confirm (or correct) that in EB-2014-0101 the Board ordered OPUCN to use the Board's 2016 long-term debt from affiliates rate for long-term debt held by the affiliate Oshawa Power and Utilities Corp.
c. Please update tables 5-11 and 5-5 using 3.21%.

Response

a. Had Oshawa PUC Networks borrowed the $60.0m directly from TD, the rate would have been 3.65% also. Given the parent-subsidiary relationship, and that OPUCN is a guarantor for the loan, it is reasonable to apply the 3.65%.
b. In EB-2014-0101, the Board approved the use of the OEB deemed long-term debt rate in relation to OPUCN's long-term debt owing to its parent company (Oshawa Power and Utilities Corp).
c. Please see below:

Table 5-5

Appendix 2-OA
Capital Structure and Cost of Capital

This table must be completed for the last OEB-approved year and the test year.

Test Year: 2021

Line No.	Particulars	Capitalization Ratio			Cost Rate		Return
		(%)		($)	(%)		($)
	Debt						
1	Long-term Debt	56.00%		$82,572,375	3.21%		$2,650,573
2	Short-term Debt	4.00%	(1)	$5,898,027	2.75%		$162,196
3	Total Debt	60.0%		$88,470,402	3.18%		$2,812,769
	Equity						
4	Common Equity	40.00%		$58,980,268	8.52%		$5,025,119
5	Preferred Shares	0.00%		$ -	0.00%		$ -
6	Total Equity	40.0%		$58,980,268	8.52%		$5,025,119
7	Total	100.0%		$147,450,670	5.32%		$7,837,888

Table 5-11

Year 2021

Row	Description	Lender	Affiliated or Third-Party Debt?	Fixed or Variable-Rate?	Start Date	Term (years)	Principal ($)	Rate (%) [2]	Interest ($) [1]	Additional Comments, if any
1	Note	Oshawa Power&Utilities Corp	Affiliated	Fixed Rate	1-Oct-18		$60,064,000	3.21%	$1,928,054	Deemed Rate
2	Term Loan 2020	TD Bank (Unfunded)	Third-Party		1-Oct-20		$10,000,000	3.21%	$ 321,000	Deemed Rate
3	Term Loan 2021	TD Bank (Unfunded)	Third-Party		1-Jul-21		$ 5,000,000	3.21%	$ 80,470	Deemed Rate
Total							$75,064,000	3.21%	$2,329,524	

5.0-VECC-47

Reference: Exhibit 5, Appendix 5-1

The notional amount of the Oshawa Power & Utilities Corp. held debt is $60 million. Table 5-11 shows the interest calculated on an amount of $60.064 million. Please explain the (minor) discrepancy.

Response

When the Parent (OPUC) and OPUCN were incorporated, the opening agreed loan/note balance owing from OPUCN to OPUC of $23.064m included the $0.064m. The related outstanding TD debt at the time was held by OPUC and was an even $23.000m. Over time, as debt levels have changed, the $0.064m has not changed.

7.0 – VECC –48
Reference: Cost Allocation Model, Tabs I6.1 and I6.2

a. Please reconcile the 2021 billing demand for Streetlights in Exhibit 3 (page 21) of 12,504 kW with the 12,698 kW value used in Tab I6 of the Cost Allocation Model.
b. With respect to Tab I6.2, please explain why for the GS 50-999 class the number of Line Transformer Customers is less than the number of Secondary customers.
c. With respect to Tab I6.2, does OPUCN provide the line transformer and secondary assets for all residential customers or are there some residential customers (e.g., residing in condominium corporations) where these assets are not owned by OPUCN?

Response

a. Please see response to OEB Staff question 3-Staff-56. Tab I6 in the Cost Allocation Model has been updated. Please see attached updated Cost Allocation Model.

b. The Line Transformer Customers do not include the 19 customers in class GS 50-999 who own their own transformer.

c. For all customers in the Residential Class, OPUCN owns and provides the line transformer and secondary assets.

7.0 – VECC –49

Reference: Exhibit 7, Cost Allocation Model, Tab I7.2

a. With respect to Tab I7.2, please reconcile the number of Residential meters (56,932) with the 2021 Residential customer count forecast (56,190).
b. With respect to Tab I7.2, please reconcile the number of GS<50 meters (4182.8) with the 2021 GS<50 customer count forecast (4,269).
c. With respect to Tab and I7.2, please reconcile the number of GS 50-999 meters (557) with the 2021 GS 50-999 customer count forecast (535).
d. With respect to Tab I7.2, please confirm that each GS 1000-4999 customer only has one meter owned by OPUCN.

Response

See response to 7-Staff-103.

7.0 – VECC –50
Reference: Exhibit 7, Cost Allocation Model, Tab I4

Please explain the significant difference between the percentage of Underground Conduit (95%) that is deemed to be Primary versus the percentage of Underground Conductors and Devices (51.20%) that are deemed to be Primary.

Response

Of all the underground conduits with cables, 95% contain cables of primary voltage (13.8kV, 8kV, 44kV, 25.4kV voltage) while 5% have secondary cables (below 1000V). Most of OPUCN's underground secondary cables are direct buried (not in conduit).

For underground conductors and devices, of all underground conductors (or cables), 51.2% are of primary voltage (see above) irrespective of whether they are in conduit or not.

7.0 – VECC –51

Reference: Exhibit 7, page 8, Tables 7-4 and 7-5
Exhibit 7, Cost Allocation Model, Tab O1
RRWF, Tab 11 (Cost Allocation)

a. With respect to Table 7-4, please confirm that the values set out in columns 2, 3 and 4 of the Table are meant to be the Total Service Requirement by Rate Class and not the Base Revenue Requirement (as titled).
b. With respect to Tab 11 (RRWF), shouldn't the total of Column 7A in Table A ($28,580,665) equal the overall Service Requirement of $28,650,063?
c. Please reconcile the value for Miscellaneous Revenues used in the Cost Allocation Model ($1,299,981) with that used in the RRWF ($1,231,721).
d. Please reconcile the value for Base Distribution Revenues at Proposed Rates used in the Cost Allocation Model ($27,350,082) with that used in the RRWF ($27,348,945).
e. As required, please provide a revised versions of Tab 11 (per the RRWF) and Tables 7-4 and 7-5.

Response

Response

a. The values set out in columns 2, 3 and 4 should be the Base Revenue Requirement. See part e. below for updated table
b. Correct, Tab 11 in RRWF has been updated. Please see updated RRWF filed with these interrogatory responses.
c. The correct miscellaneous revenue amount is $1,299,981. Tab 11 in the RRWF has been updated. Please see updated RRWF filed with these interrogatory responses.
d. The correct base distribution revenues at proposed rates is $27,048,383. Tab 11 in the RRWF has been updated. Please see updated RRWF filed with these interrogatory responses.
e. Tab 11 in the RRWF has been updated. Please see updated RRWF filed with these interrogatory responses. Please see updated Tables 7-4 and 7-5 below:

TABLE 7-4: RRWF TAB 11 – CALCULATED CLASS REVENUES 2021

Rate Class	2021 Base Revenue at Existing Rates	2021 Proposed Base Revenue Allocated at Existing Rates Proportion	2021 Proposed Base Revenue	Misc. Revenue
Residential	$ 16,634,415	$ 17,363,716	$ 17,634,537	$ 930,934
GS < 50 kW	$ 3,168,984	$ 3,307,921	$ 3,307,921	$ 123,475
GS 50 to 999 kW	$ 4,454,629	$ 4,649,932	$ 4,649,932	$ 157,083
GS 1,000 to 4,999 kW	$ 555,750	$ 580,116	$ 580,116	$ 23,482
Large Use	$ 259,438	$ 270,812	$ 270,812	$ 9,544
Street Lighting	$ 770,799	$ 804,593	$ 530,784	$ 52,238
Sentinel Lights	$ 2,216	$ 2,313	$ 2,242	$ 125
USL	$ 66,082	$ 68,979	$ 72,038	$ 3,099
Total	$ 25,912,313	$ 27,048,383	$ 27,048,383	$ 1,299,981

TABLE 7-5: RRWF TAB 11 – REBALANCING REVENUE TO COST (R/C) RATIOS – 2021

Rate Class	2019 Board Approved Cost Allocation Study	2021 Cost Allocation Study	2021 Proposed Ratios	Policy Range (%)
Residential	96.57%	96.22%	97.64%	85 - 115
GS < 50 kW	119.63%	111.47%	111.47%	80 - 120
GS 50 to 999 kW	108.29%	98.83%	98.83%	80 - 120
GS 1,000 to 4,999 kW	101.81%	107.97%	107.97%	80 - 120
Large Use	105.36%	104.31%	104.31%	85 - 115
Street Lighting	71.59%	176.36%	120.00%	80 - 120
Sentinel Lights	110.37%	123.62%	120.00%	80 - 120
USL	95.57%	93.67%	97.64%	80 - 120

f.

8.0 –VECC - 52

Reference: Exhibit 8, page 4
RRWF, Tab 13 (Rate Design)
Please reconcile the differences between the Base Distribution Revenue by rate class as set out in Table 8-2 with that set out in Tab 13 (Column O).

Response

The RRWF workbook has been updated, a copy of which is included with this filing. There is no change to the rates as proposed

8.0 –VECC - 53

Reference: Exhibit 8, page 7

Preamble: The Application states:

"*The proposed fixed charge for the: GS Intermediate 1,000 > 4,999 kW, and Large Use classes are above the ceiling as calculated in the cost allocation study. OPUCN is proposing to proceed with these proposed charges as they are in line with the fixed/variable splits approved in the last Cost of Service Application (EB-2017-0069). Decreasing the monthly fixed charge to this level will increase the variable portion of OPUCN's revenues which would create a large impact on customers with higher consumption/demand levels, as well as alter OPUCN's risk profile resulting from consumption variability*."

a. Did the move to fully fixed charge for Residential customers alter (e.g., reduce) OPUCN's risk profile resulting from consumption variability?
    a. If not, why not and why would increasing the variable charge for these two customer classes now impact the utility's risk profile?
    b. If yes, what adjustments were any adjustments made in the setting of OPUCN's rates to account for this change in risk profile?
b. What would be the range of bill impacts for each of the two customer classes (based on customers' 2019 consumption/demand levels) of:
    a. Reducing the monthly service charge for these two classes to the "ceiling value" for the class?
    b. Maintaining, for 2021, the 2020 monthly service charge for these two classes?

Response

a. Yes. No adjustments were made in the setting of OPUCN's rates to account for this change in risk profile.
b. Please see summary below:

Bill Impacts - Distribution Revenue excluding Pass-through			
Class	As Filed	b) a.	b) b.
GS Intermediate 1,000 To 4,999 KW	(1.35)%	(0.27)%	(1.20)%
Large Use	2.11%	6.16%	2.4%

8.0 –VECC - 54

Reference: Exhibit 8, pages 10-11

a. What UTR values were used in EB-2019-0062 to determine the 2020 RTSRs?
b. Please confirm that in the current Application the approved 2020 UTRs have been used to determine the proposed 2021 RTSRs.
c. Will OPUCN update the proposed 2021 RTSRs if the approved 2021 UTRs become available?

Response

a. In OPUCN's 2020 IRM EB-2019-0062, the UTR values used were approved Hydro One UTR's for July 1, 2019 to December 31, 2019, to determine the 2020 RTSRs.

b. Confirmed, the current Hydro One approved UTRs (EB-2019-0296) were used in OPUCN's application in the RTSR Workform.

c. If they become available in a timely manner, OPUCN will consider updating to the 2021 approved UTRs.

8.0 –VECC - 55

Reference: Exhibit 8, pages 11-12 and 53

a. Please clarify whether OPUCN intends to adjust its current (2020) retail service charges in accordance with the Board's November 29, 2018 Decision (EB-2015-0304) using the Board's annual inflation rate.
b. If yes, what is the basis for the currently proposed 2021 Retail Service Charges (per page 52)?

Response

a. OPUCN intends to adjust the current 2020 Retail Service Charges in accordance with the Board's annual inflation rate.

b. The 2021 Retail Service Charges on page 52 include the annual OEB inflationary adjustment from the 2020 rates. The Tariff Schedule and Bill Impact Model uses a 2% inflation adjustment on the current 2020 charge. The 2% inflation factor is subject to change pending OEB approved inflation rate effective for 2021.

8.0 –VECC - 56

Reference: Exhibit 8, pages 14-15 and 30

What is the basis of the 1.0045 Supply Facilities Loss Factor and why doesn't it equal the calculation (i.e., A(1)/A(2)) set out in Footnote H of Appendix 2-R (page 30)?

Response

The Supply Facilities Loss Factor has been corrected to reflect the appropriate method as set out in Footnote H of Appendix 2-R. This correction will be reflected in the updated models to be filed with these responses. The table below shows the updated calculation.

Appendix 2-R
Loss Factors

		Historical Years					5-Year Average
		2015	2016	2017	2018	2019	
	Losses Within Distributor's System						
A(1)	"Wholesale" kWh delivered to distributor (higher value)	1,123,341,032	1,122,297,700	1,074,174,685	1,124,625,518	1,095,245,453	1,107,936,877
A(2)	"Wholesale" kWh delivered to distributor (lower value)	1,118,817,791	1,117,783,416	1,069,852,333	1,120,102,135	1,090,839,192	1,103,478,974
B	Portion of "Wholesale" kWh delivered to distributor for its Large Use Customer(s)	39,267,728	42,298,615	41,364,189	41,852,628	42,368,466	41,430,325
C	Net "Wholesale" kWh delivered to distributor = **A(2) - B**	1,079,550,063	1,075,484,801	1,028,488,143	1,078,249,507	1,048,470,727	1,062,048,648
D	"Retail" kWh delivered by distributor	1,070,779,248	1,082,034,739	1,038,848,724	1,075,414,784	1,048,925,886	1,063,200,676
E	Portion of "Retail" kWh delivered by distributor to its Large Use Customer(s)	38,878,939	41,879,817	40,954,643	41,438,246	41,948,976	41,020,124
F	Net "Retail" kWh delivered by distributor = **D - E**	1,031,900,309	1,040,154,922	997,894,081	1,033,976,538	1,006,976,910	1,022,180,552
G	Loss Factor in Distributor's system = **C / F**	1.0462	1.0340	1.0307	1.0428	1.0412	1.0390
	Losses Upstream of Distributor's System						
H	Supply Facilities Loss Factor	1.0040	1.0040	1.0040	1.0040	1.0040	1.0040
	Total Losses						
I	Total Loss Factor = **G x H**	1.0504	1.0381	1.0348	1.0470	1.0454	1.0432

9.0 –VECC -57
Reference: Exhibit 9, page 3

Has the audit of accounts 1588 and 1589 (and Group 1 accounts) contemplated for the summer of 2020 now been completed?

Response

See response to OEB interrogatory 9-Staff-107.

RESPONSES TO CONSUMERS COUNCIL OF CANADA ("CCC") INTERROGATORIES

CCC-1

Please explain how the COVID-19 pandemic has impacted OPUCN's revenues and costs for 2020. Please set out any amounts booked to the COVID-19 Deferral Account (and sub-accounts) established by the OEB on March 25, 2020.

Response

The impact on OPUCN's revenues for 2020 September year to date total $0.6m, made up of $0.3m in specific service charges (collection charges, interest charges, etc) and $0.3m in distribution revenue, principally small commercial and industrial sectors. The principal impact on costs is $0.8m in higher bad debt provisions. Also, incremental costs of approximately $0.2m have been incurred as a result of measures necessary to deal with specific requirements of working in the Covid-19 environment. These would include PPE, additional janitorial costs, IT expense, etc. No costs have been booked to the COVID-19 Deferral Account (and sub-accounts) to date pending formal confirmation of the rules for recovery.

CCC-2
Ex. 1

Please provide copies of all materials presented to OPUCN's Board of Directors regarding this rate application. When was this Application approved by OPUCN's Board of Directors? Please provide all directions provided to OPUCN staff regarding the development of the 2021-2025 budgets. Please provide a timeline for the budgeting process.

Response

Please refer to response to interrogatory 1-SEC-2.

CCC-3
Ex. 1/p. 11
Please indicate when the 2020 customer survey is expected to be completed. Please file it when it is completed.

Response

We expect to complete our next Customer Satisfaction Survey in January 2021. Our last survey was done prior to its January 2019 due date. With doing the rate application survey in 2019 the timing was good to put the Customer Satisfaction Survey back in its regular schedule.

CCC-4
Ex. 1/p. 43
Please recast Table 1.14 – Operations, Maintenance and Administration Expense Change 2015-2021 to include forecast numbers.

Response

Table 1.14 as filed includes forecast numbers for 2015 and 2019, along with 2020 and 2021. A row has been added which includes 2016 to 2018 also.

	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Bridge	2021 Test
Total Recoverable OM&A Expenses	11,678	12,374	12,909	13,585	12,874	13,845	14,108
OEB Approved / Forecast	*12,054*	*12,533*	*12,824*	*13,033*	*13,102*	*13,845*	*14,108*
Comparison to 2015 Board Approved	12,054						
$ Change	(376)	321	855	1,531	820	1,792	2,054
% Change	-3.1%	2.7%	7.1%	12.7%	6.8%	14.9%	17.0%
CAGR		2.7%	3.5%	4.1%	1.7%	2.8%	2.7%
Comparison to 2019 Board Approved	13,102						
$ Change					(228)	743	1,005
% Change					-1.7%	5.7%	7.7%
CAGR						5.7%	3.8%

CCC-5
Ex. 1/p. 44

The evidence states that with respect to labour costs, "Factoring in related changes to Parent company management fees and affiliate service fees, the net cost is increasing at a compound annual growth rate of 1.7% to the 2021 Test Year versus 2015 Board-approved amounts and at a compound annual growth rate of 1.2% to the 2021 Test Year versus 2019 Approved." Please explain this and identify the offsetting cost reductions in the management fees and affiliate service fees.

Response

The statement is intended to highlight that, despite the increase in FTEs, the actual operating cost attributed to manpower is generally in line with or below inflation. The table below illustrate this.

Labour incl. Parent/Affiliate Fees $000's	2015 Approved	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Approved	2019 Actual	2020 Bridge	2021 Test
Labour	$7,512	$7,149	$7,131	$7,431	$8,536	$8,290	$8,806	$9,159	$9,201
Parent & Affiliate Fees Net	$327	$292	$168	$160	$(142)	$354	$(344)	$(349)	$(356)
Total	**$7,839**	**$7,441**	**$7,298**	**$7,591**	**$8,394**	**$8,644**	**$8,462**	**$8,809**	**$8,844**
CAGR vs 2015 Approved									1.7%
CAGR vs 2019 Approved									1.2%

CCC-6
Ex. 1/p. 45 and Ex. 4/p. 23
What is the overall cost of the Mondelis Actuarial work and how is it to be recovered? Was it subject to an RFP process? If not, why not?

Response

The annual cost is $6k. The work was awarded based on quotes sourced from various vendors, not a full RFP due to size.

CCC-7
Ex. 1/p. 45
What percentage of OPUCN's OM&A costs are related to sub-contractors? Is this work subject to an RFP process? If not, why not?

Response

The percentage of OPUCN's OM&A costs related to sub-contractors is between 13% and 14%.
Tables 4-35 to 4-39 in Exhibit 4 disclose the operating and capital expenditures by vendor, many of whom are subcontractors, where the annual amount exceeded $75,000 per year, for the years 2015, 2016, 2017, 2018 and 2019, respectively. These tables highlight the procurement method. Depending on the size and duration of the expected expenditure the procurement method will involve a process involving a Quote, RFI or Tender. This will be based on the methodology contained within OPUCN's Procurement Policy, which has been attached as Appendix 4-2.

CCC-8
Ex. 1/p. 46
Please explain why there has been a significant increase in the number of Management FTEs since 2015 (10).

Response

The increase in non-union/management positions since 2015 is in response to increased workload in the particular functional areas as well as some internal movement of resources.

1) Marketing & Communications Analyst – Key projects include website development and maintenance, customer touchpoints, community events, customer engagement, public safety initiatives, and contractor safety initiatives.

2) Purchasing Manager – Position working to modernize the supply chain function and implement a strategic approach to job planning, purchasing, vendor assessment and control, materials management and material cost efficiency.

3) Human Resources Consultant – Key projects include recruitment activities in response to demographic shift and evolving organizational needs, people strategy, culture transformation plan, privacy, health & safety, and succession planning initiatives.

4) Distribution Engineer in Training (EIT) – Reflects a realignment of internal resources and a change in the seniority mix of employees in the Engineering department.

5) Powerline Technician Student (0.5 FTE) – The support of a powerline co-op program is critical to develop a resource pipeline for recruitment and secure top talent, support apprenticeship training while maintaining safety ratios of journeyperson and apprentice staff, and executing succession planning strategies.

6) The President & CEO position was transferred from the parent company in 2019.

7) With the cancellation of the Conservation Demand Management framework, the CDM Manager position was transferred from the parent company in 2019 and evolved to a Manager, Sustainability & Business Advocacy position which focuses on a key accounts initiative & corporate sustainability program.

8) Maintenance Planner – A new position was created with a focus on system reliability with the responsibility of implementing a new Computerized Maintenance Management System (CMMS) and leading the detailed planning and scheduling of

work activities required to maintain, repair, upgrade, expand, and renew the electrical distribution system.

9) Cyber Security Analyst (0.5 FTE) – A new position was created in the IT department to help manage increasingly complex IT infrastructure, modernising IT infrastructure (including new Disaster Recovery site) and developing an action plan to enhance and maintain compliance with the OEB Cyber Security framework.

10) Marketing Analyst (approved in the last rebasing as Community Relations moved to Corporate) – A new position focused on customer engagement, communication, and community relations initiatives.

CCC-9
Ex. 1/p. 47
Please provide the Board-approved and actual ROE for each year 2015-2019.

Response

Please see Table 1-43 in Exhibit 1.

CCC-10
Ex. 1/pp. 56-68
What was the overall cost of the customers engagement activities OPUCN undertook regarding its rate application? How are those costs recovered?

Response

The overall costs were just under $74,000 to cover the cost of the customer satisfaction surveys, development and execution of the online survey, development and execution of the telephone virtual town hall, venue rentals and sundries for in-person town halls, advertising and administration.

The costs incurred for the customer engagement campaign are included in the one-time rate application costs to be amortized over the IRM period.

CCC-11
Ex. 1/p. 74
Please provide a detailed explanation as to why the cost per customer significantly increased in 2019 relative to historical levels.

Response

Measure	2015 (History)	2016 (History)	2017 (History)	2018 (History)	2019 (History)	2020 (Bridge)	2021 (Test Year)
Actual Total Cost	$30,513,742	$31,002,985	$30,654,401	$33,406,523	$35,391,377	$35,826,249	$37,019,685
# of customers	55,949	56,811	57,584	58,745	59,183	60,196	61,008
Cost per Customer	$ 545	$ 546	$ 532	$ 569	$ 598	$ 595	$ 607
Percent change		0.1%	-2.5%	6.8%	5.2%	-0.5%	2.0%

OPUCN's 2019 cost performance is $598 per customer, resulting in a 5% increase over the prior year.

Over the reporting period 2015 through 2019, OPUCN's Total Cost per Customer has increased by an average annual rate of just 2.9%. In addition to inflationary pressure, the renewal and growth of the distribution system, Province wide programs and costs required to address higher than normal customer growth in Oshawa have all contributed to the increase in capital expenditures and operating costs. The increase is in line with the increase in predicted costs as per the PEG Report, thereby continuing to position OPUCN in Cohort 2.

In accordance with the OEB's decision on OPUCN's Custom IR Cost of Service rate application, OPUCN will continue to replace distribution assets proactively along a carefully managed timeframe in a manner that balances system risks and customer value and adds new infrastructure to address capacity constraints resulting from growth. OPUCN will also continue to implement productivity and improvement initiatives to help offset some of the costs associated with future system improvement, enhancements and growth.

OPUCN has been investing in infrastructure renewal at a higher than normal rate over the last several years in response to its aging distribution system. Capital investments for replacement and rehabilitation of existing lines have grown at a

faster rate than additions of lines within OPUCN's service area. As reported in its Distribution System Plan, OPUCN has identified a need to proactively manage the replacement of assets that are at, or near, end of life and in "poor" or "very poor" condition. Replacement plans ensure that planning objectives related to reliability, customer satisfaction and operating cost control are achieved.

CCC-12
Ex. 1/p. 75
Please provide a schedule setting out OEB approved capital amounts (broken out by category) for the years 2015-2019.

Response

Please see table below:

CATEGORY	2015	2016	2017	2018	2019
	$ '000	*$ '000*	*$ '000*	*$ '000*	*$ '000*
System Access	8,595	3,740	3,150	3,435	3,455
System Renewal	5,943	4,932	4,472	4,761	4,851
System Service	1,068	1,380	420	10,455	15,763
General Plant	1,675	1,180	755	889	510
Total Expenditure	**17,281**	**11,232**	**8,797**	**19,540**	**24,579**
Capital Contributions	(4,911)	(1,455)	(1,075)	(1,095)	(1,105)
Net Capital Expenditures	**12,370**	**9,777**	**7,722**	**18,445**	**23,474**

CCC-13
Ex. 1/p. 86

OPUCN is proposing unit-based performance metrics. Does OPUCN have the historical data regarding each these metrics? For example, for 2019 what is the actual $/pole installed? If so, please provide the historical data for each of the metrics for the period 2015-2020. What are the targets for each of these metrics for the period 2021-2025?

Response

Unit base performance metrics are part of our future performance management program, we have implemented the infrastructure in the form of Quadra estimating software and now we are the stage of data gathering to move towards unit-based performance measurement.

CCC-14
Ex. 1/p. 89
Does OPUCN intend to acquire or amalgamate with another distributor in the near future? Please describe the role of the VP Business Development. Is that role part of OPUCN or its parent corporation?

Response

OPUCN has no plans to acquire or amalgamate with another distributor in the near future. The VP Business Development is employed by an affiliate and is not an FTE or expense in OPUCN.

CCC-15
Ex. 1/p. 90

OPUCN has provided the results of its customer engagement activities in Appendices to Exhibit 1:

1. Please fully describe how these activities contributed to the development of the DSP and the capital expenditures planned for the period 2021-2025;
2. Please provide a detailed timeline setting out the development of the DSP; and
3. Please describe the process followed in developing the DSP.

Response

1. Refer to the interrogatory response to Question 2-Staff-32 for further details on investment prioritization.

2) 3) The process of DSP development occurred over a general timeline as follows:

2017

- Engineering begins reviewing, revising and updating its overhead and underground Project Hopper List, based on equipment test results, field observations and inspection reports

2018

- METSCO is engaged to begin preparing a new Asset Condition Assessment and Grid Modernization Plan
- Engineering meets with all departments to begin identifying required capital projects for the next 5 years

2019

- METSCO completes a new Asset Condition Assessment. Refer to Exhibit 2, DSP Appendix B
- DSP customer engagement begins. Refer to Exhibit 1, DSP Customer Engagement Report, Appendix A for a listing of all activities and timelines associated with such.
- Using asset condition information, heat maps are generated to help engineering and field construction staff identify new overhead and underground projects to add to the Project Hopper List
- All overhead and underground projects are scored and prioritized per Project Condition Ranking
- Engineering finalizes the identification of required capital projects for the next 5 years and a preliminary list (Version 1) of all contemplated DSP projects are compiled

2019 to 2020

- METSCO completes a new Grid Modernization Plan

- Through iterative reviews, further development and scrutiny of project justifications, prioritization per AM objective scores, and discretionary project change assessments, all contemplated DSP projects (Version 1) are whittled down to those in this application (Version 4)

CCC-16
Ex. 2/p. 42
Please recast Table 2-23 Appendix 2-AA Capital projects to include forecast amounts for each year 2015-2020.

Response

Please find below Table 2-23 recast to include forecast amounts for each year, 2015-2020.

Appendix 2-AA
Capital Projects Table with Forecast Amounts

Projects	2015 Forecast	2015 Actual	2016 Forecast	2016 Actual	2017 Forecast	2017 Actual	2018 Forecast	2018 Actual	2019 Forecast	2019 Actual	2020 Bridge Year Forecast
System Access											
Expansions	90,400	774,110	115,000	-318,665	265,000	928,874	530,000	-47,919	562,875	1,891,799	1,662,014
Connections	164,700	307,045	90,000	567,800	45,000	-393,553	45,000	-420,820	47,125	620,238	231,550
Revenue Metering	375,000	433,622	380,000	549,305	390,000	247,460	390,000	530,591	390,000	453,066	223,000
MIST Metering	150,000	79,367	150,000	144,012	125,000	116,088	125,000	101,585	125,000	207,537	
Remote Disconnect/Reconnect Metering	100,000	78,174	100,000	54,328	100,000	-35,063	100,000		100,000		
Third Party Relocations	2,804,000	1,397,286	1,450,000	1,397,544	1,150,000	-186,995	1,150,000	-791,200	1,125,000	1,704,083	1,110,000
AMI System Upgrade											605,000
Sub-Total	3,684,100	3,069,603	2,285,000	2,394,324	2,075,000	676,810	2,340,000	-627,763	2,350,000	4,876,723	3,831,564
System Renewal											
Reactive/ Emergency Plant Replacement	830,000	1,097,162	830,000	1,141,696	830,000	1,228,047	830,000	1,010,143	830,000	1,664,882	1,190,000
Overhead Line Renewal	2,410,000	2,872,934	2,455,000	1,394,679	1,855,000	1,746,845	2,310,000	1,134,682	1,917,000	2,978,280	3,142,190
Underground Line Renewal	1,132,500	756,602	827,000	1,195,360	1,087,000	696,087	921,000	1,121,338	904,000	870,483	1,545,000
Station Renewal	210,000	144,227	820,000	111,102	500,000	964,478	500,000	470,407	1,000,000		
MS14 Metalclad Switchgear Replacment	1,360,000	1,632,383									
Pole Replacement Program					200,000	423,444	200,000	213,793	200,000	250,775	400,000
Porcelain Switch and Insulator Replacement Program											550,000
Vault Transformenr Replacement Program											162,000
44kV Quick Sleeve Replacement Program											100,000
Relay replacement Program											40,000
MS10 T2 Replacement											1,000,000
Municipal Substation Switchgear Replacement Program											
Sub-Total	5,942,500	6,503,308	4,932,000	3,842,837	4,472,000	5,058,901	4,761,000	3,950,363	4,851,000	5,764,419	8,129,190
System Service											
Downtown Automation	548,400	712,331	280,000	498,801	10,000		10,000		10,000		
Downtown UG Self-Healing Grid								531,433	255,000		
OH Automated Self Healing Switches					350,000	646,329	350,000	261,496		3,593	50,000
Neutral Reactors	450,000		1,050,000	692,153		206,432		11,590			
Distribution System Supply Optimization	45,000		25,000	24,167	35,000	37,343	260,000	40,652	260,000	68,588	
Smart Fault Indicators	25,000	9,774	25,000	238	25,000	51,143	25,000	28,217	25,000	24,704	
Non-electric Fence										245,251	
MS9 Substation Construction							7,000,000	7,600,859		-281,342	
Enfield Contribution to HONI							13,500,000			4,136,705	
MS9 and Enfield Feeders							4,000,000		3,500,000	7,455,780	1,140,400
Operational Technology (GIS,OMS,ODS,SCADA)											257,500
Smart Grid											335,000
Municipal Substation Transformer Monitoring and Telemetry											150,000
Repair, Improvements and Upgrades of OT and Smart Grid Infrastructure											25,000
Ground Grid Upgrades											100,000
Voltage Monitoring (Grid Monitoring and Automation)											450,000
Sub-Total	1,068,400	722,105	1,380,000	1,215,358	420,000	941,246	25,145,000	8,474,247	4,050,000	11,653,279	2,507,900
General Plant											
Fleet	420,000	460,652	415,000	132,338	440,000	503,173	190,000	368,394	170,000	340,672	545,000
Facilities	225,000	108,415	50,000	218,640	50,000	49,309	209,000	110,787	50,000	106,367	565,000
Major Tools & Equipment	50,000	54,338	50,000	51,358	50,000		50,000	126,810	50,000	62,006	100,000
Office IT & Equipment Upgrades	130,000	104,672	130,000	79,976	80,000	187,535	280,000	282,572	80,000	126,791	87,000
Operational Technology (GIS, MAS)	0	8,071	85,000		85,000	81,907	110,000	9,018	110,000	41,620	
OMS Implementation and Enhancements	850,000	251,533	50,000	1,000,607	50,000	51,933					
ODS Replacement and Enhancement			400,000				50,000	360,507	50,000	59,515	
Back-up Control Room and Associated IT Infrastructure											200,000
Back-Up Generator Replacement											205,000
Information Technology General											282,000
Customer Self-Serve Online Portal (Green Button Dashboard)											140,000
Customer Information System (CIS) Acquisition											
Sub-Total	1,675,000	987,680	1,180,000	1,482,919	755,000	873,857	889,000	1,258,089	510,000	736,972	2,124,000
Miscellaneous		572,215		261,250		325,518		-97,827		204,922	
Total	12,370,000	11,854,911	9,777,000	9,196,688	7,722,000	7,876,332	33,135,000	12,957,109	11,761,000	23,236,315	16,592,654
Less Renewable Generation Facility Assets and Other Non-Rate-Regulated		0		0		0		0		0	
Total	12,370,000	11,854,911	9,777,000	9,196,688	7,722,000	7,876,332	33,135,000	12,957,109	11,761,000	23,236,315	16,592,654

CCC-17
Ex. 2/p. 42 – Appendix 2-AA
For 2020 please provide updated capital numbers by project.

Response

Please see related response 2.0-VECC -7.

CCC-18
Ex. 2/p. 42 – Appendix 2-AA
Please provide a copy of OPUCN's fleet replacement policy. Please explain why there is a significant increase in fleet expenditures in 2020 and 2021.

Response

Related questions: 2-AMPCO-17, CCC-18, 2-EP-17

Refer to Fleet Management Policy in Appendix R. Please see GP-02 Fleet Replacement Program Exhibit 2 – DSP Appendix A, page 179 of 205.

CCC-19
Ex. 2/. 42 – Appendix 2-AA
Please explain why there were no IT-General expenditures during the period 2015-2019.

Response
Previous 2015-2019 IT expenditures are presented in the table Appendix 2-AA under “Office IT & Equipment Upgrades”. Information Technology General as indicated in table Appendix 2-AA is a different grouping (includes IT Systems Upgrade GP-06 excluding new IT equipment upgrades and GP-05 Office Systems) of projects moving forward. Please see IT Systems Upgrade GP-06, Exhibit 2 – DSP Appendix A Page 201-202 of 205 for a comparison of past and future spend on IT systems.

CCC-20
Ex. 2/p. 42 – Appendix-2AA
For MS9 Substation please provide a detailed forecast of the project costs and the actual costs incurred. Please provide a detailed forecast for the MS9 and Enfield Feeders project and the actual costs incurred.

Response
Please see response to 2.0-VECC -7 which includes a Appendix 2-AA Capital Projects Table are accurate actual costs 2019 and 2020 forecasts for MS9 and Enfield Feeder.

CCC-21
Ex. 3/p. 6 and 36
Please explain why in each year 2015-2019, with the exception of 2017 OPUCN's actual Other Revenue amounts exceeded the Board-approved levels.

Response

The cumulative favorable variance for the years 2015 to 2019 is $1,630k. Of this $1,065k relates to income from CDM and related projects and $434k relates to expense associated with disposals of fixed assets.

CCC-22
Ex. 3/p. 8
With respect to OPUCN's load forecast methodology:

1. Was OPUN's load forecast prepared internally? Did OPUCN obtain an independent assessment of its load forecasting methodology and the 2021 results? If not, why not?
2. Please indicate in what ways the methodology used in this application differs from the one used in the 2015-2019 Application.

Response

1. Yes. Load forecast was prepared internally and was reviewed by by an independent third party for methodology and reasonability of results.

2. See response to 3-SEC-30.

CCC-23

Ex. 3/p. 42

Please explain how OPUCN prepares its forecast of Specific Service Charges. Please explain why the forecasts for 2020 and 2021 are significantly lower than historical levels. Please provide an updated amount for 2020.

Response

The methodology has remained similar to previous applications, and can be summarized as follows:

- The standard way of forecasting each revenue account is to take an average of the previous 2 years and uplift according to the forecast customer growth rate.
- For revenue accounts subject to greater fluctuation, e.g. Enhancement revenues, the average used will be over a longer period than 2 years.
- Where rate changes are applicable, the trend used as the base forecast amount is adjusted to reflect updated rates.

For 2020 and 2021, the forecast reflects actual run rates from 2018 and 2019 with the exception of unusually high enhancement revenue in 2018 which is not forecast to repeat. Changes in OEB rules are behind lower connection fees compared to historical, as outlined in table below.

4235 - Specific Service Charges							
	2015 Actual[2]	2016 Actual[2]	2017 Actual[2]	2018 Actual[2]	2019 Actual	Bridge Year	Test Year
	2015	2016	2017	2018	2019	2020	2021
Reporting Basis							
Collection Charge	$ 501,317	$ 606,809	$ 288,867	$ 51,096	$ 27,596	$ 39,837	$ 40,392
Set up Charge	$ 261,450	$ 287,490	$ 290,002	$ 284,790	$ 258,344	$ 274,959	$ 278,786
Enhancement Revenue	$ 55,730	$ 73,821	$ 31,985	$ 272,290	$ 64,584	$ 52,874	$ 52,874
Reconnect Charge	$ 62,145	$ 60,430	$ 42,700	$ 71,757	$ 68,460	$ 70,984	$ 71,972
Retail Charges	$ 45,896	$ 40,594	$ 34,004	$ 28,165	$ 38,278	$ 33,637	$ 27,488
Other	$ 12,311	$ 8,803	$ 9,275	$ 11,371	$ 12,181	$ 11,603	$ 11,758
Total	$ 938,849	$ 1,077,947	$ 696,833	$ 719,469	$ 469,443	$ 483,894	$ 483,271

The actual total for September year to date 2020 is $199k, indicating a full year amount of approximately $265k.

CCC-24
Ex. 4
Please provide a detailed schedule setting out all productivity gains and efficiencies achieved by OPUCN in the period 2015-2020. Please identify all productivity and the associated cost savings embedded in the 2021 budget – please include OM&A and Capital.

Response

Metrics that detail productivity gains and efficiencies have not been historically tracked at a granular level by OPCUN. The following table, however, is a summary of major projects or initiatives from 2015 - 2020 that have resulted in quantifiable gains. Cost savings embedded/realized in the 2021 budget are highlighted in blue.

Project or Initiative	Description	OPEX Savings (per annum)	CAPEX Avoidance
Fueling Depots	OPUC has established an agreement with the City of Oshawa to fuel trucks at City fuelling depots	$60K	$40K
Animal Guard Installations	Reduction of 1000 customer interruption hours per year	$20K	-
Fault Indicator Installations	Line patrol time on feeders with installations have been reduced by 30 minutes	$24K	-
Inventory reduction	Stocked equipment and associated counts were re-evaluated and supply contracts modernized to reduce required inventory. Overall, there was a 37% reduction in required transformers.	$2K	$700K
Meter Reverification	44,829 meters were audited by statistical sampling technique which increased seal life by 8 years	$19K	-
Job Harmonization	OPUCN has begun to harmonize metering tech and station electrician positions, eliminating the need to hire one net new FTE	$100K	-
Data Aggregator Implementation	Pi System provides accurate, up-to-date transformer loading data to the capital design and engineering departments, eliminating case-by-case data mining and analysis previously required	$50K	-
OMS Implementation	Device outage predictions have reduced field time spent troubleshooting after hours.	$69K	-
	Device outage predictions have reduced operator diagnostic time. Real-time outage	$28K	-

	information posted online has reduced customer phone calls.		
Estimating Software Implementation	QUADRA has improved OH & UG project estimating by reducing budgets by 4%	-	$398K
Transition of UG Work Responsibility	Powerline technicians have been trained to perform UG work, which traditionally was the responsibility of station electricians at OPUCN. This has resulted in a decrease to the number of staff required to respond to outages.	$50K	-
Mobile Work Force Deployments	Field staff were equipped with tablets for real time access to distribution system maps and records, reducing reliance on paper and the frequency at which staff previously had to return to the office for additional data or clarification.	$90K	-

With regards to productivity gains and efficiencies in human resources, since 2015, OPUCN has implemented processes to ensure consistent focus and improvement on attendance management, safe & early return to work program, and health & safety programs to improve productivity, efficiency, and availability of staff to be on the job, focused on work outcomes, each and every day. Since June 2016, OPUCN has maintained a Lost Time Injury Rate of 0.0 which means employees have remained safe and not lost days of work due to work-related injury. In addition, from 2015-2019, we improved our average sick days per employee from 4.6 days to 2.49 days. This means that OPUCN has gained 2.1 productive work days per employee per year.

Attendance

Year	**Average Sick Days Per Employee (Short Term Absence)**
2015	4.6 days
2016	3.57 days
2017	3.25 days
2018	2.93 days
2019	2.49 days

CCC-25
Ex. 4/p. 12
Please provide all materials related to the ‘People Strategy”.

Response

A copy of the 3 year Culture Transformation Plan has been attached as Appendix N.

CCC-26
Ex. 4/p. 15
Please provide a copy of OPUCN's overtime policy. Please identify the overtime costs incurred in each year 2015-2020 and the forecast for 2021

Response
Non-union/management employees are not eligible for overtime.
Our overtime policy for unionized staff is as follows (as per collective agreement):

Overtime shall mean all hours worked outside of normal working hours. All overtime shall be paid for at double the employee's normal rate of pay. In all cases, overtime shall be calculated to the next even six minute period to the time written on the time sheet.

The table below summarizes overtime for 2015 to 2021.

Actual	Actual	Actual	Actual	Actual	Bridge Year	Test Year
2015	2016	2017	2018	2019	2020	2021
$665,609	$611,832	$574,436	$886,445	$789,453	$784,058	$799,439

CCC-26 (26 used twice)
Ex. 1/p. 79 and Ex. 4/p. 20
Please identify all conservation and demand management program costs in its 2021 revenue requirement? Please identify what type of collaboration on energy activities OPUCN s doing with the City of Oshawa and the Region of Durham. What is the cost of those initiatives for 2021?

Response

There are no costs associated with CDM program costs in 2021 revenue requirement. Energy projects such as the new 600-kilowatt combined heat and power plant, which will be installed at the Delpark Homes Centre, are undertaken through an affiliate company.

CCC-27
Ex. 4/p. 40
Does OPUCN expect to increase the number of its customers on electronic billing in 2021? If so, have the savings been embedded in the forecast?

Response

It is an ongoing initiative to encourage ebilling enrollment on every customer contact. Opportunities will be presented to customers both online through the website and social media as well as through telephone and email interactions. There are no plans to run any promotional campaigns to encourage at this time.

We do expect marginal increases in enrollment as new customers move to Oshawa but do not expect any material cost savings based on recent years' experience showing mail/paper volume savings being offset by rate increases.

CCC-28
Ex. 4/p. 44
The evidence states that OPUCN regularly undertakes compensation benchmarking against relevant industry comparators to ensure the best combination of costs and talent. Please provide all materials related to the benchmarking referred to.

Response
See 4-Staff-85.

CCC-29
Ex. 4/p. 45
The evidence refers to a variable incentive plan for management and non-Union staff. Please provide all of the details of this plan. What assumptions does OPUCN use when including these costs in the 2021 forecast?

Response
See the response to 2-Staff-27.

When forecasting, an assumption of 100% payout is included.

CCC-30
Ex. 4/p. 50
Please file all shared services agreements between OPUCN and its affiliates.

Response

See response to 4-SEC-37.

CCC-31
Ex. 4/p. 65
Please provide a detailed breakdown of he proposed $344,133 in regulatory consulting costs supporting this application. Does OPUCN benchmark its regulatory costs? If not, why not?

Response

The table below summarizes the proposed $344,133 in regulatory consulting costs supporting this application. OPUCN does review application costs of other utilities as one of the ways in which it seeks to ensure its costs are reasonable.

Activity	Budgeted
Technical writing / Exhibit 1	$66,800
Customer Engagement	$100,000
DSP / Asset Condition Assessment	$164,000
Misc	$13,333
Total	$344,133

CCC-32
Ex. 5/p. 4
What is the current status of the $10 million 2020 debt issuance?

Response

It is in progress and expected to conclude prior to 2020 year end.

CCC-33
Ex. 9/p. 3
What is the current status of the special purpose audit? When does OPUCN expect to dispose of the Group 1 and Group 2 accounts?

Response

See response to OEB interrogatory 9-Staff-107. Group 1 accounts will be disposed of once the audit is complete as part of our annual IRM. Group 2 accounts will be disposed of at our next rebasing application.

RESPONSES TO ENERGY PROBE RESEARCH FOUNDATION ("EP") INTERROGATORIES

1-EP-1

References: Exhibit 1, Pages 14 and 75, Tables *1-5 and 1-34: Summary of Performance Measures and Targets*

1. Please populate Tables 1-5/1-34 with the remaining targets for 2021, e.g. System Reliability.

2. Please provide a narrower liquidity ratio target based on prior years.

Response

a) Table 1-5, 1-34

Performance Outcomes	Measure	Driver	Metric	OPUCN Target	OEB Target	**2021 Target**
Customer Oriented Performance	Service Quality	Regulatory/Customer	New Residential /Small Business Services Connected on Time	100% in 2 days	90% in 5 days	100% in 2 days
			Scheduled Appointments Met on Time	100%	90%	100%
			Telephone Calls Answered on Time	92%	65%	92%
			Written Responses to Enquiries	100% in 1 day	80% in 10 days	100% in 1 day
	Customer Satisfaction	Customer	First Contact Resolution	Less than 2% of qualif	n/a	Less than 2% of qualif

				ying calls		ying calls
			Billing Accuracy	>98%	>98%	>98%
			Customer Satisfaction Survey	>90%	n/a	>90%
	System Reliability	Regulatory/Customer	SAIDI	Previous 5-year rolling average	Historic 5-year 2010-2014 average (1.18)	1.16
			SAIFI	Previous 5-year rolling average	Historic 5-year 2010-2014 average (1.06)	1.1
Cost Efficiency and Effectiveness	Cost Control	Regulatory/Customer/Corporate	Efficiency Assessment	Group 2	n/a	Group 2
	Distribution System Plan Implementation Progress	Corporate/Regulatory	Program Delivery Cost	Within 5% of budget	n/a	Within 5% of budget
Asset/System Operations Performance	Safety	Regulatory/ Corporate	Level of Public of Awareness	>80%	n/a	>80%
			Level of Compliance with Ontario 22/04	0 NC; 0 NI	C	0 NC; 0 NI
			Serious Electrical Incident Index	0	0	0

			Lost Time Injuries	0	n/a	0
	Distribution Losses	Corporate	Line Losses	<5%	<5%	<5%
Public Policy Responsiveness	Conservation and Demand Management	Regulatory/ Customer	Net Cumulative Energy Savings	73.01 GWh	73.01 GWh	73.01 GWh
	Connection of Renewable Generation	Regulatory/ Customer	Renewable Generation Connection Impact Assessments Completed on time	within 60 days of receiving ESA approval	within 60 days of receiving ESA approval	within 60 days of receiving ESA approval
		Regulatory/ Customer	New Micro-embedded Generation Facilities Connected on Time	receiving ESA	receiving ESA	receiving ESA
Financial Performance	Financial Ratios	Corporate	Liquidity Ratio	approval	approval	approval
			Leverage Ratio	<1.5	60/40 or 1.5:1	<1.5
			Profitability - Return on Equity Ratio	within 300 basis points of 9.00 %	within 300 basis points of 9.00 %	within 300 basis points of 9.00 %

b) OPUCN believes the selected range is appropriate.

1-EP-2

Reference: Exhibit 1, Page *Table 1-35 Customer Focus Historical Results*

a. Please confirm the data are without MEDs and LOS.

b. Provide the average SAIDI and SAIFI without MEDS and LOS.

c. Provide the 2020 estimates and 2021 Targets.

Response

a) The data represented in Exhibit 1, Table 1-35 is with MEDs and LOS.
b) Exhibit 1 Table 1-35 is representing the data with MEDs and LOS.

Measure	2015	2016	2017	2018	2019
Average Number of Hours that Power to a Customer is Interrupted (SAIDI)	1.21	2.61	0.73	1.34	0.98
Average Number of Times that Power to a Customer is Interrupted (SAIFI)	1.27	2.06	0.98	1.29	1.09

Below is a table representing the data **without** MEDS and LOS

Measure	2015	2016	2017	2018	2019
Average Number of Hours that Power to a Customer is Interrupted (SAIDI)	1.03	2.57	0.68	1.30	0.97
Average Number of Times that Power to a Customer is Interrupted (SAIFI)	1.17	2.04	0.85	1.30	1.08

The average SAIDI without MEDS and LOS is 1.31 and the average SAIFI without MEDS and LOS is 1.28.

c) We are estimating the 2020 year end SAIDI will be 1.3 and year end SAIFI will be 1.35 for 2020.
For 2021 our plan is SAIDI 1.16 and SAIFI 1.1.

1-EP-3
References: Exhibit 1, Pages 21 and 24; Exhibit 4, Page 9, Table 4-4 [sic] Proposed Unit-based Performance measures

a. Please add columns and populate to show most recent 5 year metrics.

b. Please add column to show 2021 Targets.

c. Please provide a comparison with the top utilities using the OEB Yearbook data.

Response

a. These are proposed metrics (Table 1-44: Proposed Unit-Based Performance Measures) which do not have historic measures calculated.
b. The Targets for 2021 have not yet been finalized.
c. Please see below table listing the top ten utilities for 2019 in terms of OM&A per customer, according to the OEB 2019 Yearbook of Electricity Distributors.

OM&A per Customer ($)	2019
Elexicon Energy Inc.	$187.2
Hydro Hawkesbury Inc.	$201.0
Kitchener-Wilmot Hydro Inc.	$202.2
Oshawa PUC Networks Inc.	$220.4
E.L.K. Energy Inc.	$231.7
Peterborough Distribution Incorporated	$235.3
Entegrus Powerlines Inc.	$237.6
Essex Powerlines Corporation	$243.2
Milton Hydro Distribution Inc.	$249.6
Wasaga Distribution Inc.	$250.0

1-EP-4

Reference: Exhibit 1, Financial Statements, Page 25, Related Party Transactions
Preamble: "The Corporation leases its premises under a net operating lease with the Corporation of the City of Oshawa. The Corporation entered into a new lease in 2017, which expires May 31, 2021.The Corporation has a contractual agreement to lease office equipment over a period of 74 months. The lease begins June 1, 2017 and expires July 31, 2023."

a. Please indicate where the lease payments are indicated in 2021 operating expenses e.g. intercorporate shared services. Please provide references.

b. Please provide the 2021 amounts for each category -buildings, IT and Office Equipment.

c. Please provide evidence that the leases are at market rates,

Response

a. The lease payments can be found in the following OEB USofA accounts:
   - UsofA 5670: Rent, contain the building lease payments.
   - USofA 5620: Office Supplier and Expenses, contains the printing equipment lease payments.

b. 2021 amounts for each category are below:

Category	2021 Operating Cost
Building Rent	$341,964
IT and Office Equipment	$14,297

c. Lease for office equipment is signed with arm's length third party for leasing photocopier equipment.
   Oshawa Power has begun evaluating options for a new building location due to the upcoming end of lease term with the City of Oshawa. The market rates seen in this process were significantly higher than current lease rate.

1-EP-5

Reference: Exhibit 1, Financial Statements - Changes in Shareholders Equity

a. Please confirm the Dividends paid 2015-2019.

b. Please provide a copy of the Oshawa PUC Dividend Policy.

Response

a. Dividends paid during 2015-2019 are below.

Year	Dividend Paid
2015	$1,800,000
2016	$3,700,000
2017	$2,300,000
2018	$2,300,000
2019	$2,500,000

b. Copy of Dividend Policy is filed with these interrogatory responses at Appendix O.

1-EP-6

References: Exhibit 1 Page 46; Exhibit 2, DSP, Pages 29-31, page 62, System Reliability

a. Please provide the System Reliability metrics SAIDI, SAIFI, MAIFI 2015-2019 (without MEDs and LOS).

b. Please provide the 5-year averages for SAIDI, SAIFI and MAIFI.

c. Please provide OPUCN Rank among distributors for SAIDI and SAIFI.

d. Please provide the Cause Codes (averages 2015-2019).

e. In regard to cause codes, please compare the OPCUN 55% scheduled outage to other Ontario Utilities.

f. Specifically provide the annual and average outages and hours of interruption due to scheduled work and defective equipment.

g. Please provide the SAIDI SAIFI and MAIFI targets for 2021.

h. Please provide the Defective Equipment Target for 2021.

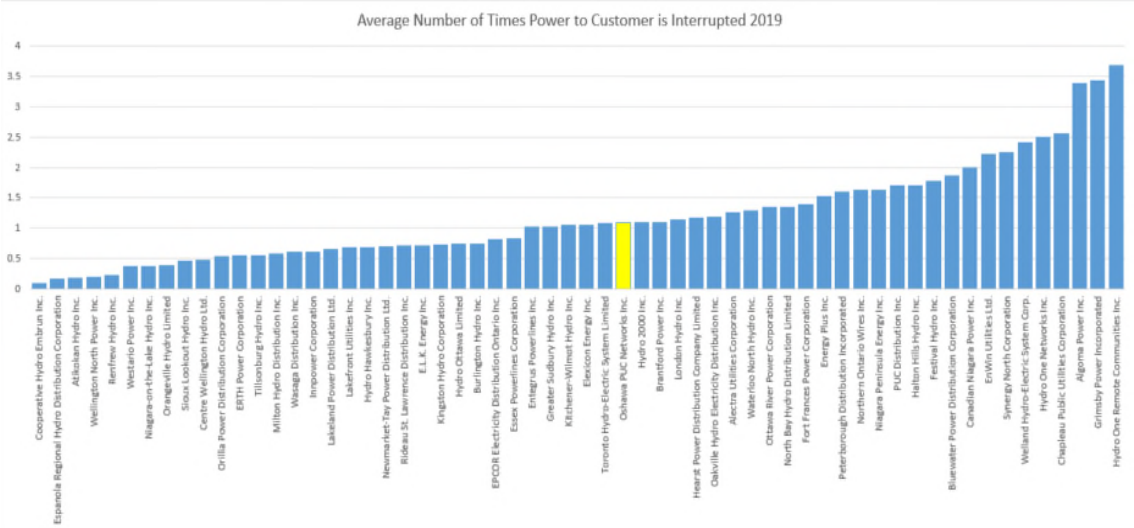
Response

a. Values are provided in Table 7: OPUCN Service Reliability Statistics Exhibit 2-DSP Page 26 of 107.

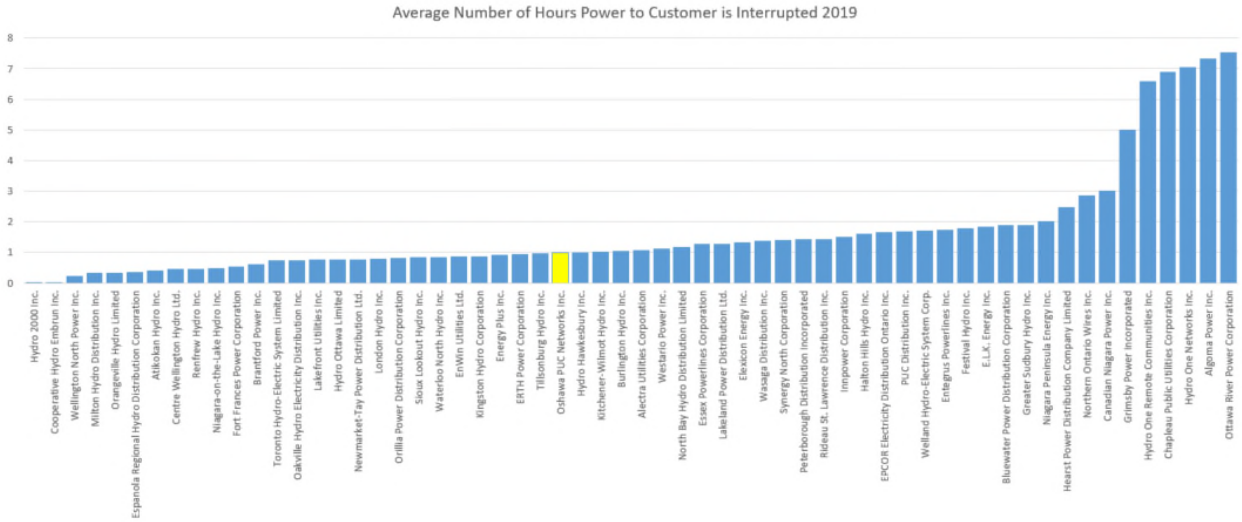
Year	MAIFI
All Interruptions, Excluding Loss of Supply and Major Events	
2015	0.11
2016	0.171
2017	0.082
2018	0.113
2019	0.092
5 Year Rolling Average	0.11

b. Values are provided in Table 7: OPUCN Service Reliability Statistics Exhibit 2-DSP Page 26 of 107 and above table in a).

c.



Top 10 Average	0.298
Rank	32



Top 10 Average	0.313
Rank	27

d. Please see below table.

Table 9-2 Number of Interruptions by Cause (5 Year Average)

Cause Code	5 Year Rolling Average
0-Unknown/Other	3,708

1-Scheduled Outage	3,954
2-Loss of Supply	1,886
3-Tree Contacts	5,487
4-Lightning	602
5-Defective Equipment	30,097
6-Adverse Weather	4,103
7-Adverse Environment	1,208
8-Human Element	12,381
9-Foreign Interference	17,486

e. Please note that the number of scheduled outages is high but each outage is low in impact as they are planned strategically with minimal impact on customers. See tables 10 and 11 in the DSP. Actual customers interrupted and customers hours interrupted is 4.31% and 4.89% respectively. These percentages are small when comparing with other utilities.
f. Please see answer to 2-SEC-15 for annual outages, hours of interruption due to scheduled work and defective equipment. Average Outages see above Table 9-2. Please see below for Average outages for customer-hours interruptions.

Table 11-2 Number of Customer-Hours Interruptions by Cause (5 Year Average)

Cause Code	5 Year Rolling Average
0-Unknown/Other	3,708
1-Scheduled Outage	3,954
2-Loss of Supply	1,886
3-Tree Contacts	5,487
4-Lightning	602
5-Defective Equipment	30,097
6-Adverse Weather	4,103
7-Adverse Environment	1,208
8-Human Element	12,381
9-Foreign Interference	17,486

g. Please see 2-Staff-26 d) and 2-Staff-34.
h. Refer to Exhibit 2, DSP, Page 21, Table 4. OPUCN assigns a reliability target for overall SAIFI and SAIDI.

1-EP-7

References: Exhibit 1, Appendix 1.2, Customer Engagement; Exhibit 2, DSP Page 14, Customer Self-Serve Online Portal (Green Button Dashboard)

Preamble: "OPUCN will implement an enhanced self-service tool that will allow customers the ability to log into a secure portal to view balances, due dates, bills as well as smart meter activity and predicted bill statistics."

a. Please confirm that only 30% of customers supported self-service options.

b. Please provide the annual budgets (capital an operating) for the Green Button Dashboard.

c. Please confirm these are a General Plant Cost.

d. How much has been spent to date?

Response

a) 127 out of 431 responses (30%) agreed with the statement.
b) Ongoing Annual fee of $3,600 plus tax for Annual Software Maintenance.
c) Confirmed.
d) $98,456.90.

2-EP-8

Reference: Exhibit 2, DSP Page 20, Appendix 5-A Performance Metrics

a. Please provide a more detailed explanation of why in 2019, Total Cost /customer, Capex
/customer and per km of line are much higher than the historic 5-year average.

b. Please show the rank of OPUCN for 2019 among Ontario Utilities, using OEB Yearbook data, including the average metrics of the top 10 utilities.

c. Please indicate how this poor performance has been reflected in the 2019 performance scores for executives and management by showing the average % performance incentive for 2015-2018 compared to 2019.

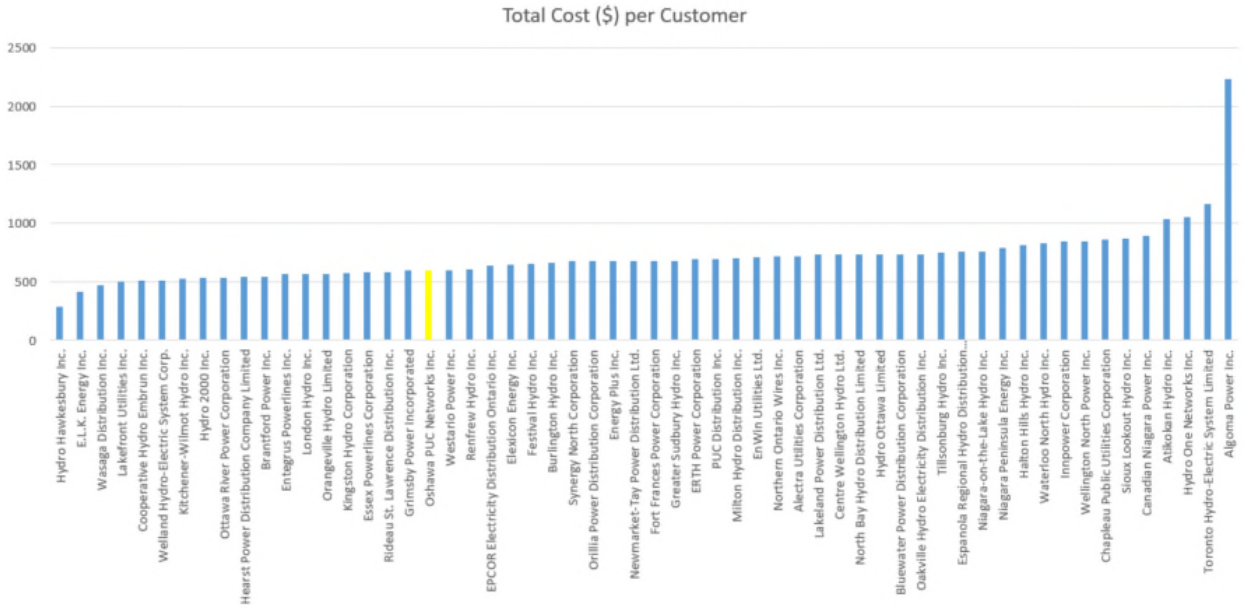
d. Please provide the 2021 Targets for these metrics.

Response

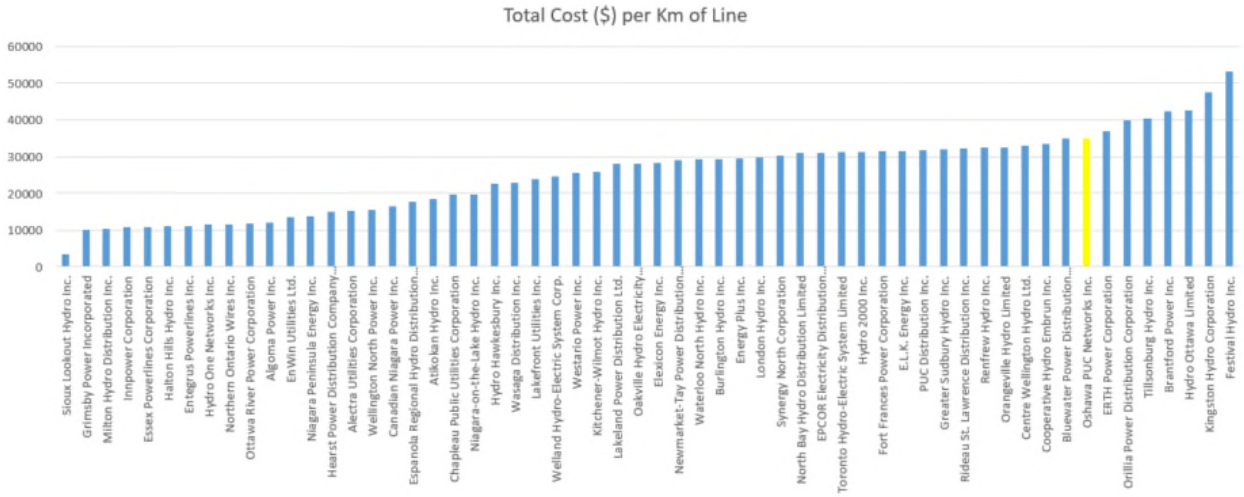
a. REF: Exhibit 2, DSP, Page 80, Appendix 2-AA Capital Projects Table

As shown in Table 2-AA, significant capital expenditures were made in 2019, including a $4.1M contribution to Hydro One for Enfield TS and $7.4M for MS9 and Enfield feeders.

b. Refer to the interrogatory response to question 1-EP-6 for SAIFI and SAIDI. Please see below charts based on the available data from OEB website (https://www.oeb.ca/_html/performance/report_builder_select.php)



Top 10 Average	482.2
OPUCN Rank	19



Top 10 Average	10234.1
OPUCN Rank	51

c. Refer to the interrogatory response to question 4-SEC-34 for percentage of potential variable incentive plan compensation paid out from 2015 to 2019.

Average percentage paid out from 2015 to 2018 is 91.24%
Average percentage paid out in 2019 is 76.5%

d. REF: Exhibit 2, DSP, Page 21, Table 4

Not all performance indicators and metrics have yearly corporate targets. Refer to Table 4 for OPUCN performance measures and targets.

2-EP-9

Reference: Exhibit 2, Page 40, Table 2-22
Preamble: The 2020 CAPEX is forecast as $6.5 million-60% lower than plan and is to ramp up to $14.5 million in 2021.

a. Please confirm and provide a breakdown of additional 2019 System Access spending attributable to the construction of MS9, Hydro One contribution to build Enfield TS, and the required feeder expansion projects.
b. Please provide the expected/updated 2020 total In-Service additions.

c. Please provide detailed reasons for the 2020 60% shortfall linked to each category of investment.

d. Please provide more details on how is OPUCN going to ramp up (more than double) its Capex in 2021. (list projects and indicate if deferred from 2020).

Response

a. Please note that spending attributed to the construction of MS9, Hydro One contribution to build Enfield TS and the required feeder expansion projects can be found in Appendix 2-AA Capital Projects Table under System Service and not under System Access.
b. The expected 2020 total in-service additions forecasts are the same as provided table 2-22.
c. Please see Appendix 2-AB sub note 2, which indicates that 2020 actual values presented are 6 of 12 months of the year and hence actual values are not expected to be 100% of planned (year-end) values.
d. Historical spend in 2019 ($23.2M) is double expected in 2021 ($14.5M). OPUCN will not need to will not be doubling its Capex in 2021 as 2020 actual value ($6.5M) are only 6 of 12 months (as explained in part (c)).

2-EP-10

References: Exhibit 2, DSP, Table 2-22, Figure 22, and Page 79
Preamble: In the System Renewal Investment Category forecast net expenditure is expected to increase by 51% from historical net actual expenditure to support the renewal of assets that are at or near, or at the end of Typical Useful Life as per the ACA (Asset Condition Assessment)".

a. Please confirm the budget for System Renewal was $4.5m-$5m under the prior IRM Plan.

b. Please explain in detail what has changed to necessitate a 51% increase in SR expenditures starting in 2021.

Response

a. The average yearly budget for system renewal in the last DSP was $4.99M. The average yearly budget for system renewal in this DSP is $8.57M. This represents an average yearly increase of $3.58M or 71.7%.

b. The average yearly budget for system renewal of Station Assets in the last DSP was $0.88M.
The average yearly budget for system renewal of Station Assets in this DSP is $2.44M. This is the predominant driver for the increase in system renewal spending. More station assets are at end of life. Station renewals are generally more costly, complex and site-specific than standard overhead and underground renewal projects.

2-EP-11

References: Exhibit 2, DSP, Table 2-22
Preamble: General Plant capital expenditures are significantly higher in 2020/2021.

a. Please provide the average annual General Plant investment for 2015-2019.

b. Please compute the percentage increases relative to the 2015-2019 average for 2020 and 2021.

c. Please provide more detail on the drivers for the 2020/21 GP increases.

Response

a. $1,067,903 based on Table 2-AA.
b. 2020 +98.89%, 2021+84.90%
c. Please see Exhibit 2 Page 49 of 65 on General Plant, 2020 Bridge Year vs. 2019 Actual and 2021 Test Year vs. 2020 Bridge Year

2-EP-12

Reference: Exhibit 2 – DSP, Appendix A, Page 2, Table and Figure 1

a. Please provide a copy of the table which shows for each year, the percentage contributions for third party relocations.
b. Please list the primary partners for each year.
c. Please explain why the 2021 budget is significantly higher (i.e. more than double) than the annual budgets for the rest of years (2022-2025).

Response

a.

	Historical Costs ($ '000)					Forecast Costs ($ '000)					
Year	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Gross	2,537	1,816	879	-	1,884	1,480	1,820	900	520	600	580
Contributions	-1,139	-418	-1,066	-791	-180	-370	-455	-225	-130	-150	-145
Contribution %	45%	23%	121%		10%	25%	25%	25%	25%	25%	25%
Net	1,397	1,398	-187	-791	1,704	1,110	1,365	675	390	450	435

b. Primary partners are typically Region of Durham and City of Oshawa.
    a. 2015: Region of Durham and MTO
    b. 2016: Region of Durham and Metrolinx
    c. 2017: City of Oshawa and Region of Durham
    d. 2018: Region of Durham
    e. 2019: Region of Durham and MTO
c. The 2021 budget is higher due to the projects identified by the region and the City in 2021.

2-EP-13

References: Exhibit 2, DSP, Appendix B, Table 0-1: Asset Condition Assessment overall results; Exhibit 2, DSP, Page 75
Preamble: METSCO states that "The majority of OPUCN's system is in *Fair or better condition,* which suggests OPUCN's past renewal investments were effective in maintaining the system health. However, there are some assets that can benefit from an increase in asset renewal to improve the age distribution and the condition of the asset class."

OPCN States at second reference "Since a large part of OPUCN's infrastructure assets have been determined to be in *"poor" or "very poor"* condition, prioritization of investments in the System Renewal category, required a comprehensive risk assessment approach, which is described in Section 5.3.3 in detail".

a. Please reconcile the above statements. Specifically, how does it affect the DSP?

b. Please confirm that U/G cable, Cut-out Arrestors and Switchgear have high percentages in Poor condition.

c. What steps is OPUCN taking to address the poor condition of these assets?

d. Why are the concrete poles in poor condition? Has OPUCN inspected these and how many will be replaced under the 5-year DSP?

e. The Building is assessed as only Fair condition. What are OPUCN plans in this regard?

f. Please provide a table showing historic and planned frequency of testing assets please add explanatory notes.

g. Please discuss how the testing has affected the 2020-2025 DSP? Please provide examples

Response

a. METSCO's statement is taking into consideration all assets under the ACA report. OPUCN's statement is specific to the System Renewal projects.
b. Confirmed.
c. Assets are being replaced under SR-02 Porcelain Insulator and Switch Replacement Program.
d. Most concrete poles are in poor condition due to age. Concrete poles are inspected for exposed rebar and rust and are replaced accordingly.

e. OPUCN has had a comprehensive building assessment completed. Please see Exhibit 2, DSP, Appendix L, Pinchin Building Condition Report. OPUCN plans to meet recommendations from the report to ensure safe operation of its existing facility. Please see response to 1-Staff-10 and Exhibit 2 – DSP Appendix A, Page 175 of 205 in regards to plans regarding building facility.

f. Historical frequency of testing assets are aligned with Distribution System Code (DSC) Appendix C minimum inspection requirements to provide minimum or greater frequency. Please see attached historic maintenance manual. Planned frequency of testing assets can be seen in Ex. 2. Appendix P: Maintenance Plan.

Category	Program	Test Cycle (2004-2019)	Test Cycle (2020-)	Notes
Station	Batteries and Chargers	Every year	Every year	Load tests
Station	Circuit Breakers & Protection Control	Every 4 years	Every 3 years	Relay test, breaker mechanical and electrical tests
Station	Power Transformers & Tap Changers	Every year	Every year, five years	DGA (yearly), turn ratio, doble, winding resistance tests (every 5 years)
Station	Switchgears & Seasonal Maintenance	Every 8 years	Every 3 years	Insulation tests
Overhead System	Wood & Concrete Pole Inspection & Treatment	Every 15 years (for poles over 20 years)	Every 5 years	Prodding tests and hammer tests and if necessary resistograph and/or ultra sound
Overhead System	Distribution Automation Battery, Communication and P&C	None	Battery (4x per year)	Load tests

g. Testing has been part of the formulation of health indices in the ACA report which informed decisions in System Renewal projects. For instance, Power Transformers use DGA test analysis in determining the asset health and whether the transformer should be replaced. Similarly, Circuit Breakers use test results in determining its health indices and whether the Circuit Breaker should be replaced.

2-EP-14
Reference: Exhibit 2, DSP, Appendix B, Section 5, Asset replacement plan
Preamble: The METSCO Report provides an asset replacement plan 2019-2025 for 13 asset categories.

a. Please provide a Table with both
   - the historic annual asset replacements during the 2015-2019 IRM plan, and
   - the forward-looking recommended asset replacement plan for 2019-2025.

b. Please discuss the material changes historic vs future for each asset category.

c. Please provide an annual capital cost estimate using unit cost estimates for the period 2015-2025.

d. Compare the cost estimate to the historic and projected Capital Plans.

Response
a.
Please see below table.

	Historical Actual Replacements					ACA Recommended Replacement					
Asset	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Wood pole	373	288	42	344	234	320	320	320	320	330	330
Concrete pole	0	0	0	0	0	7	7	7	7	8	9
Underground primary cable (km)	19.24	24.33	13.44	13.015	6.112	7.3	7.05	7.2	7.3	7.05	7.05
Pole-mount transformer	95	67	87	58	89	38	38	38	38	38	38
Pad-mount transformer	128	134	131	84	63	50	50	50	55	55	55
Vault transformer	0	0	13	0	0	11	12	12	11	12	11
Submersible transformer	0	0	0	0	1	1	1	0	0	0	0
Primary switch	61	40	43	19	22	11	8	5	5	4	4
Cut-out arrestor	77	41	51	50	36	52	52	50	62	69	65
Elbow	1391	356	198	251	40	10	10	15	15	15	15
Power transformer	-	-	-	-	-	-	-	-	1	1	1
Circuit Breaker - 13.8kV	8	0	0	0	0	0	0	0	0	0	0
Circuit Breaker - 44kV	0	4	12	0	0	0	0	0	0	0	0
Switchgear	1	-	-	-	-	1	1	1	1	1	1
Relay	0	0	0	0	0	0	2	3	1	1	1
RTU	0	0	0	0	0	0	0	1	1	1	1
Battery	0	0	0	0	1	1	1	1	1	1	1

Please note that the above data historical actual replacements are based on data extracted from OPUCN's GIS which include reactive replacements.

b. Historic forecast amounts for each asset are summarized below based on EB-2014-0101, Exhibit 2, Tab B, Schedule 3, Page 1 of 101. The historical actual replacements in the table above include reactive replacements. The overall numbers appear to be aligned with the 2015 ACA, but material changes are not easily determinable.

	2015 ACA Recommendation				
Asset	**2015**	**2016**	**2017**	**2018**	**2019**
Wood pole	210	210	210	210	210
Concrete pole	0	0	0	0	0
Underground primary cable (km)	7.4912	7.4912	7.4912	7.4912	7.4912
Pole-mount transformer	141	141	141	141	141
Pad-mount transformer	21.6	21.6	21.6	21.6	21.6
Vault transformer	18.2	18.2	18.2	18.2	18.2
Submersible transformer	0	0	0	0	0
Primary switch	14	14	14	14	14
Cut-out arrestor	Not specifically identified in ACA				
Elbow	Not specifically identified in ACA				
Power transformer	0	0	0	0	1
Circuit Breaker - 13.8kV	7	8			
Circuit Breaker - 44kV			4	4	3
Switchgear	Not specifically identified in ACA				
Relay	Not specifically identified in ACA				
RTU	0	0	0	0	0
Battery	0	0	0	0	0

c. Please see response to CCC-13.

d. Please see variance analysis starting at page 31 of 65 Exhibit 2 and starting 5.4.2 Capital Expenditure Summary Exhibit 2-DSP Page 78 of 107.

2-EP-15

References: Exhibit 2, DSP Page 77; Exhibit 2, DSP Appendix A Page 31, Figures 16 and 17 **Preamble:** "OPUCN will be investing in replacing end of life smart meters with improved technology smart meters. This will provide more reliable smart meter data and would provide near real-time data access to customers. In addition, new smart meter technology would aid the utility's situational awareness of customer outages."

a. Please provide a current age profile for the OPUCN meter Fleet (residential and commercial meters).
b. Based on the second references, please provide more details on the Alternative scenarios/pacing for the meter replacement program(s).
c. Please provide the annual numbers and costs for the program(s).
d. Please provide the unit costs (procurement and installation for meter replacement for each type of meter.
e. Please position this cost to the functionality/costs range for meters.
f. Is OPUCN part of a utility consortium for meter procurement? If so indicate the member utilities.

Response

a)

OPUC began to procure and install smart meters in 2010. At this time, smart meters were anticipated to have a useful life of 10 years. At the onset of DSP development for this rate filing, OPUCN assumed it would need to proactively replace all smart meters that reach end of life. Upon review of data and further analysis, it was determined that smart meter replacement upon failure was more prudent than planned renewal at this time.

Smart meters initially deployed were Elster REX2, REX2-BI and REX2-RD models. They will be replaced with equivalent latest generation, REXU models.

Interval meters initially deployed were GE kV and ITRON Sentinel models. They will be replaced with Elster A3RL or A3TLs. Currently, OPUCN uses Elster A3TL models for General Service < 50kW and Elster A3RL models for MIST and General Service > 50kW, with intervals at 60, 15 or 5 minutes.

b) c)

Refer to the Discretionary Project Change Assessment form, completed for project SA-05 AMI System Update, following the response to question f.

For comparison, costs associated with the two alternatives are summarized in the table below.

Project Alternatives	2020	2021	2022	2023	2024	2025
Meter Replacement (planned)	$400,000	$1,170,000	$1,170,000	$1,170,000	$1,170,000	$1,200,000
AMI System Update (reactive)	$605,000	$386,600	$411,800	$437,000	$462,200	$487,400

d)

Estimated unit cost for replacement of an existing residential meter is $185/meter

Estimated unit cost for installation of a new residential meter is $200/meter

Estimated unit cost for replacement or installation of a new commercial meter is $900/meter

Estimated unit cost for replacement or installation of a new interval meter is $2600/meter

e)

OPUCN has standardized on the Honeywell Elster AMI Connexo system and latest generation REXU smart meters. New meters procured, and replacement of old failed meters, are to equivalent REXU models. There is no readily available list from the vendor which can be shared to highlight all varying model options/ permutations and associated prices.

f)

No. OPUCN does not participate in a utility consortium for meter procurement.

Change Assessment

Discretionary Project Information		
Name	Number	Investment Category
AMI System Update	SA-05	System Access

Summary

This program will refresh outdated Rex2 (2nd Generation Elster/Honeywell) smart meters with the latest generation of smart meter technology. The meter upgrade will provide better security, better communication and better outage management functionality. The "AMI System Update" program is a consolidation of the "AMI Gatekeeper Upgrade," "Meter Replacement Program," and "Fibre Connections to AMI Network" projects in Version 2 of the DSP. This program is anticipated to occur over 10 years, but will be re-evaluated in 2025. Replacing meters as they fail will help to smooth out the age profile of meters in service and facilitate planned system renewal, if justified/required in the future. Existing meters not replaced until 10 years from now, will be 20 years old by the completion of this program.

Proposed Change

Type of Change Assessed (select most reasonable)

☒ Scope Change ☒ Budget Change ☐ Cancellation ☐ Advancement ☐ Postponement	☐ Other (describe below)

Reason for Change

An assessment was completed to contrast planned meter replacement versus reactive meter replacement. In general, most smart meter failures do not affect the service supply to customers. When meters fail, they typically stop communicating with the AMI headend system, but continue to supply electricity to customers. Financially, it has been shown that reactive meter replacements will be more cost effective than planned replacement for the next 18 years. As a result, analysis shows it is more prudent to implement a reactive meter replacement program. Additionally, when a meter is pulled for reverification or for any other purpose, it will be replaced with an upgraded meter to minimize meter change out costs.

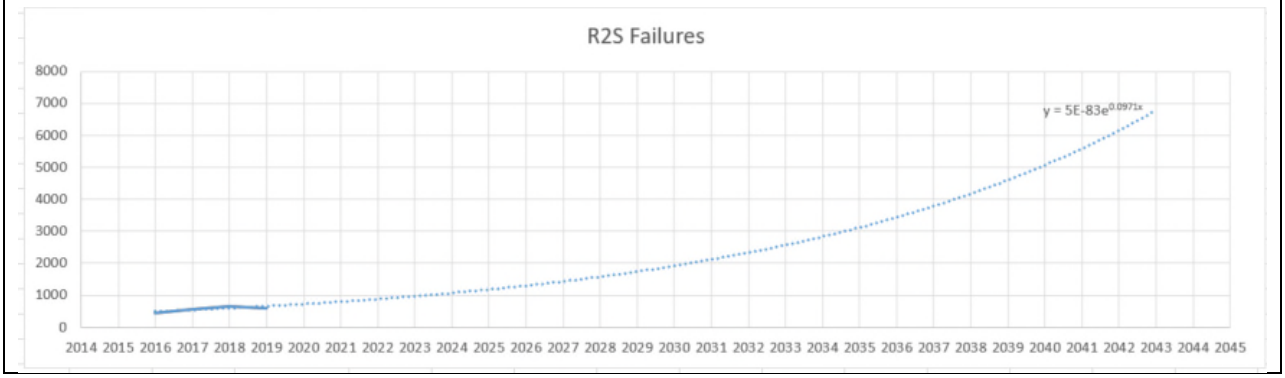
The planned meter replacement budget is based on the replacement of 6000 meters per year:

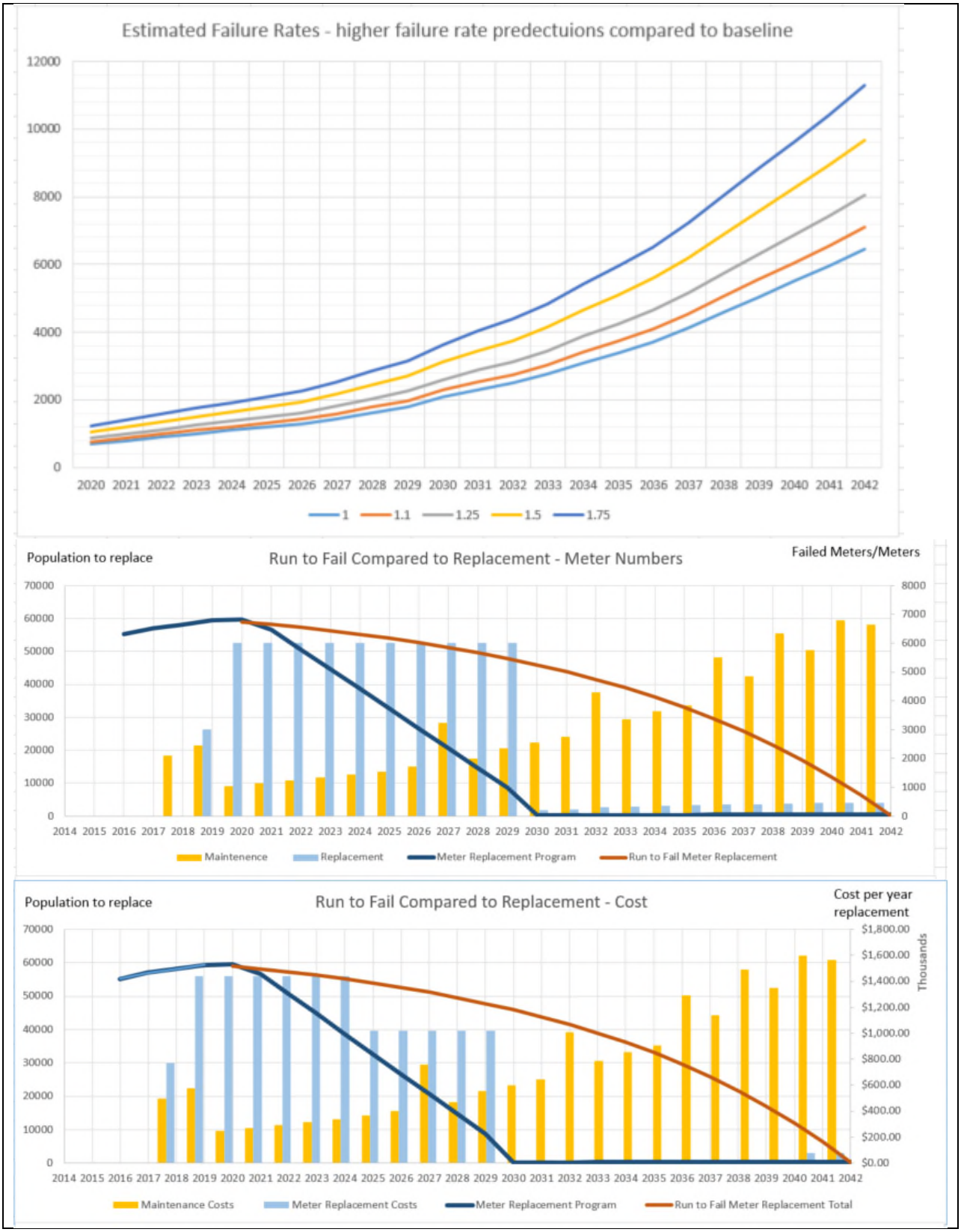
A. General Information (5.4.3.2.A)						
Project/Activity	Meter Replacement Program					
Project Number						
Investment Category	System Access					
	2020	2021	2022	2023	2024	2025
Capital Cost	$400,000	$1,170,000	$1,170,000	$1,170,000	$1,170,000	$1,200,000
Capital Contribution	N/A	N/A	N/A	N/A	N/A	N/A
Net Cost	$400,000	$1,170,000	$1,170,000	$1,170,000	$1,170,000	$1,200,000
O&M Cost	2020	2021	2022	2023	2024	2025

The reactive meter replacement budget is based on running the meters to failure starting in 2021:

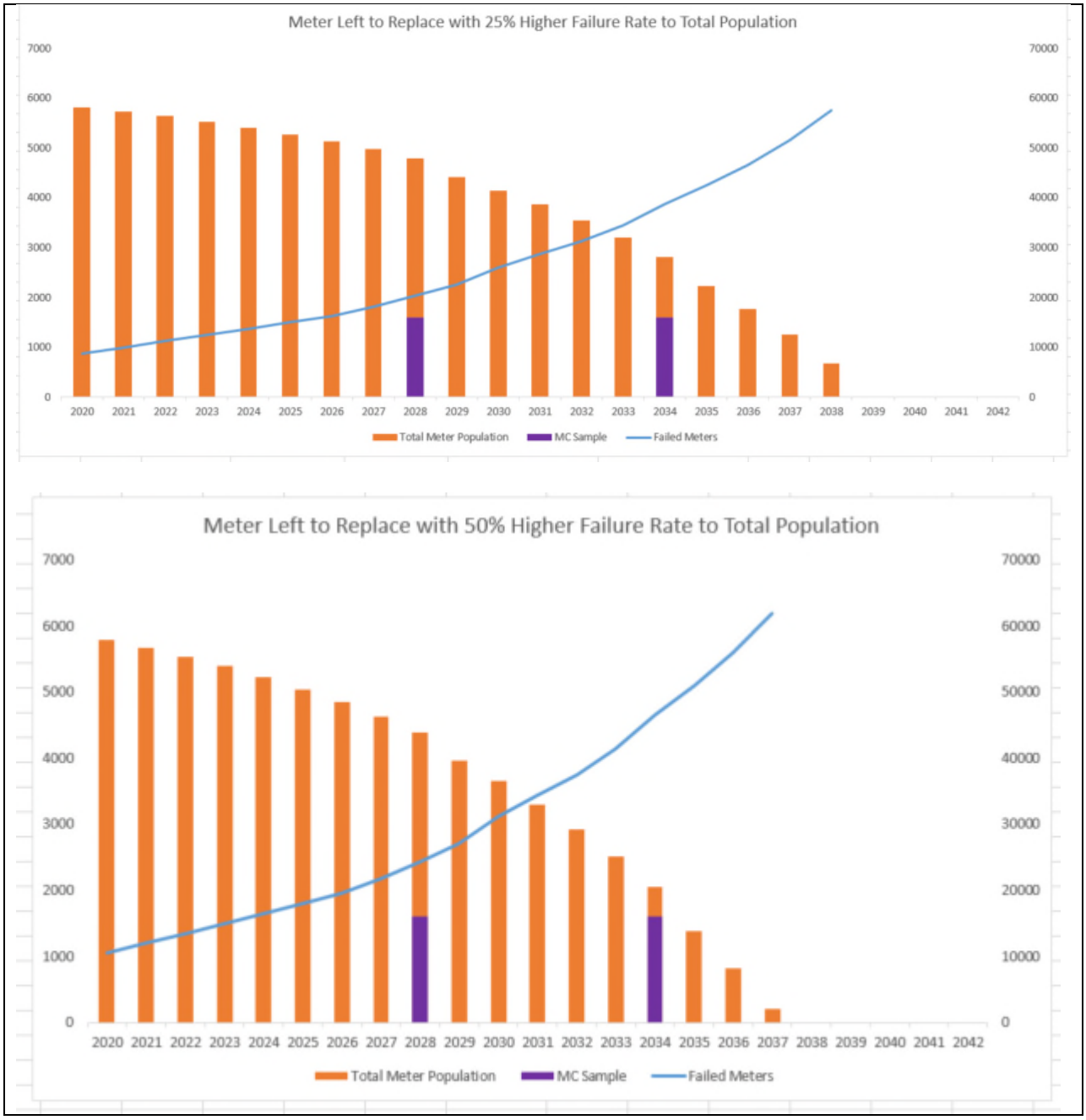
A. General Information (5.4.3.2.A)						
Project/Activity	AMI System Update					
Project Number	SA-05					
Investment Category	System Access					
	2020	2021	2022	2023	2024	2025
Capital Cost	$605,000	$386600	$411800	$437000	$462200	$487400
Capital Contribution	N/A	N/A	N/A	N/A	N/A	N/A
Net Cost	$605,000	$386600	$411800	$437000	$462200	$487400
O&M Cost	2020	2021	2022	2023	2024	2025
	-	-	-	-	-	-

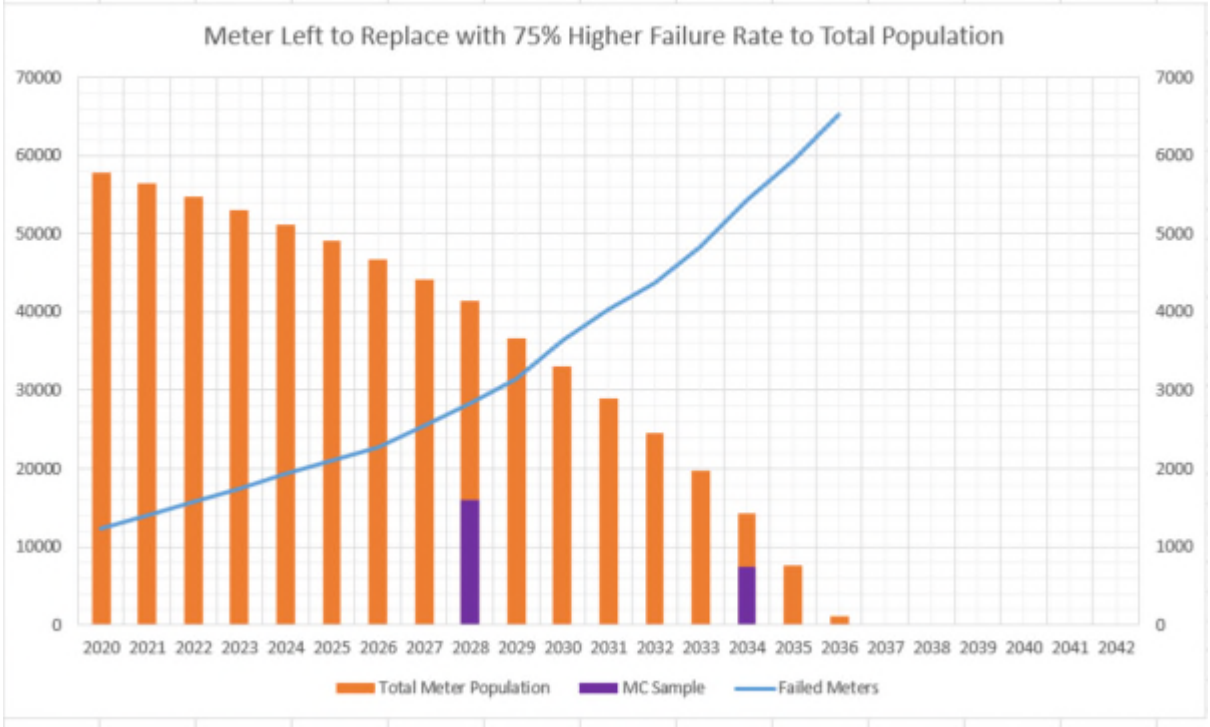
The following charts provide supporting supplemental information:

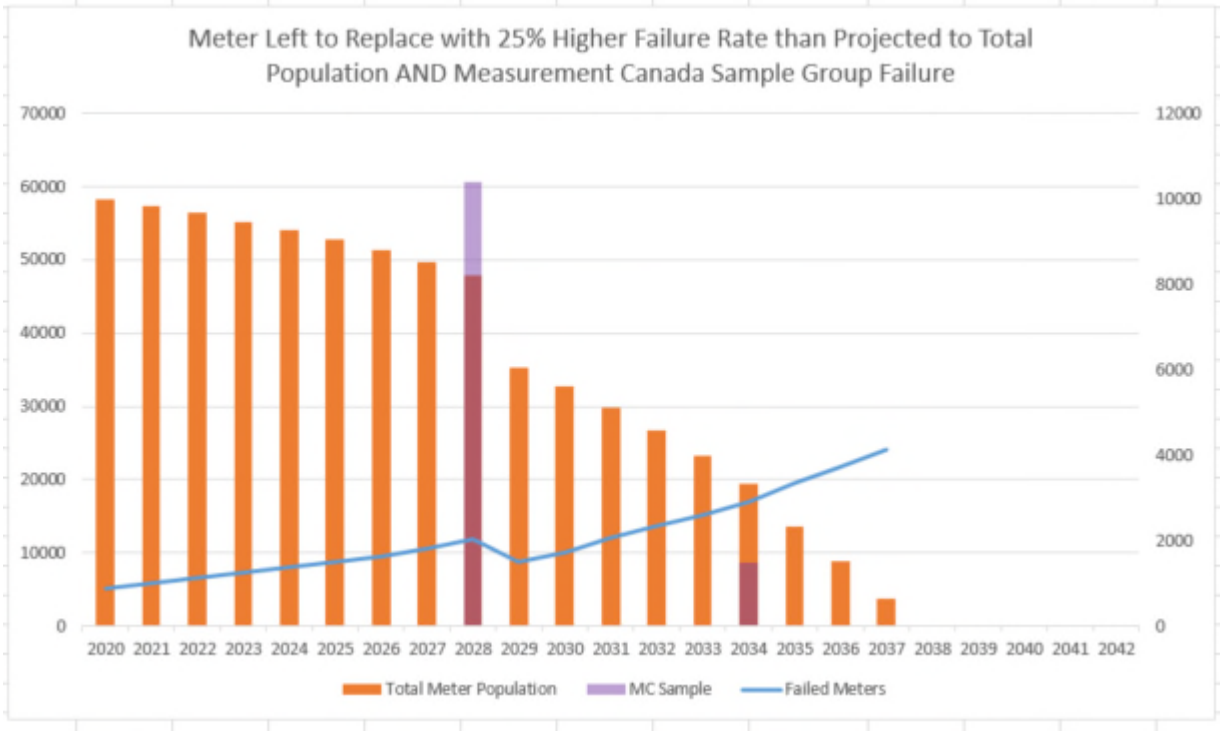



Estimated Failure Rates - higher failure rate predectuions compared to baseline
12000
10000
8000
6000
4000
2000
0
2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042
1
1.1
1.25
1.5
1.75
Population to replace
Run to Fail Compared to Replacement - Meter Numbers
Failed Meters/Meters
70000
60000
50000
40000
30000
20000
10000
0
8000
7000
6000
5000
4000
3000
2000
1000
0
2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042
Maintenence
Replacement
Meter Replacement Program
Run to Fail Meter Replacement
Population to replace
Run to Fail Compared to Replacement - Cost
Cost per year replacement
Thousands
70000
60000
50000
40000
30000
20000
10000
0
$1,800.00
$1,600.00
$1,400.00
$1,200.00
$1,000.00
$800.00
$600.00
$400.00
$200.00
$0.00
2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042
Maintenance Costs
Meter Replacement Costs
Meter Replacement Program
Run to Fail Meter Replacement Total


Run to Fail Compared to Replacement - Cost Operations and Customer Service
Thousands
$25,000.00
$20,000.00
$15,000.00
$10,000.00
$5,000.00
$0.00
2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042
Runto to Fail Replacement Cost
Meter Replacement Cost Total
Meter Left to Replace with 10% Higher Failure Rate to Total Population
70000
60000
50000
40000
30000
20000
10000
0
6000
5000
4000
3000
2000
1000
0
2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042
Total Meter Population
MC Sample
Failed Meters

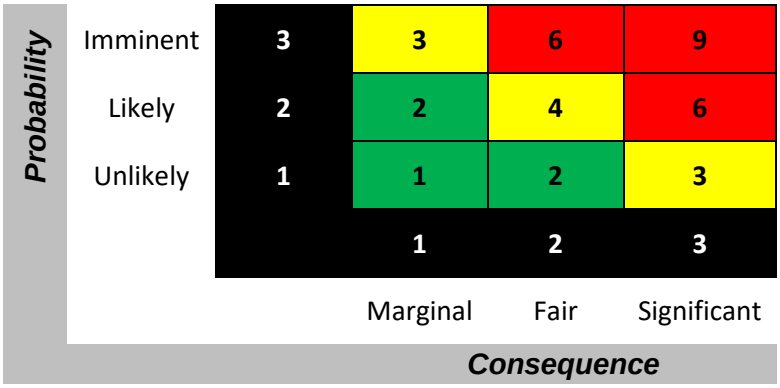

Meter Left to Replace with 25% Higher Failure Rate to Total Population
7000
6000
5000
4000
3000
2000
1000
0
70000
60000
50000
40000
30000
20000
10000
0
2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042
Total Meter Population
MC Sample
Failed Meters
Meter Left to Replace with 50% Higher Failure Rate to Total Population
7000
6000
5000
4000
3000
2000
1000
0
70000
60000
50000
40000
30000
20000
10000
0
2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042
Total Meter Population
MC Sample
Failed Meters


Meter Left to Replace with 75% Higher Failure Rate to Total Population
70000
60000
50000
40000
30000
20000
10000
0
7000
6000
5000
4000
3000
2000
1000
0
2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042
Total Meter Population
MC Sample
Failed Meters


Meter Left to Replace with 25% Higher Failure Rate than Projected to Total Population AND Measurement Canada Sample Group Failure
70000
60000
50000
40000
30000
20000
10000
0
12000
10000
8000
6000
4000
2000
0
2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042
Total Meter Population
MC Sample
Failed Meters

Risk Assessment

Score



	Value	Description
Consequence	1	Most smart meter failures result in communication loss, not an outage. Impact to customer is marginal if replaced in time to avoid billing estimations and associated issues.
Probability	2	Probability of increasing failures is likely.
Risk (C*P)	2	☒ Green ☐ Yellow ☐ Red (unacceptable)

Implications to Distribution System

No implications anticipated for system reliability. Customer specific outages will not be detected by the OMS if a smart meter has failed, and thus, would only be detected if reported or investigated. Required distribution system next generation technology may progress quickly and require planned smart meter renewal sooner than reactive renewal over the next 10 years, but nothing is imminent at this time.

Recommendation	Rationale
☒ Accept ☐ Reject	There are no significant impacts to the distribution system with this change.

2-EP-16

Reference: Exhibit 2, DSP, Appendix L, Pinchin Building Condition Report; Appendix1 Table 1 Summary of Anticipated Expenditures Replacement Reserve Costs

a. Please provide the name of the owner of the Buildings at 100-102 Simcoe Street South.

b. Does OPUCN lease the buildings? If the answer is yes, is the lease cost is included in Rate Base or as an Operating Expense. If the answer is no, please explain your answer.

c. Please explain the reasons for the accounting treatment of the lease.

d. Is OPUCN responsible for the referenced estimated Capital upgrades and the Replacement Reserve Costs totalling $933,077 over the next 10 years?

e. Please provide information on increased security costs associated with security of station buildings and head office in response to increased levels of attempted theft and vandalism.

Response

a. The Corporation of the City of Oshawa
b. Yes. Lease cost is included as an operating expense.
c. OPUCN adopted IFRS 16 for its 2019 Audited Financial Statements, published April 2020. The accounting adjustments had not been made internally when preparing this application. Both treatments produce similar outcomes from a rate calcilation perspective.
d. Yes. OPUCN has responsibility for capital expenditures at all buildings referenced in Exhibit 2, DSP, Appendix L, Pinchin Building Condition Report. The costs identified represent a 10 year capital expenditure plan recommended by Pinchin based on the Property Condition Assessments they conducted in early 2020.
e. In response to increased incidents of theft, property damage, and threatening/untoward behavior of trespassers entering OPUCN premises and confronting staff, new fencing and automated gates are being installed at 100 Simcoe St South in 2020, at an estimated capital cost of $215K.

   Additional security measures such as physical patrols/inspections at OPUC offices, storage and sub-stations, along with additional video monitoring, have increased operational costs by approximately $70k annually.

2-EP-17

Reference: Exhibit 2, DSP, Appendix R, Fleet Management Policy, Appendix A, Fleet Inventory.

a. Please provide the Fleet Replacement Plan 2020-2025.

b. Please provide annual cost estimates.

c. Please compare the estimated total 6 year cost and average per year to the historic 5 year total and average 2015-2019.

Response

a. Please see GP-02 Fleet Replacement Program Exhibit 2 – DSP Appendix A, page 179 of 205.
b. Please see above response in a)
c.

2020	**2021**	**2022**	**2023**	**2024**	**2025**
545,000	530,000	420,000	100,000	440,000	95,000
				Total (6 years)	$2,130,000
				Average	$335,000

2015	**2016**	**2017**	**2018**	**2019**
460,652	132,338	503,173	368,394	340,672
			Total (5 years)	$1,805,229
			Average	$361,046

Average yearly spends during 2020-2025 is less than historical 2015-2019 period.

Reference Exhibit 2 – DSP Appendix A- Page 179 of 205- GP-02, Appendix 2-AA Capital Projects Table

3-EP-18

Load Forecast

Reference: Exhibit 3, Table 3-2
Preamble: From 2015-2019 predicted kWh purchases exceeded actual purchases, and in 2019 the difference was 4.1%.

a. Is OPUCN satisfied that there is no systematic error in the regression models.

b. Please comment specifically on the 2021 forecast that is higher than the 20 year trend?

Response

a. OPUCN is satisfied that there is no systemic error in the regression model. The continued improvements in conservation and demand have played a role in the actual system purchases being lower than predicted. The test year 2021 bring levels closer to 2019 actual which further supports the regression model being used.

b. The 2021 forecast of 1,122.8 GWh is 0.3% higher than the 20 year trend for 2021 (1,119.1 GWh). The difference is small. OPUCN supports that a ten year normalized average is more suitable for predicting test year purchases.

4-EP-19

Operating Expenses Reference: Exhibit 4, Table 4-1
Preamble: OM&A levels totalled $63.414 million 2015-2019 and are proposed to increase significantly in 2020 and 2021.

a. Please provide the annual percentage increases 2015-2019 and the 5 year CAGR.
b. Please provide the annual percentage increases in 2020 and 2021 and the average.

Response

The table below provides the requested calculations.

Year	Board Approved $	Annual % Increase	CAGR (vs 2014 Actual)	Actual $	Annual % Increase	CAGR (vs 2014 Actual)
2014				11,070		
2015	12,054	8.9%		11,678	5.5%	
2016	12,533	4.0%		12,374	6.0%	
2017	12,824	2.3%		12,908	4.3%	
2018	13,033	1.6%		13,585	5.2%	
2019	13,102	0.5%	3.4%	12,874	(5.2)%	3.1%
2015-2019	63,546			63,418		
2020 Bridge Year				13,845	7.5%	3.8%
2021 Test Year				14,108	1.9%	3.5%
Average 2020/21					4.7%	

4-EP-20

References: Exhibit 4 Table 4-2, Table 4-4 Table 4-12
Preamble: OPUCN estimates its projected 1 2021 OM&A per customer of $231 would rank in the top ten of lowest OM&A per customer expense. In addition, OPUCN projected 2021 OM&A per customer is the same as it was in 2018.

Please provide the following metrics for 2015-2021:
a. OM&A/Connection
b. OM&A per kWh
c. OM&A per FTE

Response
The table below provides the requested calculations.

OM&A per Customer $000's except per customer	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Bridge	2021 Test
OM&A Costs	$11,677,888	$12,374,450	$12,907,541	$13,584,607	$12,873,961	$13,845,477	$14,107,550
Number of Connections	68,651	70,074	71,091	72,892	73,631	74,655	75,694
OM&A per Connection	$170	$177	$182	$186	$175	$185	$186
Total kWhs	1,123,341,031	1,122,027,434	1,074,174,685	1,124,349,572	1,090,293,582	1,125,237,967	1,122,802,653
OM&A per kWh	$0.0104	$0.0110	$0.0120	$0.0121	$0.0118	$0.0123	$0.0126
Total FTEs	78.7	75.7	84.3	89.7	90.2	92.3	91.4
OM&A per FTE	$148,327	$163,521	$153,099	$151,486	$142,691	$149,951	$154,321

4-EP-21

References: Exhibit 4, Page 21, and Table 4-15
Preamble: EP would like to understand the cost/benefit behind the transfer of the CEO to the utility and the related changes in Management Fees.

a. How much of the CEO's time was allocated to the utility in the year prior to the transfer.
b. How much time is allocated to the utility in 2021?
c. Please provide the 2019 Total Compensation for the CEO (assuming the transfer in 2019)
d. Provide any other related costs such as office and staff.
e. Provide the Management Fees related to the office/function of the CEO prior to and after the transfer.
f. Please discuss if/how the transfer is financially beneficial to OPUCN customers.
g. What other non-monetary collateral benefits result for customers?

Response

The table below summarizes the movement in combined labour and parent/affiliate charges from 2015 OEB Approved to the requested amount for the 2021 Test Year. The overall growth rates show average annual increases to 2021 of 1.7% and 1.2% compared to approved amounts for 2015 and 2019 respectively.

Labour incl. Parent/Affiliate Fees $000's	2015 Approved	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Approved	2019 Actual	2020 Bridge	2021 Test
Labour	$7,512	$7,149	$7,131	$7,431	$8,536	$8,290	$8,806	$9,159	$9,201
Parent & Affiliate Fees Net	$327	$292	$168	$160	$(142)	$354	$(344)	$(349)	$(356)
Total	**$7,839**	**$7,441**	**$7,298**	**$7,591**	**$8,394**	**$8,644**	**$8,462**	**$8,809**	**$8,844**
CAGR vs 2015 Approved									1.7%
CAGR vs 2019 Approved									1.2%

a. 50%.
b. 50%
c. [redacted] The compensation paid to an identifiable individual constitutes personal information, which is protected from disclosure and has been redacted in this public filing – see cover letter to Interrogatory Responses.
d. n/a
e. $175,000 prior to transfer. Zero post transfer.
f. As noted in Exhibit 4, page 21, the net cost impact is neutralised through adjustments to parent company management fees and OPUCN service charges to affiliate companies.
g. There is no impact on customers.

4-EP-22
Total Compensation

Reference: Exhibit 1, Page 53, *Table 1-16: Total Wages and Benefits 2015 – 2021*
Preamble: Total Compensation for Management has increased materially based on the addition of 7 positions in 2018. EP wishes to understand why these positions were required.

a. Please provide the ratio of management to operating employees from 2015 -2020 (i.e. Management FTE/ employee FTE).

b. Please provide the basis of the increment in Management positions/per employee in 2019/2020.

c. Please provide specifics on the management positions added.

d. Did OPUCN undertake an organizational study to support the reorganization and need for added positions? If so please provide a copy?

e. Please provide a copy of the Request to the Board of Directors for the addition of 7 management positions.

Response

a. Due to the size of our utility, we do not have a multi-layer organizational structure of management positions. The management/non-union group are working managers that perform work beyond administration and project oversight. While bargaining unit work is identified in job descriptions, our non-union/management group operate as subject matter experts who complete essential, technical work in their functional areas. For example, our Supervisor, Capital Design completes studies and technical work as part of their everyday duties. We therefore would consider many of our management/non-union employees as “operating” employees.

The ratio of management/non-union to union employees from 2015-2020 is (rounded to nearest whole number):

Year	# of Non Union Management	# of Union
2015	1	3
2016	1	2
2017	1	2
2018	1	2
2019	1	2

b. The increment of non-union positions in 2019/2020 reflect the following:

1) The President & CEO position was transferred from the parent company in 2019.
2) With the cancellation of the Conservation Demand Management framework, the CDM Manager position was transferred from the parent company in 2019 and evolved to a Manager, Sustainability & Business Advocacy position which focuses on a key accounts initiative & corporate sustainability program.
3) Maintenance Planner – A new position was created with a focus on system reliability with the responsibility of implementing a new Computerized Maintenance Management System (CMMS) and leading the detailed planning and scheduling of work activities required to maintain, repair, upgrade, expand, and renew the electrical distribution system.
4) Cyber Security Analyst – A new position was created in the IT department to help manage increasingly complex IT infrastructure, modernising IT infrastructure (including new Disaster Recovery site) and developing an action plan to enhance and maintain compliance with the OEB Cyber Security framework.
5) Marketing Analyst (approved in the last rebasing as Community Relations moved to Corporate) – A new position focused on customer engagement, communication, and community relations initiatives.

c. The addition of non-union positions from 2015-2020 were a result of increased workload in particular functional areas, as described. Prior to 2018, some of these positions were being filled on a contract basis; therefore, the increase in positions in 2018 is a reflection of the positions moving to a continuous, full time capacity. The non-union positions added since 2015 are as follows: Marketing & Communications Analyst (1.0 FTE), Purchasing Manager (1.0 FTE), Human Resources Consultant (1.0 FTE), Distribution Engineer in Training (EIT) (1.0 FTE), Maintenance Planner (1.0 FTE), Cyber Security Analyst (0.5 FTE), Powerline Co-op Student (0.5 FTE), Marketing Analyst (Community Relations) (1.0 FTE). In addition, two positions were transferred from the parent company – the President & CEO, and the Manager, Sustainability & Business Advocacy (Key Accounts – formerly CDM Manager).

d. No, an organizational study was not undertaken.

e. Request for approval for new positions to the Board of Directors is provided in the form of budgets to Finance & Audit Committee and review of headcount by the Human Resources & Governance Committee.

4-EP-23
Regulatory Costs
Reference: Chapter 2, Appendices, Tab 2-M – Regulatory Costs
Preamble: The incremental costs of $687,786 in respect of this application, including $344k are for legal and consultants, and $105k for intervenors.

a. Please provide a breakdown of the legal and consultants that make up the $344k cost and the amount spent to date.
b. Please provide the number of intervenors in each case and compare the $105k 2021 amount to the 2014 Application.

Response

a) The table below summarizes the proposed $344,133 in regulatory consulting costs supporting this application.

Activity	Budgeted	Actual to Date
Technical writing / Exhibit 1	$66,800	$53,837
Customer Engagement	$100,000	$74,566
DSP / Asset Condition Assessment	$164,000	$70,680
Misc	$13,333	$14,999
Total	$344,133	$214,082

b) There were 5 intervenors in the 2014 Application who billed a total of $273k. There are 6 intervenors for the 2021 Application.

5-EP-24

Long Term Debt

References: Exhibit 5, Page 4; Appendix 5-1; Appendix 2-OB; Exhibit 1, Financial Statements

Preamble: Oshawa PUC Networks states: “Funded Debt represents Notes Payable of $60.064 million to the parent company, Oshawa Power and Utilities Corporation (“OPUC”). The effective interest rate on the Note is 3.65%. The Note is due on demand to the parent company. The rate used for this loan in calculation of the weighted average is the actual rate of 3.65%, *which is the effective rate payable by OPUC to the Toronto Dominion Bank on a loan of a similar amount*. “

a. Please confirm that OPUCN borrowed ~$60 million from the TD bank to buy a note of similar value from the Parent Holding Company.
b. Please file a copy of the Note(s) Payable between Oshawa PUC Networks and OPUC.
c. Please provide the term(s) of the Note(s) Payable between Oshawa PUC Networks and OPUC.
d. Please confirm the annual interest and effective rate(s) paid to OPUC from 2015-2020.

Response

a. OPUC (Parent) borrowed the $60m and lent to OPUCN.
b. Please see response to Board Staff interrogatory "5-Staff-97".
c. Please see response to Board Staff interrogatory "5-Staff-97".
d. Please see Appendix 2-OB, also summarized below.

				Year	2015					
Row	Description	Lender	Affiliated or Third-Party Debt?	Fixed or Variable-Rate?	Start Date	Term (years)	Principal ($)	Rate (%) [2]	Interest ($) [1]	Additional Comments, if any
1	Debenture	Oshawa Power&Utilities Corp	Affiliated	Fixed Rate	1-Dec-05		$23,064,000	4.77%	$1,100,153	Deemed Rate
2	Term Loan 2012	TD Bank	Third-Party	Fixed Rate	1-Dec-12	7	$ 7,000,000	3.57%	$ 249,550	Actual Rate
3	Term Loan 2015	TD Bank	Third-Party	Fixed Rate	17-Jun-15	7	$15,000,000	2.71%	$ 219,399	Actual Rate
Total							$45,064,000	3.48%	$1,569,101	
				Year	2016					
1	Debenture	Oshawa Power & Utilities Corp	Affiliated	Fixed Rate	1-Dec-05		$23,064,000	4.54%	$1,047,106	Deemed Rate
2	Term Loan 2012	TD Bank	Third-Party	Fixed Rate	1-Dec-12	7	$ 7,000,000	3.57%	$ 249,550	Actual Rate
3	Term Loan 2015	TD Bank	Third-Party	Fixed Rate	17-Jun-15	7	$15,000,000	2.71%	$ 406,500	Actual Rate
Total							$45,064,000	3.78%	$1,703,156	
				Year	2017					
1	Debenture	Oshawa Power&Utilities Corp	Affiliated	Fixed Rate	1-Dec-05		$23,064,000	4.54%	$1,047,106	Deemed Rate
2	Term Loan 2012	TD Bank	Third-Party	Fixed Rate	1-Dec-12	7	$ 7,000,000	3.57%	$ 249,550	Actual Rate
3	Term Loan 2015	TD Bank	Third-Party	Fixed Rate	17-Jun-15	7	$15,000,000	2.71%	$ 406,500	Actual Rate
Total							$45,064,000	3.78%	$1,703,156	
				Year	2018					
1	Debenture	Oshawa Power&Utilities Corp	Affiliated	Fixed Rate	1-Dec-05		$23,064,000	4.16%	$ 959,462	Deemed Rate
2	Term Loan 2012	TD Bank	Third-Party	Fixed Rate	1-Dec-12	7	$ 7,000,000	3.57%	$ 249,550	Actual Rate
3	Term Loan 2015	TD Bank	Third-Party	Fixed Rate	17-Jun-15	7	$15,000,000	2.71%	$ 406,500	Actual Rate
Total							$45,064,000	3.58%	$1,615,512	
				Year	2019					
1	Note	Oshawa Power&Utilities Corp	Affiliated	Fixed Rate	1-Oct-18		$60,064,000	3.65%	$2,191,735	Actual Rate
Total							$60,064,000	3.65%	$2,191,735	
				Year	2020					
1	Note	Oshawa Power&Utilities Corp	Affiliated	Fixed Rate	1-Oct-18		$60,064,000	3.65%	$2,191,735	Actual Rate
2	Term Loan 2020	TD Bank (Unfunded)	Third-Party		1-Oct-20		$10,000,000	3.21%	$ 80,030	Deemed Rate
Total							$70,064,000	3.63%	$2,271,765	

5-EP-25

References: Exhibit 5, Pages 4-5: Appendix 2-OB- New Long-term Debt in 2020 and 2021
Preamble: OPUCN plans to issue approximately $10.0 million new Long-term Debt in 2020, and $5.0 million in 2021.

a. Please confirm that OPUCN will procure this debt from the TD Bank.
b. If the answer to (a) is yes, please indicate the term(s) and expected interest rates.
c. Please confirm that OPUCN will exchange this debt with a note from the Parent Company and if so, the projected term and interest rate(s).

Response

a. OPUC (Parent) will procure the debt.
b. This has not been finalised, but likely term of 10 years at approximately 2.1%.
c. Confirmed. Rate to be as per TD.

9-EP-26
Deferral and Variance Accounts

References: Exhibit 1, Page 60; Exhibit 9, Table 9-12
Preamble: OPUCN is requesting the disposition of Group 2 Deferral and Variance Account ("DVA"), 1568, and LRAM Variance Account in this Application.

a. Please provide more detail on the LRAM calculation, including IESO verified results and the persistence assumptions.

b. Please provide details of the System Renewal Capital Variance Account.

Response

a. Persistent savings for 2015-2017 CDM were taken from IESO verified results reports. 2018 and 2019 CDM program savings were taken from Participation & Cost report from IESO based on unverified results. For clarity, both net savings and persistence of said savings were calculated using assumptions provided by the IESO, via the 2018 Participation & Cost Report which included full year 2018 programs and 2019 programs up to March 2019. The IESO report was filed with this Application. Assumptions used for persistence are based on the IESO reports. No additional assumptions were made.

b. See response to OEB interrogatory 9-Staff-113 part b.

RESPONSES TO DISTRIBUTED RESOURCE COALITION ("DRC") INTERROGATORIES

2-DRC-1
Reference: Exhibit 2, Appendix K

Preamble: In 2018, OPUC launched E-Mission, "a survey and study to examine the effects that wholesale migration to Electric Vehicle (EV) technology could have on the utility's infrastructure", as well as a "comprehensive [EV] strategy aimed at increasing electrification of transportation." OPUC indicates that data collected through the E-Mission initiative will assist OPUC to "plan for the future of electric transportation." (p. 3)

a) Please provide a brief summary of the aspects or outcomes of the E-Mission initiative that are relevant to OPUC's:

(i) proposed rates;

(ii) proposed capital plan;

(iii) customer needs and preferences;

(iv) reliability;

(v) vehicle fleet;

(vi) current O&M costs associated with vehicle fleet and anticipated O&M costs associated with portion of the fleet anticipated to be electrified; and

(vii) any anticipated productivity impacts.

b) Please provide any and all working papers, reports, and analysis written or carried out in support of OPUC's comprehensive EV strategy aimed at increasing electrification of transportation.

c) Please indicate how many of each of the following types of customer connections OPUC anticipates in its service territory over the 2021 to 2025 rate period:

(i) single residential unit EV charger connections;

(i) commercial facility EV charger connections; and

(ii) multi-unit residential EV charger connections.

d) Please provide any and all planning assumptions, working papers, reports, and analysis conducted to support OPUC's EV strategy generally and demand forecasts of expected EV penetration on its service territory specifically.

Response

a) E-Mission and its outcomes have not factored into the proposed rates, capital plan, reliability plans or anticipated productivity impacts at this time. The initiative has not gathered sufficient data to support any of these aspects of the current 5 year plan.

   In terms of customer needs and preferences, E-Mission provides a vehicle through which OPUCN can simultaneously cater to customers implementing these new loads, while gathering their feedback on preferences. E-Mission surveys show that customers would like more charging options within the community and that they would prefer preferential rates associated with vehicle charging. To address these preferences, OPUCN has been collaborating on efforts to install charging capacity within Oshawa. Two level 2 chargers were installed in 2019 and up to 8 more will be installed in 2020, with funding from Natural Resources Canada. In terms of preferential rates, this is not within OPUCN's jurisdiction, however we are monitoring the Ontario Energy Board pilots that examined EV charging rates, as well as other policy recommendations.

   In terms of vehicle fleet, OPUCN's fleet is not well-suited to transition to zero-emission vehicles at this time. OPUCN's fleet only has two cars, one of which is a zero-emission vehicle. The remaining fleet is 100% truck-based and there is a current lack of ZEV truck models available within the Canadian market. In preparation for their availability, OPUCN is reviewing Natural Resources Canada funding for fleet-focused charging infrastructure. OPUCN is considering if infrastructure could serve City of Oshawa zero emission fleet vehicles as well as our own, given our relatively small fleet.

   In terms of O&M costs, OPUCN will begin to model those impacts within the next 1-2 years, as more information on zero-emission trucks becomes available.

b. An excerpt from a recent grant proposal for E-Mission has been provided at Appendix P, which consolidates relevant information. OPUCN has also mapped customers who have reported that they own zero emission vehicles. This map is not being provided as it contains private customer information, and because there are insufficient data points to impact any planning exercises.

c. OPUCN has not done any predictive work regarding numbers of ZEVs, short of monitoring historical trends in uptake on a local and regional basis. This has been done using purchase data for battery and hybrid electric vehicles, obtained from the Ontario Ministry of Transport, via the Clean Air Partnership. Our analysis, which is contained in the attached excerpt, shows a slow local adoption rate. OPUCN's hope is to foster ZEV uptake and ameliorate rates so that they at least match provincial averages.

d. Due to the unusually-low uptake of ZEVs, OPUC has not produced any specialized forecasting for Oshawa.

2-DRC-2
Reference: Exhibit 2, DSP

Preamble: OPUC indicates that it will not be pursing funding through distribution rates for any of the four types of activities contemplated in the Ontario Energy Board's "CDM Requirement Guidelines for Electricity Distributors". However, OPUC intends, throughout the five-year Distribution Service Plan, to "monitor less predictable load growth trends, such as electric vehicle uptake, and will consider opportunities for applying for distribution rates to defer infrastructure as appropriate." (p. 78)

a) Please provide:

(i) expected or predicted load growth trends as a result of EV uptake over the five-year DSP;

(ii) any anticipated physical or technical distribution system changes, or implications associated with EV-related demand growth; and

(iii) any and all costs or savings associated with all elements identified in a)(ii), above; and

(iv) any study or studies done in relation to the distribution system impacts of projected EV growth in the OPUC service territory.

Response

a)

i) Per the Emission discussion in Response 2-DRC-1, EV uptake in Oshawa is marginal and not expected to deviate from its trend line unless major shifts in public policy occur within the next few years.

ii) At this time, there are no anticipated physical or technical distribution system changes or implications associated with EV-related demand growth, within the DSP's investment period.

iii) None.

iv) There are no unique studies required by OPUC at this time in relation to the distribution system impacts of projected EV growth.

2-DRC-3
Reference: Exhibit 2, DSP, Appendix A

Preamble: OPUC has planned several material investments for the 2021 through 2025 period, including Geographical Information System (GIS) upgrades and enhancements, including regular data model enhancements. OPUC states that the investments will "accommodate emerging technology in the distribution network such as EVs, smart devices, distributed generation." (p. 137)

Further, OPUC intends to invest in upgrades and enhancements to the ODS Systems. OPUC states that this "will be the foundation for adapting to changing customer demands in terms of DERs, EVs and changing customer loading." (p. 160)

a) Please outline and provide examples of the data model enhancements to the GIS system that OPUC expects will be required to accommodate EVs and DERs.

b) Please outline how GIS upgrade and enhancements will assist OPUC to accommodate EVs and DERs in the distribution network. In addition, please explain why the use of GIS is important in the context of accommodating DERs and EVs in the distribution network and what customer and/or system efficiencies OPUC anticipates will result from such investments.

c) Please outline and provide examples, in the context of changing customer demands in terms of EVs and DERs, of the upgrades and enhancements to the ODS Systems.

d) Please outline how ODS Systems upgrades and enhancements will be the foundation for adapting to changing customer demands with respect to EVs and DERs. In addition, please explain why the ODS Systems is foundational in the context changing customer demands in terms of DERs, EVS and changing customer loading.

e) Please explain how, if at all, OPUC has addressed the following vehicle manufacturers' announcements on phasing out ICE vehicles or introducing additional EV options, including during the 2021 to 2025 time period:

- General Motors;
- Ford;
- Volkswagen;
- BMW Group;
- Fiat Chrysler Automobiles Group;
- Toyota Group;
- Hyundai Motor Group;
- Volvo;
- Mercedes-Benz;

• Audi; and

• several others.

Response

a) Specific examples of data model enhancements have yet to be determined and/or developed in consultation with OPUC's GIS provider. This will occur in due course, as the introduction of a broader range of DER assets is introduced into the distribution system by various proponents.

b) Upgrading the GIS to accommodate EV and DER assets will enable tracking and modelling of these equipment types to facilitate asset management and the creation of appropriate maintenance and capital investment plans for the distribution system. Additionally, the OMS is updated with this information and requires adequate modelling to predict outage sources. As the number of electricity supply points increase, OMS prediction algorithms will need to evolve to take into consideration the effect of DERs.

c) Upgrading the ODS will seek to broaden its data aggregation capabilities, of which, Business Intelligence functionality can be derived. With respect to EVs and DERs, ODS upgrades will enable the ability to calculate in real time, loading on distribution transformers using both existing smart meter data and new data shared from connected EVs and DERs. Analysis of loading will yield greater insight into customer usage, changes in behavior and their impacts on the distribution system.

d) Please see c) above.

e) At this time, manufacturer announcements of specific vehicle designs and functionalities are irrelevant. OPUC works to ensure all electric vehicle supply equipment (i.e. chargers) mostly designed for universal usage, can be connected to operate at their maximum rated capacities.

1-DRC-4
Reference: Exhibit 1, p. 49 , Exhibit 2, Appendix K

Preamble: For the 2021 test year, OPUC is requesting $1.395 million to implement smart grid projects. OPUC indicates that the proposed projects will enable their response to external, internal and regulatory drivers such as DERs and electrification of transport.

a) Please provide a breakdown of the proposed $1.395 million investment for smart grid projects or provide the corresponding reference in Exhibit 2, Appendix K.

b) Please comment on and provide examples of the external, internal and regulatory drivers associated with DERs, EVs, and the electrification of transport.

c) Please provide any and all estimates of short-, medium-, and longer-term customer savings that will result from the proposed Advanced Metering Infrastructure (AMI).

Response

a) Please see section 9 2021 column in Appendix K – Grid Modernization Plan.

b) The statement referenced suggests that the proliferation of EVs, DERs and the electrification of transit are drivers themselves of smart grid investments.

   Please see section 4, External Drivers and section 6, Anticipated Drivers in Appendix K – Grid Modernization Plan.

c) Reference: Exhibit 2, DSP Appendix A, Page 27

   The AMI System Update consists of replacing all failed smart meters that are currently in-service with the next generation of meters. The replacement program includes upgrading the AMI data collector units to wireless routers and connecting these to the fiber network. Currently the maintenance program is fixed to the initial deployment of smart meters. As a result, the majority of meter maintenance is completed to maintain meter seal compliance to Measurement Canada. Each re-seal of meters reduces the subsequent length of sealing. This program will also include Measurement Canada reverification of meters requiring re-seal will be scrapped. Sample test meters will be replaced with next generation meters.

   This project is necessary to maintain an operable AMI system, with modern non-obsolescent technology. As a result, there has not been a necessity to calculate detailed estimates of short, medium and long term customer savings.

2-DRC-5
Reference: Exhibit 2, Appendix K, p. 4

Preamble: OPUC is developing a business case for the electrification of a local bus fleet. The plan would see OPUC install, own and operate EV charging infrastructure at transit depots and on routes. Solar power generated at the depots may be used for charging.

a) Please provide any and all working papers, reports, and analysis written or carried out in connection with the local bus fleet electrification plan.

b) Please provide your assessment of the distribution system and ancillary benefits of the electrification of transit in OPUC's service territory on OPUC's distribution system planning, load forecast, productivity, and OM&A costs.

c) Please advise how the bus fleet electrification initiative fits within any broader climate change mandates, measurements, targets or assessments of the City of Oshawa.

Response

a) The work referenced by METSCO to summarize a Smart Grid vision for Oshawa Power, incorrectly referenced projects for Combined Heat and Power and Bus Charging. These are projects being pursued by OPUC's energy services affiliate, EnerFORGE. As such, none of these projects are listed in the Distribution System Plan.

b) Please see a) above

c) Please see a) above

2-DRC-6
Reference: Exhibit 2, Appendix K, p. 15

Preamble: OPUC has partnered with New Energy and Industrial Technology Development Organization (NEDO) for a small deployment of DERs. OPUC indicates that it "continues to explore technologies to manage the inevitable changing demands to be put on the distribution system" and notes that "DER's will have the most significant impact on the shape of system peak of all technologies being considered." (p. 15).

a) Please identify the DER technologies that OPUC is considering deploying in connection with the NEDO partnership.

b) Please provide any and all working papers, reports, and analysis written or carried out in connection OPUC's partnership with NEDO and the deployment of DERs.

c) Please provide all anticipated impacts of DERs in OPUC's service territory on OPUC's distribution system planning, load forecast, productivity, and OM&A costs.

d) Please explain the role of customer needs and preferences in these initiatives.

Response

a) (for a to d) The deployment referenced was a project fully funded by NEDO during the previous DSP investment period. No further work with this initiative is planned in the current DSP.

1-DRC-7

Reference: Exhibit 1, Appendix 1.1, 1.2, 1.3 and 1.4

Preamble: OPUC engaged in customer outreach commitments under the Renewed Regulatory Framework for Electricity Distributors. OPUC utilised a multi-method approach to engaging customers which included three feedback components. The first was an online survey to ask budgetary questions and gather feedback. The second was virtual telephone town halls. The third was four in-person public town halls which included an open forum question and answer period.

a) Please provide a copy of all written instructions provided by OPUC in relation to OPUC's customer engagement for the DSP and the reports provided in Exhibit 1, Appendices 1.1 - 1.4.

b) Please describe any and all feedback related to EVs and DERs.

c) Please provide any and all notes from the customer engagement relating to EVs/DERs that are supplementary to the reports provided in Exhibit 1, Appendices 1.1 - 1.4.

Response

a) See attached Taking AIM CE Operational Plan Oshawa PUC UtilityPULSE.pdf filed as Appendix Q with these responses.
b) All feedback received has been captured in the reports provided.
c) All notes relating to Evs/DERs are captured within the reports provided.

RESPONSES TO POPULATION PROBE INTERROGATORIES

Pollution Probe #1

[Exhibit 1, Page 7]

OPUCN indicates that "OPUCN plans to **Enhance the Customer Experience** by driving advanced service outcomes. We strive to be anticipatory rather than reactive, to enhance the customer's experience by setting expectations and continuing to surpass them by going above and beyond the threshold requirements"

a. Please describe the efficiencies and enhanced customer experience Oshawa PUC expects to achieve from coordinating with City of Oshawa or Region of Durham, particularly related to their energy and emissions plans.

a. Please describe how Oshawa PUC support the Provincial requirements for energy and emission reporting under Ontario Regulations 397/11 and 20/17 and CDM plan requirements under Ontario Regulation 397/11 for its customers (including the City of Oshawa).

Response

a. OPUCN expects to achieve the following efficiencies and enhanced customer experience through coordinating with the City of Oshawa and Region of Durham on energy and emissions plans:
    - Aligned customer communications that serve to reinforce joint outreach and educational goals – an example could be adding content about the City's LEAF program to our social media to build community awareness of the project.
    - Joint efforts that leverage existing resources within each organization to drive more effective outcomes – examples would be joint applications for federal funding, and data sharing.
    - Avoiding duplication of efforts – where one group is leading, OPUCN will strive to support them and vice versa. For example, OPUC is currently leading transportation innovation activities, with strong support from the City of Oshawa. OPUCN is participating in Durham-led transportation programming, but will be leading portions of communications and technically advanced charger installations.
    - Aligning sustainability targets with those set through municipal policies – misalignment would cause market confusion and potentially competing priorities.

b. OPUCN assists with the development and administration of Energy Conservation and Demand Management (CDM) Plans through:

- Encouraging key accounts that qualify to participate in the Energy Manager training and funding programs;
- Reviewing CDM plans;
- Bringing forward insights pertaining to CDM plan achievement in key account meetings;
- Supplying data needed for EMV and baseline measurements.

Pollution Probe #2

[Exhibit 1, Page 40]

OPUCN indicates that "Based on OPUCN's consultations with the City of Oshawa and Durham Region, OPUCN expects its customer base to continue to increase over the next five years".

a. Please confirm what electrification, DER or other assumptions have been identified which will have an impact on OPUCN's load forecast and capital plan (DSP) over the same period.

b. Please detail any energy storage opportunities OPUCN has assessed for new or existing customer load which would reduce the need for system capital upgrades.

c. Please detail the opportunity for OPUCN to consider behind the meter load displacement given the recent bulletin from the OEB.

Response

a. No electrification, DER or other new assumptions have been identified and expected to have a material impact on OPUCN's load forecast and capital plan for the next 5 years.
b. There are no applicable projects in this DSP for consideration that would result in a reduction or deferral of required capital expenditures, from the use of energy storage solutions.
c. As a result of the August 6, 2020 OEB Staff Bulletin related to ownership of behind the meter storage assets, OPUCN will likely seek to identify and assess opportunities, either in this 5 year investment period or the next, to investigate whether any cases of long-term reliability problems experienced by customers who face long duration outages with relative frequency, could benefit from a behind-the-meter energy storage solution. Notwithstanding the foregoing, new engineering standards, equipment specifications, training, new policies and procedures, monitoring, control, and liability of new assets behind-the-meter, represent a significant amount of technical due diligence and administrative matters to work through before any wide-spread implementation or even a pilot project, may occur. OPCUN will continue to monitor, consult and participate in industry associations to learn and implement best practice as it evolves in this field in the coming years.

Pollution Probe #3

[Exhibit 1, Page 42]

"OPUCN is requesting $1.395 million to implement smart grid projects which include the implementation of system upgrades, distribution automation, communication upgrades, and customer facing web interfaces."

a. Please provide the definition OPUCN uses for "smart grid" to determine which projects would be "smart grid projects".

b. Please explain how each proposed "smart grid project" (or project grouping) fits under the definition provided.

c. Please explain how OPUCN screens and prioritizes these projects.

Response

a. Refer to Exhibit 2, DSP, Appendix K, Grid Modernization Plan

Smart grid definitions are subjective and are not universally agreed upon. For the purpose of this rate filing, all projects identified in the Grid Modernization Plan, are considered Smart Grid Projects.

b. Please see a. above
c. The purpose of the Grid Modernization Plan was to identify Smart Grid Projects that should be included in the DSP. All projects identified in the Grid Modernization Plan that are considered non-discretionary were scored and prioritized. Refer to Exhibit 2, DSP, Appendix K, Grid Modernization Plan, page 24 for scoring methodology. The scoring presented in the Grid Modernization Plan is independent from AM Scores and Project Condition Scores calculated for all projects in the DSP.

Refer to the interrogatory response to Question 2-Staff-32 and 2-SEC-21 for details pertaining to AM Scores and Project Condition Scores respectively.

Pollution Probe #4

[Exhibit 1, Appendix 6]

Oshawa PUC indicates that one of its core value principles is to "Demonstrate Environmental Stewardship and Community Involvement".

a. Please provide a description of how Oshawa PUC coordinates with and supports the City of Oshawa and Region of Durham energy and emissions plans.

b. Conservation and Demand Management (CDM) programs are available to consumers in the City of Oshawa. IESO has also proposed (subject to final Provincial approval) to continue CDM programs post-2020. Please explain how Oshawa PUC provides support to its customers to ensure awareness and take advantage of these programs.

c. Has Oshawa PUC assessed opportunities to avoid or share costs with other project developers (e.g. distributed energy resources) as part of its Distribution System Plan? If so, please provide details. If not, why not?

Response

a) Oshawa PUC undertakes a number of activities to support the City of Oshawa and Region of Durham in energy emission plans. The following is a high-level summary of some of these activities.
    - OPUCN supported the development of the Durham Community Energy Plan through CDM program contributions and through in-kind contributions of advisory services. Subsequent to its approval (in principle), OPUCN now sits on the advisory board for the Durham Community Energy Plan, and acts as a catalyst for initiating programming. Recent activities have included assisting with program design, grant writing, research, networking and outreach.
    - An OPUCN employee sits on the Durham Region Roundtable on Climate Change and is tasked with providing insights from the energy sector. These insights can inform energy plans, or other policy decisions.
    - OPUCN provided CDM program contributions for community climate resilience videos created by the Region, as a part of the rollout of their adaptation plan.
    - OPUCN supports the Oshawa Environmental Advisory Committee with an annual donation and with in-kind support in the form of presentations, outreach, educational materials and networking.
    - OPUCN provided CDM program contributions for the development of Oshawa's internal and community-facing greenhouse gas mitigation plans. Additionally, OPUCN continues to provide detailed comments to support the development, community outreach and council approvals phases of Oshawa's plans.

- OPUCN is actively supporting the development of low carbon transportation innovation in Oshawa and across Durham through:
- Developing new connection standards to facilitate EV charger connections;
- Launching the E-Mission initiative https://www.opuc.on.ca/e-mission/ ;
- Supporting Durham Region Transit's E-bus pilot;
- Applying for EV charging infrastructure, education and outreach grants in partnership with the Region and on behalf of other industry stakeholders;
- Creating and disseminating policy notes; etc.
- Finally, OPUCN is currently developing a sustainability framework that aligns with local and Regional policy, to ensure our internal and external-facing activities drive sustainable outcomes.

b) OPUCN's ability to promote the Save On Energy programs is controlled by the terms of our Energy Conservation Agreement and its subsequent Cancellation Notice, both of which were issued by the Independent Electricity System Operator. At this time, LDCs have been directed not to actively promote the existing programming.

Where possible, the OPUCN team helps connect inquiring customers with information about the programs. Through OPUCN's participation on the EDA's Conservation Issues Council, we have advocated for LDCs to take an active role in future CDM program outreach and promotions.

Beyond this, OPUCN focuses on creating awareness that new programs are in development, and about general opportunities for saving energy. In terms of our business groups, we include information about conservation programming from other sources (such as the federal government) in our regular updates. In terms of our residential segment, OPUCN works to pilot new ways of helping customers to conserve, such as our recent OEB RPP pilot, and the implementation of the Silverblaze customer platform.

c) OPUCN has investigated into such opportunities but none have been secured and hence have not been highlighted in this application.

APPENDIX A – 1-STAFF-3 – RESPONSES TO LETTERS OF COMMENT

October 6, 2020

Response to W Williams

Oshawa Power is the local distribution company for the City of Oshawa. Our responsibility is to deliver safe, reliable electricity to the customers of Oshawa that is supplied from the province's overall electrical grid. Oshawa Power has approximately 60,000 customers comprised of residential, small commercial and industrial profiles.

Every five years, Oshawa Power prepares an investment plan to maintain and improve the electricity grid to better serve its customers and community.

Creating this investment plan and rate application takes approximately two years to complete and considers input from various resources such as equipment failure history, asset condition assessment, customer needs, cybersecurity requirements and outage impacts to customers. The outcome is an investment plan with four main categories: system renewal, system access, system service and general plant investments.

The proposed 2021 rate changes apply to the Oshawa Power portion of the bill which currently amounts to 16% of all money collected on a residential bill. The money collected from Oshawa rates stays in Oshawa and are applied to support the grid services in Oshawa. The remaining balance of the bill is forwarded to the province and pays for the commodity, transmission, regulatory operations and tax. On a residential bill, the overall impact of the new rate is less than 1% for an average bill of 750 kWh.

Without the proposed rates Oshawa Power's ability to maintain the current customer service and reliability levels will be impacted, meaning that capital replacement projects, new services and customer service enhancements would not move forward as needed over the next five years. This will result in greater needs and significant increases in future years, along with issues such as:

- Delaying projects and operating grid infrastructure beyond end of life expectations. This would increase equipment failures and of power outages, increasing our operating costs.
- Not investing in outage predictability and detection technology will make determining the location and cause of outages more difficult and extend the length of outages.
- Not adding new infrastructure to expand the grid to meet the new growth capacity will place a greater strain on the existing grid.
- Deferring customer facing investments would not allow us to meet our customers' expectations.
- Maintaining existing rates without consideration to inflationary pressures or change in industry costs would result in the utility being less efficient.

Now, more than ever it has become of utmost importance to maintain a reliable source of electricity when there are so many people working and learning from home and small businesses trying to keep their doors open as a result of the COVID-19 pandemic. While an increase is necessary to maintain reliability and safety of the Oshawa infrastructure our rates will still be the lowest residential and small commercial rates in Durham Region.

We appreciate you concerns about the current state of financial unrest in many Oshawa households. We have weighed possibilities and feel that further delays to needed upgrades to

the infrastructure would create greater reliability concerns and higher costs at a later date. Oshawa Power is doing everything they can to keep a reliable and safe supply of power to our customers and we are committed to assisting Oshawa into recovery following the COVID-19 pandemic.

Oshawa Power is committed to being here for their customer. We are here to empower our customer whether they are working from home, learning from home or serving our community. We are here to assist customers through this period and we work to create solutions for all customers that suit their situation. As part of our commitment we will work with all customers that require financial assistance and we will find a program or plan that works for them.

Our staff have developed a responsible investment plan that achieves a proper balance between today's customer needs, system needs and economic factors while addressing the future impact. This investment plan will reduce grid and service risk exposure as a result of equipment failures driven by operating equipment past the useful End of Life (EOL).

Oshawa Power has a positive track record for spending efficiently and delivering on projects, infrastructure upgrades and enhancements. It is a collaborative effort between staff, executives and the board of directors that keeps Oshawa Power a fiscally responsible company that continues to deliver exceptional service.

October 6, 2020

Response to D Robicheau

Oshawa Power is the local distribution company for the City of Oshawa. Our responsibility is to deliver safe, reliable electricity to the customers of Oshawa that is supplied from the province's overall electrical grid. Oshawa Power has approximately 60,000 customers comprised of residential, small commercial and industrial profiles.

Every five years, Oshawa Power prepares an investment plan to maintain and improve the electricity grid to better serve its customers and community.

Creating this investment plan and rate application takes approximately two years to complete and considers input from various resources such as equipment failure history, asset condition assessment, customer needs, cybersecurity requirements and outage impacts to customers. The outcome is an investment plan with four main categories: system renewal, system access, system service and general plant investments.

The proposed 2021 rate changes apply to the Oshawa Power portion of the bill which currently amounts to 16% of all money collected on a residential bill. The money collected from Oshawa rates stays in Oshawa and are applied to support the grid services in Oshawa. The remaining balance of the bill is forwarded to the province and pays for the commodity, transmission, regulatory operations and tax. On a residential bill, the overall impact of the new rate is less than 1% for an average bill of 750 kWh.

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- Not investing in outage predictability and detection technology will make determining the location and cause of outages more difficult and extend the length of outages.
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- Maintaining existing rates without consideration to inflationary pressures or change in industry costs would result in the utility being less efficient.

Now, more than ever it has become of utmost importance to maintain a reliable source of electricity when there are so many people working and learning from home and small businesses trying to keep their doors open as a result of the COVID-19 pandemic. While an increase is necessary to maintain reliability and safety of the Oshawa infrastructure our rates will still be the lowest residential and small commercial rates in Durham Region.

We appreciate you concerns about the current state of financial unrest in many Oshawa households. We have weighed possibilities and feel that further delays to needed upgrades to

the infrastructure would create greater reliability concerns and higher costs at a later date. Oshawa Power is doing everything they can to keep a reliable and safe supply of power to our customers and we are committed to assisting Oshawa into recovery following the COVID-19 pandemic.

Oshawa Power is committed to being here for their customer. We are here to empower our customer whether they are working from home, learning from home or serving our community. We are here to assist customers through this period and we work to create solutions for all customers that suit their situation. As part of our commitment we will work with all customers that require financial assistance and we will find a program or plan that works for them.

Our staff have developed a responsible investment plan that achieves a proper balance between today's customer needs, system needs and economic factors while addressing the future impact. This investment plan will reduce grid and service risk exposure as a result of equipment failures driven by operating equipment past the useful End of Life (EOL).

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October 6, 2020

Response to J Bignell

Oshawa Power is the local distribution company for the City of Oshawa. Our responsibility is to deliver safe, reliable electricity to the customers of Oshawa that is supplied from the province's overall electrical grid. Oshawa Power has approximately 60,000 customers comprised of residential, small commercial and industrial profiles.

Every five years, Oshawa Power prepares an investment plan to maintain and improve the electricity grid to better serve its customers and community.

Creating this investment plan and rate application takes approximately two years to complete and considers input from various resources such as equipment failure history, asset condition assessment, customer needs, cybersecurity requirements and outage impacts to customers. The outcome is an investment plan with four main categories: system renewal, system access, system service and general plant investments.

The proposed 2021 rate changes apply to the Oshawa Power portion of the bill which currently amounts to 16% of all money collected on a residential bill. The money collected from Oshawa rates stays in Oshawa and are applied to support the grid services in Oshawa. The remaining balance of the bill is forwarded to the province and pays for the commodity, transmission, regulatory operations and tax. On a residential bill, the overall impact of the new rate is less than 1% for an average bill of 750 kWh.

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- Not adding new infrastructure to expand the grid to meet the new growth capacity will place a greater strain on the existing grid.

- Deferring customer facing investments would not allow us to meet our customers' expectations.

- Maintaining existing rates without consideration to inflationary pressures or change in industry costs would result in the utility being less efficient.

Now, more than ever it has become of utmost importance to maintain a reliable source of electricity when there are so many people working and learning from home and small businesses trying to keep their doors open as a result of the COVID-19 pandemic. While an increase is necessary to maintain reliability and safety of the Oshawa infrastructure our rates will still be the lowest residential and small commercial rates in Durham Region.

We appreciate you concerns regarding the overall impact to the City of Oshawa given the recent relocation of the GM plant combined with the financial impact of the COVID-19 pandemic to Oshawa households. These issues were considered when planning the investment projects for the next five years. Oshawa Power wants to ensure a reliable and safe supply of electricity is available to support the City of Oshawa while they rebuild the economy following the pandemic.

Oshawa Power is committed to being here for their customer. We are here to empower our customer whether they are working from home, learning from home or serving our community. We are here to assist customers through this period and we work to create solutions for all customers that suit their situation. As part of our commitment we will work with all customers that require financial assistance and we will find a program or plan that works for them.

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October 6, 2020

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- Maintaining existing rates without consideration to inflationary pressures or change in industry costs would result in the utility being less efficient.

Now, more than ever it has become of utmost importance to maintain a reliable source of electricity when there are so many people working and learning from home and small businesses trying to keep their doors open as a result of the COVID-19 pandemic. While an increase is necessary to maintain reliability and safety of the Oshawa infrastructure our rates will still be the lowest residential and small commercial rates in Durham Region.

We appreciate you concerns regarding Ontario's overall electricity supply. Please be aware that the provincial demand and supply of electricity is managed at a different level of government

however your concerns are valued feedback. It is important to note that OEB regulations do not allow local distribution companies to carry reserves. It is expected that all projects and work planned in a current year are funded entirely by revenue collected within the same year. To stay current with economic factors such as inflation and other industry factors, electricity rates are reviewed annually for any adjustments to reflect the true costs.

Oshawa Power is committed to being here for their customer. We are here to empower our customer whether they are working from home, learning from home or serving our community. We are here to assist customers through this period and we work to create solutions for all customers that suit their situation. As part of our commitment we will work with all customers that require financial assistance and we will find a program or plan that works for them.

Our staff have developed a responsible investment plan that achieves a proper balance between today's customer needs, system needs and economic factors while addressing the future impact. This investment plan will reduce grid and service risk exposure as a result of equipment failures driven by operating equipment past the useful End of Life (EOL).

Oshawa Power has a positive track record for spending efficiently and delivering on projects, infrastructure upgrades and enhancements. It is a collaborative effort between staff, executives and the board of directors that keeps Oshawa Power a fiscally responsible company that continues to deliver exceptional service.

October 6, 2020

Response to L Hudson

Oshawa Power is the local distribution company for the City of Oshawa. Our responsibility is to deliver safe, reliable electricity to the customers of Oshawa that is supplied from the province's overall electrical grid. Oshawa Power has approximately 60,000 customers comprised of residential, small commercial and industrial profiles.

Every five years, Oshawa Power prepares an investment plan to maintain and improve the electricity grid to better serve its customers and community.

Creating this investment plan and rate application takes approximately two years to complete and considers input from various resources such as equipment failure history, asset condition assessment, customer needs, cybersecurity requirements and outage impacts to customers. The outcome is an investment plan with four main categories: system renewal, system access, system service and general plant investments.

The proposed 2021 rate changes apply to the Oshawa Power portion of the bill which currently amounts to 16% of all money collected on a residential bill. The money collected from Oshawa rates stays in Oshawa and are applied to support the grid services in Oshawa. The remaining balance of the bill is forwarded to the province and pays for the commodity, transmission, regulatory operations and tax. On a residential bill, the overall impact of the new rate is less than 1% for an average bill of 750 kWh.

Without the proposed rates Oshawa Power's ability to maintain the current customer service and reliability levels will be impacted, meaning that capital replacement projects, new services and customer service enhancements would not move forward as needed over the next five years. This will result in greater needs and significant increases in future years, along with issues such as:

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- Deferring customer facing investments would not allow us to meet our customers' expectations.

- Maintaining existing rates without consideration to inflationary pressures or change in industry costs would result in the utility being less efficient.

Now, more than ever it has become of utmost importance to maintain a reliable source of electricity when there are so many people working and learning from home and small businesses trying to keep their doors open as a result of the COVID-19 pandemic. While an increase is necessary to maintain reliability and safety of the Oshawa infrastructure our rates will still be the lowest residential and small commercial rates in Durham Region.

We appreciate your concerns regarding job loss, decreased hours and increased expenses due to the COVID-19 pandemic and request to deny or delay the increase. Keeping rates the same will cause potential reliability and safety concerns and the delay of planned projects. Delaying planned projects can increase costs at a later date due to unplanned power outages and future material costs. If there is no interruption in the project flow Oshawa Power can utilize previously negotiated material costs, maintain staffing levels to address the projects and keeps costs consistent.

Oshawa Power is committed to being here for their customer. We are here to empower our customer whether they are working from home, learning from home or serving our community. We are here to assist customers through this period and we work to create solutions for all customers that suit their situation. As part of our commitment we will work with all customers that require financial assistance and we will find a program or plan that works for them.

Our staff have developed a responsible investment plan that achieves a proper balance between today's customer needs, system needs and economic factors while addressing the future impact. This investment plan will reduce grid and service risk exposure as a result of equipment failures driven by operating equipment past the useful End of Life (EOL).

Oshawa Power has a positive track record for spending efficiently and delivering on projects, infrastructure upgrades and enhancements. It is a collaborative effort between staff, executives and the board of directors that keeps Oshawa Power a fiscally responsible company that continues to deliver exceptional service.

APPENDIX B – 2-STAFF-27 – SCORECARD 2016-2019

Summary 2016						
Key Performance Indicators	**Weight**	**Threshold**	**Target**	**Above Target**	**2016**	**YTD Status**
Financial – 30%						
EBITDA	**20%**	$12,376,000	$12,876,000	$13,376,000		Target
Controllable Capital Investment Program						
Program Delivery	**5%**	90%	100%	105%		Above Target
Program Delivery Cost	**5%**	110%	100%	95%		Above Target
Safety/Reliability - 20%						
Safety	**10%**	No major accidents resulting in permanent disability or loss of life	LTI Severity Rate <5 (rolling average of past 2 years)	Zero LTI's	2.4	Target
SAIDI (minutes)	**5%**	92	80	72	61.3	Above Target
SAIFI	**5%**	1.44	1.25	1.13	1.06	Above Target
People – 10%						
Calls answered within 30 seconds	**5%**	≥65% (based on OEB target)	≥70%	≥75%	74%	Target
Employee Engagement	**5%**	100% survey response rate to establish a baseline engagement metric			100%	Target

Summary 2017							
Key Performance Indicators	**Weight**	**Threshold**	**Target**	**Stretch**	**YTD Status**		
FINANCIAL – 15%					**2017 Budget**	**2017 Actual**	
EBITDA *in thousands*	15%	$12,582	$13,082	$13,582	$13,082	$13,209	Target
CONTROLLABLE CAPITAL INVESTMENT PROGRAM – 10%					**2017 Target**	**2017 Actual**	
Program Delivery Schedule	5%	96%	100%	104%	100%	100%	Target
Program Delivery Cost	5%	100%	95%	92%	95%	93.5%	Target
OEB Program Implementation	0%	96%	105 %	113%	105%	107%	Target
RELIABILITY- 10% *(Excluding loss of Supply Events)*					**2017 Target**	**2017 Actual**	
OEB SAIDI (minutes)	5%	86	75	67	75	44.8	Above Stretch
OEB SAIFI	5%	1.45	1.26	1.13	1.26	1.18	Stretch
CAIDI (per outage duration)	0%	70	64	58	37		Above Stretch
CUSTOMER SERVICE – 10%							
OEB Grade of Service	5%	≥72%	≥77%	≥82%	91%		Above Stretch
OEB Customer Satisfaction Survey	5%	90%	93%	95%	92%		Threshold
Positive Customer Feedback - Snap	0%	TBA	TBA	TBA	99.7%		Above Stretch
SAFETY AND PEOPLE – 15%					**2017 Target**	**2017 Actual**	
Lost Time Injuries (LTI)	5%	5	3	<3	0		Above Stretch
Site Safety Observations	5%	150	200	250+	200	279	Above Stretch
Performance Management	5%	90%	95%	100%	95%	95%	Target

2018 Performance Scorecard							
Key Performance Indicators	**Weight**	**Threshold**	**Target**	**Stretch**	**YTD Status**		
FINANCIAL – 15%					**2018 Budget**	**2018 Actual**	**Outlook**
EBITDA *in thousands*	15%	$12,497	$12,997	$13,497	$12,997	$15,085	
CONTROLLABLE CAPITAL INVESTMENT PROGRAM – 10%					**2018 Target**	**2018 Actual**	
Program Delivery Schedule	5%	94%	100%	106%	100%	105.3%	
Program Delivery Cost	5%	100%	95%	93%	95%	89.8%	
OEB Program Implementation	0	96	105	114	104	117	
RELIABILITY- 10%					**2018 Target**	**2018 Actual**	
OEB SAIDI (minutes)	5%	78	71	61	71	81	
OEB SAIFI	5%	1.38	1.25	1.10	1.25	1.36	
CAIDI (per outage duration)	0%	67	61	55	61	60	
CUSTOMER SERVICE – 10%					**2018 Target**	**2018 Actual**	
OEB Grade of Service	5%	80%	85%	90%	85%	90%	
Customer Snap Feedback Survey	5%	80%	85%	90%	85%	94%	
Customer Engagement Touchpoints	0%	2 times/year	4 times/year	6 times/year	4	9	
SAFETY AND PEOPLE – 15%					**2018 Target**	**2018 Actual**	
Lost Time Injuries (LTI)	5%	4	2	<2	0	0	
Site Safety Observations	5%	250	275	300+	275	264	
Performance Management Quarterly Performance Discussions	5%	90%	95%	100%	95%	96.5%	

2019 Performance Scorecard

Key Performance Indicators	***Weight***	***Threshold***	***Target***	***Stretch***	***YTD Status***		
FINANCIAL – 20%					***Plan***	***Actual***	***Outlook***
EBITDA ($'s Consolidated) *in thousands*	10%	$14,318	$14,818	$15,318	$14,818	$14,672	
Total Revenue ($'s Consolidated) *in thousands*	10%	$31,790	$31,965 ($5,051)	$32,140	$31,965	$30,863	
COST CONTROL – 10%					***Plan***	***Actual***	
Program Delivery Schedule	5%	95%	100%	105%	100%	105.6%	
Program Delivery Cost	5%	100%	95%	93%	95.7%	106.7%	
RELIABILITY- 10%					***Plan***	***Actual***	
SAIDI (minutes)	5%	78	71	61	71	59	
SAIFI	5%	1.38	1.25	1.10	1.25	1.07	
CUSTOMER SERVICE – 10%					***Plan***	***Actual***	
Customer Service Composite Score	10%	3	4	5	4	5	
SAFETY AND PEOPLE – 10%					***Plan***	***Actual***	
Lost Time Injuries (LTI)	5%	3	1	0	1	0	
Employee Engagement (Planned Touchpoints)	5%	75%	85%	95%	85%	98.5%	

APPENDIX C – 3-STAFF-55 – REGRESSION MODEL

(SEE EXCEL SPREADSHEET)

APPENDIX D – 9-STAFF-108 – ESTIMATE OF SUB-ACCOUNT

(SEE EXCEL SPREADSHEET)

APPENDIX E – 9-STAFF-110 – SUB-ACCOUNT POLE ATTACHMENT REVENUE VARIANCE CALCULATION

(SEE EXCEL SPREADSHEET)

APPENDIX F – 9-STAFF-112 – ESTIMATE OF SUB-ACCOUNT LOST REVENUE FOR COLLECTION OF ACCOUNT

(SEE EXCEL SPREADSHEET)

APPENDIX G – 1-SEC-2 – MEETING MINUTES

RATE APPLICATION APPROVAL

Included:

Minutes showing Board approval for submission of Rate Application

April 30, 2020

MINUTES
Oshawa PUC Networks Inc.
Board of Directors Meeting
Via Go to Meeting
April 30, 2020

Board Members Present:
Denise Carpenter, Chair
Terry Caputo
Grant Buchanan
Robert Watson
Donna Kingelin
Marc Rosen
Lou Meehan
Jeff Coles

Management:
Ivano Labricciosa, President & CEO
Matt Strecker, VP Engineering and Operations
David Savage, Corporate Controller
Corporate Secretary:
Lori Dafoe

The meeting was called to order at 9:07 am by the Chair.

CARRIED

1. **ADMINISTRATIVE MATTERS**

The chair declared the meeting open for business to be considered by the Board of Directors.

Approval of the Agenda

[redacted]

CARRIED

1.2 Declaration of Conflict of Interest

No conflicts declared.

2. **IN CAMERA**

[redacted]

CARRIED

3. **CONSENT AGENDA ITEMS**

[redacted]

4. **REPORTS**

Rate application

Management walked the Board through a summary of the Rate application, including the Capital expenditures outlined in the DSP. The Board discussed the rate application and asked questions to management. The Board approved the following motion:

> The Board received the 2021-2025 rate application, including the Distribution System Plan and after review approved the application for submission to the OEB.
> Moved by Lou Meehan
> Seconded by Grant Buchanan

CARRIED

5. REPORTS

[redacted]

6. COMMITTEE UPDATES

[redacted]

[redacted]

[redacted]

[redacted]

7. CLOSING

The meeting was terminated at 1:02 pm.
Moved by Denise Carpenter
Seconded by Marc Rosen

CARRIED

ACTION ITEMS

[redacted]

_____
CHAIRPERSON

_____
CORPORATE SECRETARY

APPENDIX H – 1-SEC-2 DSP 2020-2025 PRESENTATION

2020-2025 DSP OVERVIEW FINAL

Included:

2020-2025 revised DSP Overview – April, 2020

DISTRIBUTION SYSTEM PLAN

2020 to 2025

Oshawa PUC Power

Distribution System Plan

What is a Distribution System Plan?

A five year capital investment program that enables utilities to sustain, expand, renew and modernize their distribution systems.

Distribution System Plans are submitted to the OEB during rate filings to support revenue requirements.

Oshawa Power

Investment Categories

The Distribution System Plan groups CAPEX into 4 Categories:

System Renewal - Asset Replacement

System Access - Connections & Expansions

System Service - Modernization & Capacity Upgrades

General Plant – Facilities, Tools & Equipment

Oshawa PUC Power

Last DSP

Distribution System Plan 2015-2019 (OEB APPROVED)

Summary

Investment Category	Net Cost					
	2015	2016	2017	2018	2019	Avg ($M)
System Renewal	$5,942,500	$4,932,000	$4,472,000	$4,761,000	$4,851,000	$4.99
System Access	$3,684,100	$2,285,000	$2,075,000	$2,340,000	$2,350,000	$2.55
System Service	$1,068,400	$1,380,000	$420,000	$25,145,000	$4,050,000	$6.41
General Plant	$1,675,000	$1,180,000	$755,000	$889,000	$510,000	$1.00
TOTAL	**$12,372,015**	**$9,779,016**	**$7,724,017**	**$33,137,018**	**$11,763,019**	**$14.96**
TOTAL (with MS9 & Enfield Removed)	**$12,372,015**	**$9,779,016**	**$7,724,017**	**$11,137,018**	**$7,963,019**	**$9.80**

Oshawa Power

New DSP

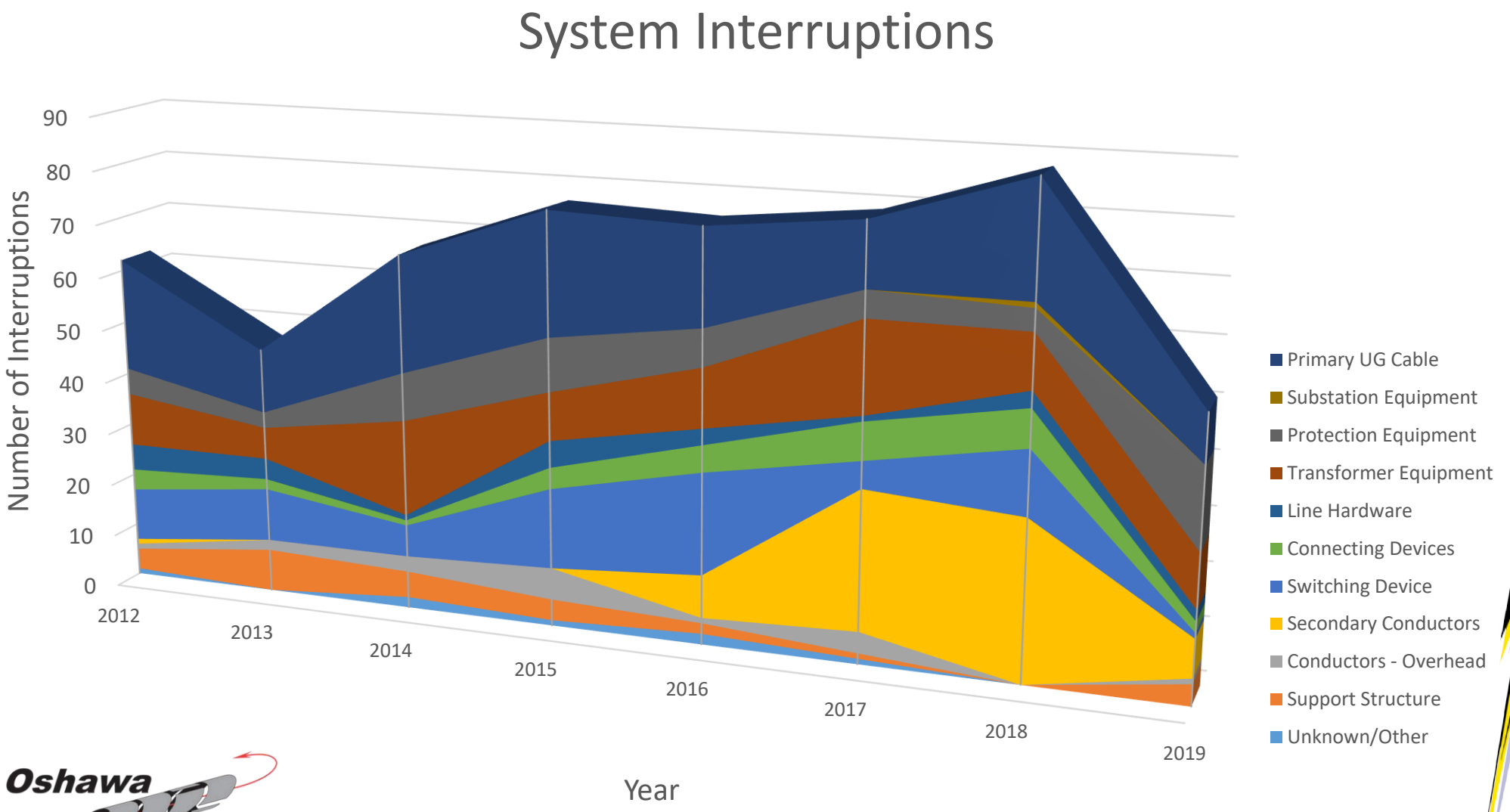
Distribution System Plan 2020-2025 (V3)

Summary

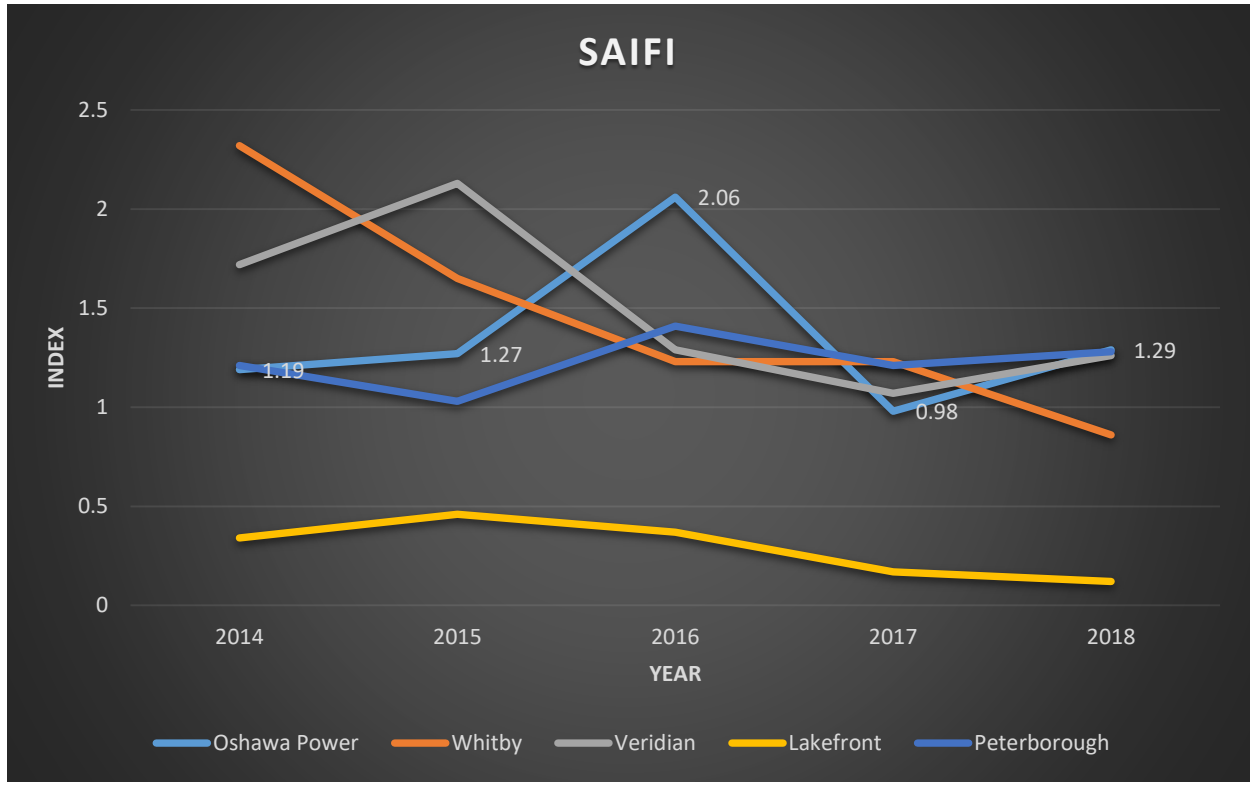
Investment Category	Net Cost							
	2020	2021	2022	2023	2024	2025	Avg ($M)	Var (%)
System Renewal	$8,229,190	$7,598,300	$9,311,336	$8,796,717	$8,884,041	$8,818,448	$8.61	72.4%
System Access	$3,831,564	$3,868,164	$3,203,364	$2,943,564	$3,028,764	$3,038,964	$3.32	30.3%
System Service	$817,500	$1,008,500	$799,000	$1,383,000	$886,000	$995,000	$0.98	-84.7%
General Plant	$2,124,000	$1,974,500	$850,500	$794,250	$874,500	$713,250	$1.22	22.0%
TOTAL	**$15,002,254**	**$14,449,464**	**$14,164,200**	**$13,917,531**	**$13,673,305**	**$13,565,662**	**$14.13**	**-5.5%**

Oshawa Power

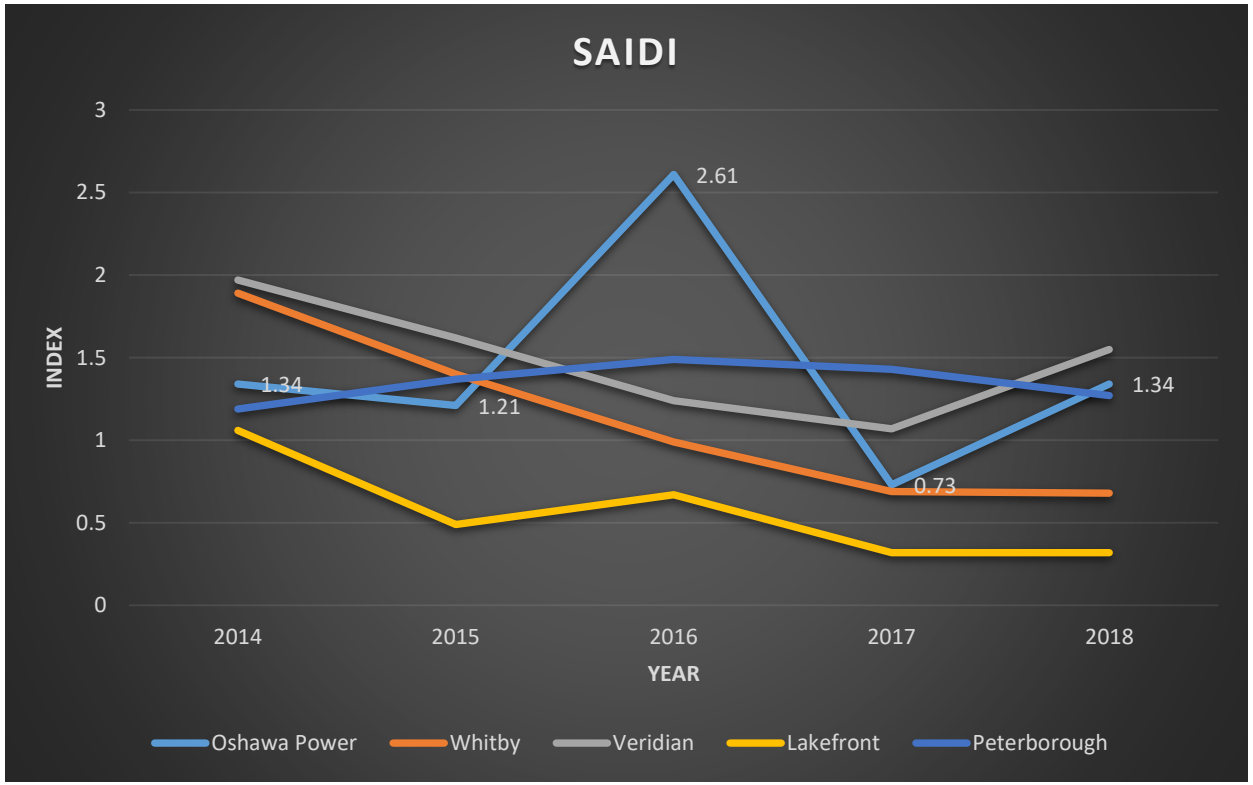
Investment Drivers



Investment Drivers

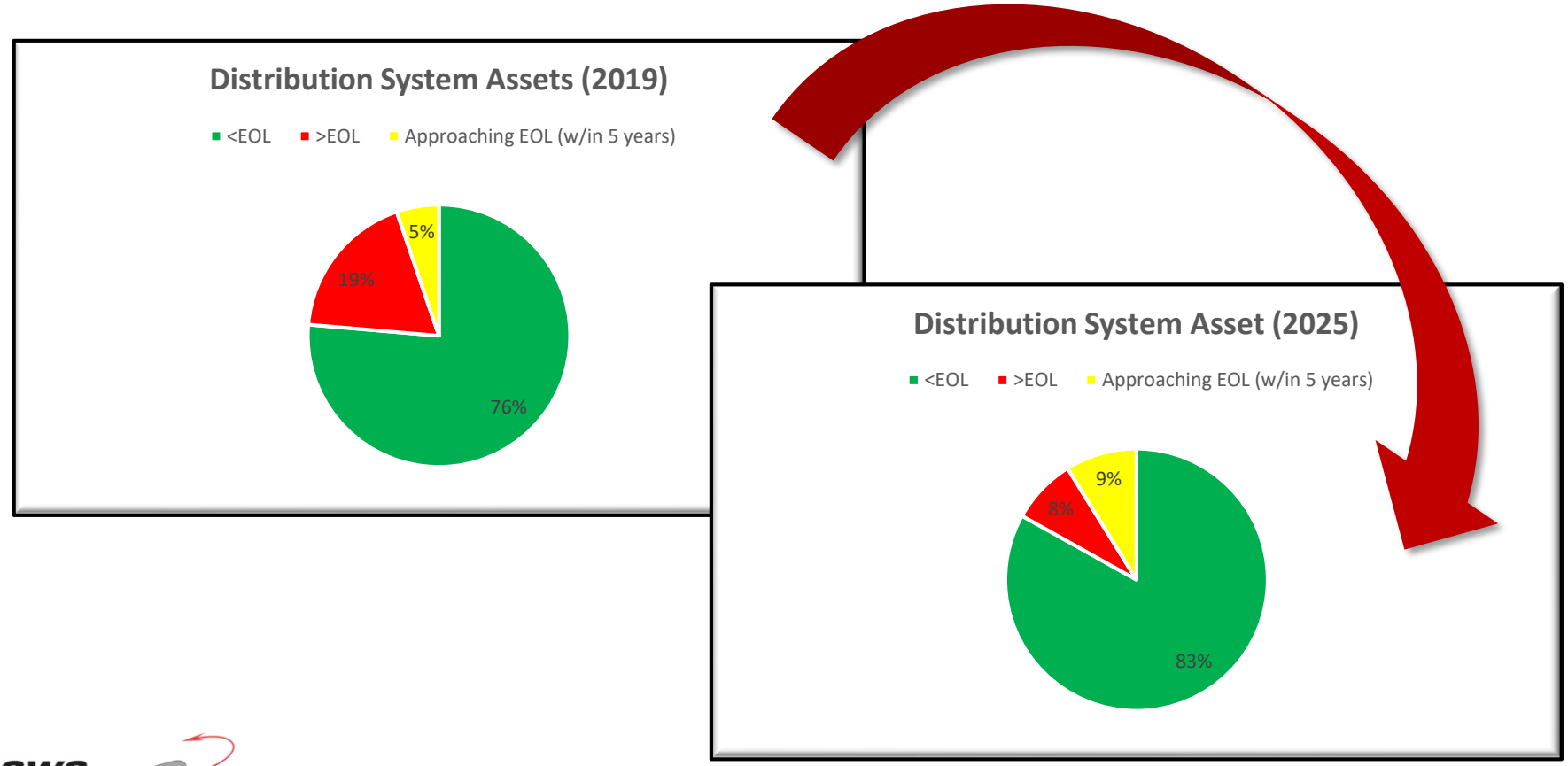


Investment Drivers



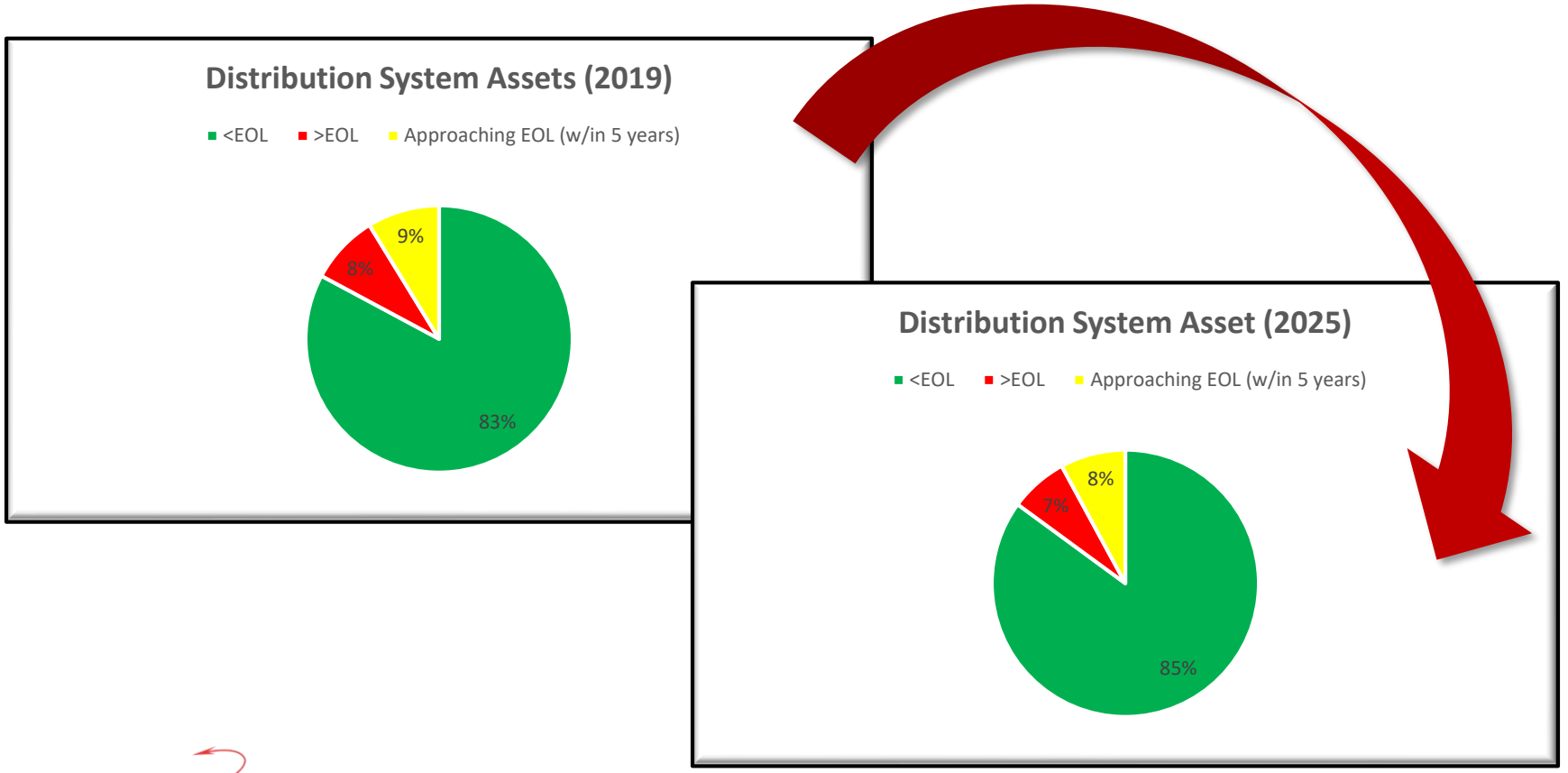
Investment Drivers

Asset Balance by Count



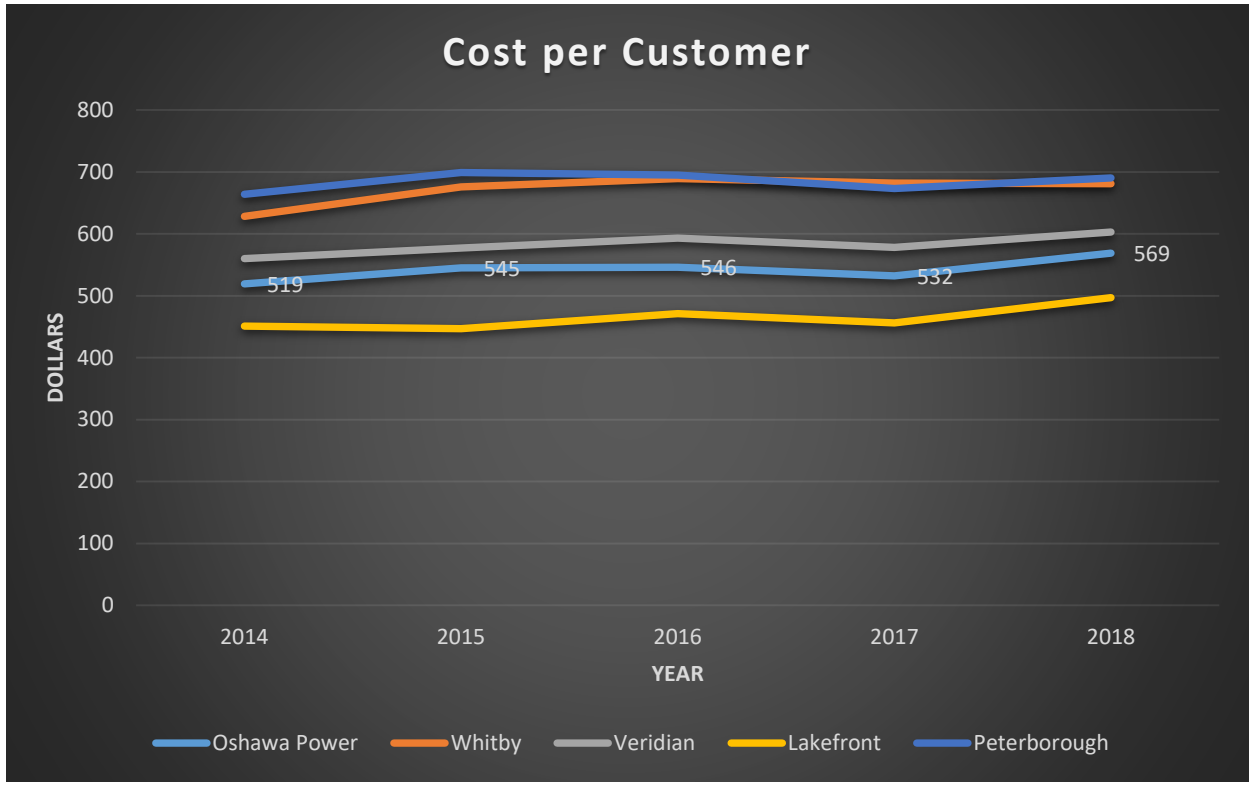
Investment Drivers

Asset Balance by Replacement Cost

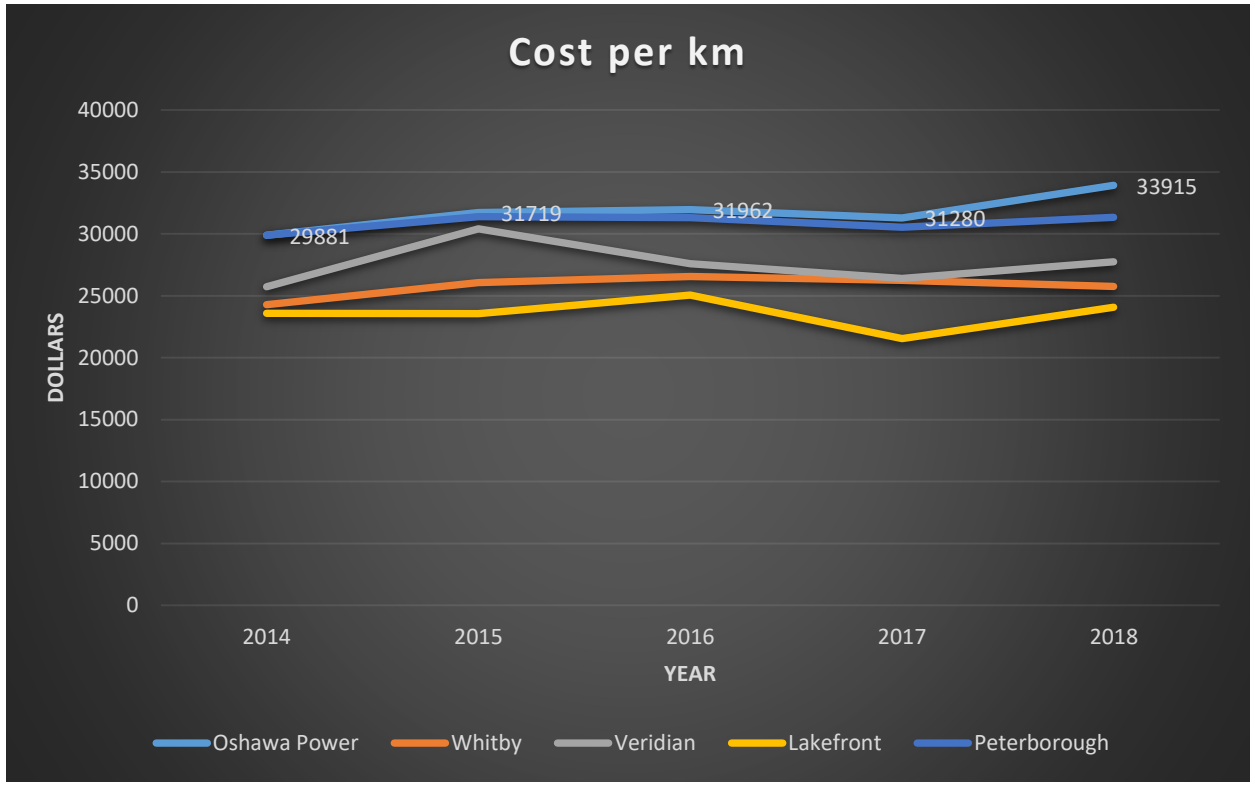


Oshawa Power

Performance Benchmarking



Performance Benchmarking



DSP Comparison

Distribution System Plan Comparison

Summary

Investment Category	Avg Net Cost ($M)				
	Last DSP	New DSP (V3)	Delta	Var (%)	
System Renewal	**$4.99**	**$8.61**	**$3.61**	**72.4%**	
Overhead	$2.31	$3.45	$1.14	49.3%	$1M more for OH
Underground	$0.97	$1.52	$0.55	56.5%	$400K more for UG
Stations	$0.88	$2.47	$1.59	181.3%	$1.6M more for Stns
Reactive	$0.83	$1.16	$0.33	40.1%	$300K more for Reactive (failures)
System Access	**$2.55**	**$3.32**	**$0.77**	**30.3%**	
Municipal & Regional Work	$1.54	$0.74	-$0.80	-52.0%	$800K less for Municipal Works
Connections & Expansions	$0.36	$1.89	$1.53	424.5%	$1.5M more for New Connections & Expansion
Metering	$0.65	$0.69	$0.04	5.8%	No Change for New Meters & Replacements
System Service	**$6.41**	**$0.98**	**-$5.43**	**-84.7%**	
Stations (Capacity & Improvements)	$5.90	$0.15	-$5.75	-97.5%	$5.75M less for Station Capacity
Smart Grid	$0.51	$0.49	-$0.02	-4.6%	No Change for grid modernization
Operation Technology	$0.00	$0.24	-$0.12	-33.9%	$120K less for OT
Reactive	$0.00	$0.04	$0.04	New	$40K for Reactive
Overhead	$0.00	$0.06	$0.06	New	$62K for Line Extensions
General Plant	**$1.00**	**$1.22**	**$0.22**	**22.0%**	
Fleet & Facilities	$0.44	$0.57	$0.12	27.7%	$120K more for Fleet & Facilities
Tools	$0.05	$0.13	$0.08	166.7%	$80K more for Tools & Equipment
Operation Technology	$0.37	$0.00	-$0.12	-33.9%	$120K less for OT
Information Technology	$0.14	$0.52	$0.38	272.7%	$380K more for IT
New Building	$0.00	$0.00	$0.00	New	New Building to be Leased
TOTAL	**$14.95**	**$14.13**	**-$0.82**	**-5.5%**	***The New DSP is 5.5% less (on average) than the Last DSP**

Oshawa Power

Process to Determine Renewal Projects

1. Evaluate Assets
2. Geo Media Heat Map
3. Develop Projects
4. Create Project Hopper List
5. Score & Prioritize Hopper
6. Develop 5 Year Capital Renewal Plan
7. Reconcile Plan with ACA
8. Finalize 5 Year Capital Renewal Plan

i. 3rd Party Asset Condition Assessment (ACA)

ii. Identify Target Quantity of Assets to Replace Annually

OH
- Pole Testing
- Age
- Faults
- Conductor Size

UG
- Splices
- Faults
- Age/Condition

Health Indices

Additional evaluation criteria & weights for the following Assets:

- Wood Poles
- Concrete/Steel Poles
- OH Primary
- UG Primary
- Distribution TXs
- Switches
- Arrestors
- Vaults & Manholes
- Substations

Oshawa Power

System Renewal

Overhead ($3.45M)

- 40 Projects
- 5 Programs
  - Porcelain Insulator Replacement
  - Porcelain Switch Replacement
  - Pole Replacement
  - 44kV Quick Sleeve Replacement
  - Vault Transformer Replacement

Underground ($1.52M)

- 28 Projects
- 2 Programs
  - Downtown UG Cable Replacement
  - Station UG Cable Replacement

Stations ($2.45M)

- 3 Transformer Replacements
- 5 Switchgear & Relay Replacements
- Ground grid upgrades

Reactive ($1.16M)

- OH Transformers
- UG Transformers
- Components
- Stations
- OH
- UG Primary
- UG Secondary
- Poles
- Delta Wye Conversions

Oshawa Power

System Renewal

OPUC Capital Rebuilds 2020 to 2025

OH

UG

Oshawa Power

System Access

Municipal & Regional Work ($0.74M)

- 16 Relocation Projects

Connections & Expansions ($1.89M)

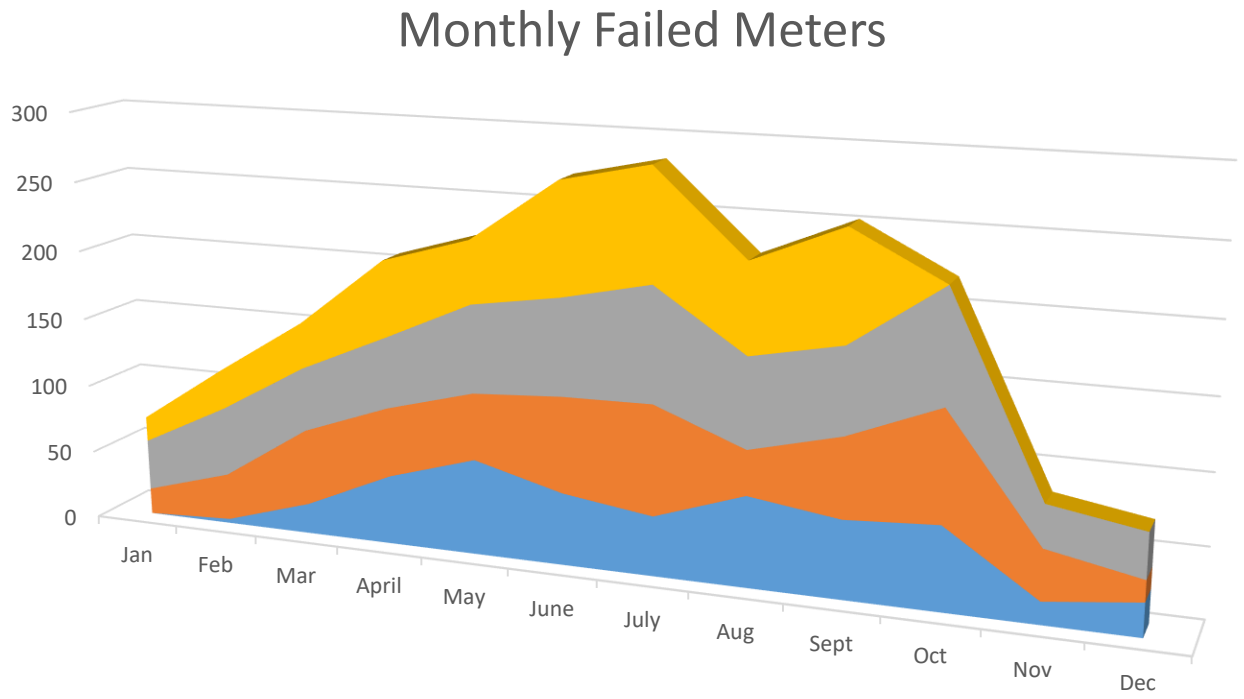
- Approx. 2000 units expected per year

Metering ($.69M)

- New Connections
- Meter Replacements
- Fiber Connections to AMI

Oshawa Power

System Access



	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
2019	18	29	33	55	45	80	80	64	78			
2018	37	50	46	51	63	69	82	64	61	80	30	32
2017	19	34	55	50	48	69	79	32	57	79	36	15
2016	0	3	22	50	69	52	43	65	56	60	16	24

System Service

Stations($0.15M)

- Transformer Monitory & Telemetry

Smart Grid / Modernization($0.49M)

- 13.8kV OH automated switches – S&C IntelliRupters
- 44kV OH automated switches
- Downtown automation enhancements
- Fault indicators & Lateral Trip Savers
- Communication Network & Cyber Security upgrades – L2 to L3
- Station Battery & Charger upgrades

Oshawa Power

System Service

Operation Technology($0.24M)

- GIS integration upgrades
- New AMI Gatekeepers
- OMS upgrade
- ODS upgrade
- SCADA upgrade

Reactive($0.04M)

- OT & Smart Grid - Repairs, Improvements & Upgrades

Overhead($0.06M)

- Line Extensions

Oshawa Power

General Plant

Fleet & Facilities ($0.57M)

- Poleyard Storage
- Barcoding
- Facility repairs, upgrades & improvements
- MS12 demolition
- HVAC replacements
- New backup generator
- Fleet renewal

Tools ($0.13M)

- Major tools & equipment
- Backup control room

General Plant

Information Technology ($0.52M)

- Financial System upgrades - GP
- Customer web portal – Silverblaze
- Customer Data Interface
- CIS acquisition
- People Systems
- File management system
- Computer and software upgrades & renewals
- Network segmentation project – L2 to L3
- Network Switch & Firewall upgrades
- UPS upgrades & renewals
- Phone system upgrades
- Email server upgrades
- Server upgrades
- Data backup and disaster recovery infrastructure
- Mobile phone renewals

Oshawa Power

Risk Management

Risk Mitigation from implementing DSP

- Equipment Failures
  - ✓ ***Reduces*** Total EOL Assets
  - ✓ ***Reduces*** Specific Failing Components – Porcelain Switches, Porcelain Insulators & 44kV Quick Sleeves
  - ✓ ***Reduces*** Major Station Equipment at EOL – Switchgear & Relays
  - ✓ ***Reduces*** First generation Smart Meters with increasing failure rates
- Improved Functionality & Operational Efficiency
  - ✓ ***Reduces/Corrects*** Protection & Control Issues/Design Limitations
  - ✓ ***Increases*** Monitoring, Remote Control & Automation of Assets
  - ✓ ***Reduces*** Manual Processes, Paperwork & Human Error

Oshawa Power

Risk Management

Risk Mitigation from implementing DSP

- Data & Cyber Security
  - ✓ ***Ensures*** Renewal and upgrade of IT & OT network equipment
  - ✓ ***Establishes*** Layer 3 Networks
  - ✓ **Implements** systems required for OEB Cyber Security Frame compliance
  - ✓ **Enhances** data backup and disaster recovery capabilities

- Health & Safety
  - ✓ ***Eliminates*** decommissioned facilities in states of disrepair – MS12 demolition
  - ✓ ***Improves*** physical security & organization – Pole Yard Storage

Oshawa Power

Questions?

Oshawa Power

APPENDIX I – SERVICES AGREEMENTS

SERVICES AGREEMENT

THIS SERVICES AGREEMENT is made as of the 10th day of August, 2017

BETWEEN:

OSHAWA PUC NETWORKS INC., a corporation incorporated pursuant to the laws of the Province of Ontario

(referred to as "Networks" after this)

- and -

OSHAWA POWER and UTILITIES CORPORATION, a corporation incorporated pursuant to the laws of the Province of Ontario

- and -

OSHAWA PUC SERVICES INC., a corporation incorporated pursuant to the laws of the Province of Ontario

- and -

OSHAWA PUC ENERGY SERVICES INC., a corporation incorporated pursuant to the laws of the Province of Ontario

- and -

2252112 ONTARIO INC., a corporation incorporated pursuant to the laws of the Province of Ontario

(referred to collectively as "**Affiliates**" and individually as an "**Affiliate**" after this)

WHEREAS:

1. Each of the Parties to this Agreement are corporations incorporated under the *Business Corporations Act* (Ontario);

2. Networks carries on the business of distributing electricity within the City of Oshawa; and

3. Networks agrees to provide certain services to the Affiliates on the terms as set forth in this Agreement.

NOW THEREFORE in consideration of the mutual covenants contained in this Agreement and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

ARTICLE 1 – INTERPRETATION

1.1 Definitions

Unless the context otherwise specifies or requires, for the purposes of this Agreement all capitalized terms herein shall have the meanings set forth below

(a) **"Agreement"** means this Services Agreement together with all Schedules attached to it, as they may be amended from time to time;

(b) **"Business Day"** means any day other than a Saturday, Sunday, statutory or bank holiday in the Province of Ontario;

(c) **"Claim"** has the meaning ascribed to it in **Section 4.4**;

(d) **"Confidential Information"** means information Networks has obtained relating to a specific consumer, retailer or generator in the process of providing current or prospective distribution service;

(e) **"Defaulting Party"** has the meaning ascribed to it in **Section 8.1**;

(f) **"Effective Date"** means 10th August 2017;

(g) **"Event of Default"** has the meaning described to it in **Section 8.1**;

(h) **"Force Majeure Event"** has the meaning ascribed to it in **Section 11.1;**

(i) **"IESO"** means the Independent Electricity System Operator;

(j) **"Law"** means any law, rule, regulation, code, order, writ, judgement, decree or other legal or regulatory determination by a court, regulatory agency, including the IESO, or governmental authority of competent jurisdiction;

(k) **"Party"** means a party to this Agreement and "Parties" means every party;

(l) **"Person"** means an individual, corporation, partnership, joint venture, association, trust, pension fund, union, governmental agency, official, board, tribunal, ministry, commission or department;

(m) **"Personnel"** means employees, agents, professional advisors, contractors and subcontractors;

(n) **"Prime Rate"** means, for any day, an annual rate of interest equal to the rate of interest which Networks' principal bank establishes at its principal office in Toronto as the reference rate of interest to determine interest rates that it will charge on such day for commercial loans in Canadian dollars made to its customers in Canada and which it refers to as its "prime rate of interest";

(o) **"Services"** are Services that are provided under **Section 3.1** of this Agreement;

(p) **"Term"** has the meaning ascribed to it in **Section 2.1** of this Agreement; and

(q) **"Third Party Expenses"** means all fees, costs and charges paid to third parties by Networks on behalf of an Affiliate in connection with providing the Services or incurred by Networks' employees while providing Services under this agreement.

1.2 **Construction of Agreement**

In this Agreement:

(a) words denoting the singular include the plural and vice versa and words denoting any gender include all genders;

(b) all usage of the word "including" or the phrase "e.g.," in this Agreement shall mean "including, without limitation," throughout this Agreement;

(c) any reference to a statute shall mean the statute in force as at the date hereof, together with all regulations promulgated under it, as the same may be amended, re-enacted, consolidated or replaced, from time to time, and any successor statute, unless otherwise expressly provided;

(d) any reference to a specific executive position or an internal division or department of a Party shall include any successor positions, divisions or departments having substantially the same responsibilities or performing substantially the same functions;

(e) when calculating the period of time within which or following which any act is to be done or step taken, the date which is the reference day in calculating such period shall be excluded, and if the last day of such period is not a Business Day, the period shall end on the next Business Day;

(f) all dollar amounts are expressed in Canadian dollars;

(g) the division of this Agreement into separate Articles, Sections, subsections and Schedules and the insertion of headings is for convenience of reference only and shall not affect the construction or interpretation of this Agreement;

(h) words or abbreviations which have well known or trade meanings are used in accordance with their recognized meanings;

(i) the terms and conditions are the result of negotiations between the Parties and the Parties therefore agree that this Agreement shall not be construed in favour of or against any Party by reason of the extent to which any Party or its professional advisors participated in the preparation of this Agreement.

ARTICLE 2 – TERM

2.1 Term

Unless terminated in accordance with **Section 10.1** of this Agreement, this Agreement shall come into force on the Effective Date and shall continue in full force and effect for a period of five (5) years.

ARTICLE 3 – NETWORKS SERVICES AND COVENANTS

3.1 Services

Subject to the terms, covenants and conditions contained in this Agreement, Networks will provide, or cause to be provided, to the Affiliates the services set out in **Schedule "A"** (collectively the "**Services**"), as may be required by the Affiliates.

3.2 Service Standards

Subject to the terms, covenants and conditions contained in this Agreement, Networks will provide the Services to the Affiliates, or cause them to be provided, to the standards set out in **Schedule "B"** (collectively the "**Service Standards**").

3.3 Changes

The Affiliates, collectively or individually and Networks may, from time to time, agree to modifications to a Service or a Service Standard by negotiating appropriate changes to the descriptions of the Service on the Service Standard and the consideration in connection with such changes and shall initial and attach amended schedules in this Agreement.

3.4 General Networks Covenants

(a) Networks shall be responsible for obtaining all necessary licences and permits and for complying with all applicable federal, provincial and municipal laws, codes and regulations in connection with the provision of the Services and Networks shall, when requested, provide an Affiliate with adequate evidence of its compliance with this **Section 3.4**;

(b) Networks shall, while on the premises used by an Affiliate, comply with all the rules and regulations of the Affiliate from time to time in force, which are brought to its notice or of which it could reasonably be aware;

(c) Networks shall pay for and maintain for the benefit of Networks appropriate insurance concerning the operations and liabilities of Networks relevant to this Agreement

including, without limiting the generality of the foregoing, workers' compensation and employment insurance in conformity with applicable statutory requirements in respect of any remuneration payable by Networks to any employees of Networks and public liability and property damage insurance;

3.5 Regulatory Change

If any change of Law after the date of this Agreement renders this Agreement illegal or unenforceable, then the Parties shall be required to renegotiate in good faith for thirty (30) days with a goal of developing a substitute agreement with such amendments as are necessary to comply with such change of Law.

ARTICLE 4 – MUTUAL COVENANTS

4.1 Confidentiality of Confidential Information

No Personnel of a Party shall have access to any Confidential Information in the possession of another Party, except for purposes related to the Services and in compliance with the Affiliate Relationship Code for Electricity Distributors and Transmitters prescribed by the Ontario Energy Board.

4.2 Maintain Records

The Parties will maintain such records as may be necessary in connection with this Agreement and as are agreed upon by the Parties acting reasonably.

4.3 Notification of Changes of Circumstances

Networks shall promptly give written notice to an Affiliate of any changes or prospective changes in circumstances that would materially affect the resources required for the Services provided to the Affiliate, including any anticipated material change in the nature or level of business of Networks, the number of employees of Networks, or any efforts relating to the organization of or collective bargaining by employees of Networks, or any lease or service arrangements contemplated with any third parties.

4.4 Notice of Claims, Etc.

Networks shall promptly give written notice to the Affiliates, and an Affiliate shall promptly give written notice to Networks, of all material claims, proceedings, notice of regulatory non-compliance from any regulatory authority, disputes (including labour disputes) or litigation (collectively, "**Claims**") which it reasonably believes could have a material adverse effect on the fulfillment of any of the material terms hereof by Networks or the Affiliate (whether or not any such Claim is covered by insurance) in respect of its own operations of which any of them is aware. Each Party shall provide the other Party with all information reasonably requested from time to time concerning the status of such Claims and any developments relating thereto.

ARTICLE 5 – FEES AND COSTS

5.1 Fees

(a) The Affiliates shall pay to Networks the fees and charges set out in **Schedule "C"** for services received from Networks.

5.2 Taxes

In addition to the fees, the Affiliates shall pay to Networks an amount equal to any and all goods and services taxes, sales taxes, value-added taxes or any other taxes (excluding income taxes) properly eligible on the supply of services provided by a third party under this Agreement.

ARTICLE 6 – REPRESENTATIONS AND WARRANTIES

6.1 Representations and Warranties of Networks

Networks represents and warrants to the Affiliates as follows and acknowledges that the Affiliates are relying on such representations and warranties:

(a) Networks is a corporation, duly incorporated, validly existing and in good standing under the laws of the Province of Ontario and it has the rights, powers and privileges to execute and deliver this Agreement and to perform its obligations hereunder;

(b) the execution, delivery and performance of this Agreement has been duly authorized by all necessary corporate action;

(c) this Agreement constitutes a legal, valid and binding obligation of Networks, enforceable against Networks by the Affiliates in accordance with its terms; and

(d) Networks has the necessary resources and expertise to acquire or perform the Services.

6.2 **Representations and Warranties of the Affiliates**

Each Affiliate represents and warrants to Networks as follows and acknowledges that Networks is relying on such representations and warranties:

(a) the Affiliate is a company, duly organized, validly existing and in good standing under the laws of the Province of Ontario and it has the rights, powers and privileges to execute and deliver this Agreement and to perform its obligations hereunder;

(b) the execution, delivery and performance of this Agreement has been duly authorized by all necessary corporate actions; and

(c) this Agreement constitutes a legal, valid and binding obligation of the Affiliate, enforceable against the Affiliate by Networks in accordance with its terms.

6.3 **Warranty**

(a) Networks warrants that the work and services it provides will be performed in a professional and workman like manner subject to Section 6.3(b) and 6.3(c) below. Networks warrants that any fault or defect due solely or indirectly to workmanship of Networks shall be corrected as soon as is reasonably possible upon notification by the affected Affiliate at no cost to the Affiliate;

(b) in respect of Networks workmanship, this warranty period shall extend to a defect or failure occurring within 90 days of the date that the original Work was completed.

(c) Networks provides no warranty for meters and metering equipment manufactured by a third party. Networks shall not be liable for any losses, damages, loss of opportunity or profit whether direct or consequential, that may be suffered by any party as a result of the malfunction of such third party meters and metering equipment.

ARTICLE 7 – INDEMNIFCATION

7.1 **Indemnification**

(a) Each Affiliate shall indemnify, defend and hold harmless Networks, its officers, directors, and employees (each a **"Networks Indemnitee")** from and against any and all claims, demands, suits, losses, liabilities, damages, obligations, payments, costs and expenses and accrued interest thereon (including the costs and expenses of, and accrued interest in respect of, any and all actions, suits, proceedings, assessments, judgements, awards, settlements and compromises relating thereto and reasonable lawyers' fees and reasonable disbursements in connection therewith) (each an **"Indemnifiable Loss"),** asserted against or suffered by any Networks Indemnitee relating to, or in connection with, or resulting from or arising out of the provision of the Services to that Affiliate.

(b) Networks shall deemed to hold the provisions of **Section 7.1(a)** that are for the benefit of the Networks Indemnitees that are not party to this Agreement in trust for such persons as third party beneficiaries under this Agreement.

7.2 **Limit of Liability**

(a) Each Affiliate agrees that Networks liability, if any, to that Affiliate or any third party in connection with or arising under this Agreement, including without limitation, any liability arising from any act or omission of Networks in the provision of the Services, whether arising in contract, tort, equity or otherwise, shall be limited to actions or liabilities resulting solely from the fraud or wilful misconduct of Networks in the provision of the Services and shall not exceed an amount equal to the total amount paid by that Affiliate to Networks under this Agreement for Services over the twelve month period preceding the date that the cause of action or claim giving rise to the liability first arose.

(b) Networks shall not be liable for any damages caused by delay in delivering or furnishing any Services referred to in this Agreement.

7.3 Notwithstanding anything else to the contrary in this Agreement, the Parties agree that Networks shall not be responsible for any sanctions, fines, penalties, or similar obligations imposed on an Affiliate, and each Affiliate agrees to indemnify and hold harmless Networks from any such sanctions fines, penalties or similar obligations.

ARTICLE 8 – DEFAULT

8.1 **Events of Default**

The occurrence of any one or more of the following events shall constitute a Default by a Party (the **"Defaulting Party")** under this Agreement and shall constitute an Event of Default if such Default is not remedied prior to the expiry of any notice period and any cure period applicable to such Default:

(a) if the Defaulting Party defaults in the payment of any amount due to the other Party under this Agreement and such default shall continue unremedied for sixty (60) days following notice in writing thereof to the Defaulting Party by the other Party; and

(b) if the Defaulting Party fails in any material respect to perform or observe any of its other material obligations under this Agreement and such failure shall continue unremedied for a period of sixty (60) days following notice in writing thereof (giving particulars of the failure in reasonable detail) from the other Party to the Defaulting Party or such longer period as may be reasonably necessary to cure such failure (if such failure is capable of being cured), provided that the Defaulting Party:

(i) proceeds with all due diligence to cure or cause to be cured such failure; and

(ii) in proceeding so, can be reasonably expected to cure or cause to be cured such failure within a reasonable time frame acceptable to the other Party acting reasonably.

ARTICLE 9 – REMEDIES

9.1 **Default Remedies**

(a) Unless otherwise agreed to in writing, in the event of an Event of Default the non-defaulting Party may terminate this Agreement as it relates to the non-defaulting Party upon notice in writing and all amounts payable by the defaulting Party hereunder shall become due and payable forthwith;

(b) The remedies in this section are expressly in lieu of any or all of the remedies which may be available to each of Networks and an Affiliate in respect of or under this Agreement resulting from the furnishing, the failure to furnish or the quality of any Services.

ARTICLE 10 – TERMINATION

10.1 Termination

This Agreement shall terminate in accordance with the provisions of **Section 9.1**;

10.2 Notice of Termination

Any termination hereof pursuant to Section 10.1 shall be by written notice of the terminating Party.

ARTICLE 11 – GENERAL

11.1 Force Majeure

No Party shall be liable for a failure or delay in the performance of its obligations pursuant to this Agreement:

(a) provided that such failure or delay could not have been prevented by reasonable precautions;

(b) provided that such failure or delay cannot reasonably be circumvented by the non-performing Party through the use of alternate sources, work around plans or other means; and

(c) if and to the extent such failure or delay is caused, directly or indirectly, by fire, flood, earthquake, elements of nature or acts of God, acts of war, terrorism, riots, civil disorders, rebellions, strikes, lock outs or labour disruptions or revolutions in Canada, or any other similar causes beyond the reasonable control of such Party, (each a "**Force Majeure Event**").

Upon the occurrence of a Force Majeure Event, the non-performing Party shall be excused from any further performance of those of its obligations pursuant to this Agreement affected by the Force Majeure Event only for so long as:

(a) such Force Majeure Event continues; and

(b) such Party continues to use commercially reasonable efforts to recommence performance whenever and to whatever extent possible without delay.

The Party delayed by a Force Majeure Event shall:

(a) immediately notify the other Parties by telephone (to be confirmed in writing within five (5) days of the inception of such delay) of the occurrence of a Force Majeure Event; and

(b) describe in reasonable detail the circumstances causing the Force Majeure Event.

11.2 Dispute Resolution

If any dispute arising in relation to an event of default under **Section 8.1(b)** or its implementation of **Section 8.1(b)** cannot be resolved by negotiation between the two disputing Parties, then the dispute shall be referred to one arbitrator agreeable to and appointed by both Parties to the dispute. If the Parties cannot agree on one arbitrator, the matter in dispute shall be referred to a panel of three arbitrators, one of which shall be appointed by Networks, one appointed by the Affiliate in the dispute and the third appointed by the two arbitrators selected by the disputing Parties. The arbitrator or arbitrators shall receive such oral and written evidence as may be required to investigate the matter in dispute and to render a decision and shall be guided by this Agreement and the intent of this Agreement. The decision of the arbitrator or arbitrators shall be provided in writing to the disputing Parties no later than thirty (30) days after the sole arbitrator or the third arbitrator has been appointed. The decision of the arbitrator or arbitrators shall be final and binding on the disputing Parties.

11.3 **Assignment**

No Party shall, without the written consent of the other Parties, which may be arbitrarily withheld in the sole discretion of a Party, assign or transfer its interest in this Agreement. This Agreement shall be binding on the Parties and their respective successors and permitted assigns. Any purported assignment in contravention of this Agreement shall be void.

11.4 **Notices**

All notices, request, approvals, consents and other communications required or permitted under this Agreement shall be in writing and addressed as follows:

(a) If to the Affiliates,

100 Simcoe St. South
Oshawa, ON
L1H 7M7

Attn: Phil Martin, VP Finance and Regulatory Compliance
Fax: 905-723-7947

(b) if to Networks,

100 Simcoe St. South
Oshawa, ON
L1H 7M7

Attn: Ivano Labricciosa, CEO and President
Fax: 905-723-7947

and shall be sent by fax and the Party sending such notice shall telephone to confirm receipt. A copy of any such notice shall also be sent on the date such notice is transmitted by fax by registered express mail or courier with the capacity to verify receipt of delivery. Any Party may change its address or fax number for notification purposes by giving the other Party notice of the new address or fax number and the date upon which it will become effective in accordance with the terms of this Agreement. A notice shall be deemed to have been received as of the next Business Day following its transmission by fax.

11.5 **Severability**

If any provision of this Agreement is held by a court of competent jurisdiction to be unenforceable or contrary to law, then the remaining provisions of this Agreement, or the application of such provisions to persons or circumstances other than those as to which it is invalid or unenforceable shall not be affected thereby, and each such provision of this Agreement shall be valid and enforceable to the extent granted by law. If any clause is deemed unenforceable or contrary to law, the parties shall alter the said clause and this agreement to produce enforceability or compliance with law such that the intent of the original clause is maintained and such change or alteration may be established through the dispute resolution clause in this agreement.

11.6 **Waiver**

No delay or omission by a Party to exercise any right or power it has under this Agreement or to object to the failure of any covenant of any other Party to be performed in a timely and complete manner, shall impair any such right or power or be construed as a waiver of any succeeding breach or any other covenant. All waivers must be in writing and signed by the Party waiving its rights

11.7 **Entire Agreement**

This Agreement supercedes any prior agreement between Networks and any of the Affiliates in relation to the Services provided for in this Agreement, and constitutes the entire Agreement between the Parties with respect to the Services, and there are no other representations, understandings or agreements, either oral or written, between the Parties other than as set out in this Agreement.

11.8 **Amendments**

No amendment to, or change, waiver or discharge of, any provision of this Agreement shall be valid unless in writing and signed by authorized representatives of each Party.

11.9 **Governing Law**

This Agreement shall be governed by the laws of the Province of Ontario and the laws of Canada applicable therein. The Parties hereby agree that the courts of the Province of Ontario shall have exclusive jurisdiction over disputes under this Agreement, and the Parties agree that jurisdiction and venue in such courts is appropriate and irrevocably attorn to the jurisdiction of such courts.

11.10 **Survival**

The terms of **Article** 7, **Article 9** and **Article 11** shall survive the expiration of this Agreement or termination of this Agreement for any reason.

11.11 **Third Party Beneficiaries**

Each Party intends that this Agreement shall not benefit or create any right or cause of action in or on behalf of any person or entity other than the Parties.

11.12 **Covenant of Further Assurances**

The Parties agree that, subsequent to the execution and delivery of this Agreement and without any additional consideration, the Parties shall execute and deliver or cause to be executed and delivered any further legal instruments and perform any acts which are or may become necessary to effectuate the purposes of this Agreement and to complete the transactions contemplated under it.

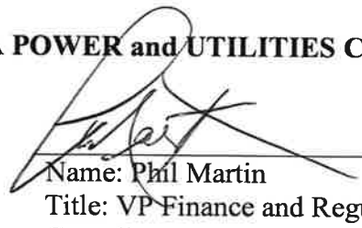
IN WITNESS WHEREOF this Agreement has been executed by the duly authorized signatories of the parties hereto as of the date first written above.

OSHAWA PUC NETWORKS INC.

Per: 

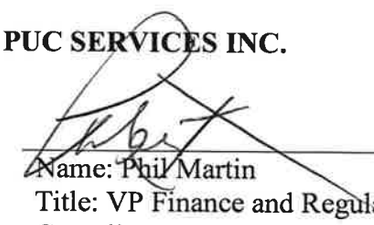
Name: Ivano Labricciosa
Title: CEO and President

OSHAWA POWER and UTILITIES CORPORATION

Per: 

Name: Phil Martin
Title: VP Finance and Regulatory Compliance

OSHAWA PUC SERVICES INC.

Per: 

Name: Phil Martin
Title: VP Finance and Regulatory Compliance

OSHAWA PUC ENERGY SERVICES INC.

Per: _____

Name: Phil Martin
Title: VP Finance and Regulatory Compliance

2252112 ONTARIO INC.

Per: _____

Name: Phil Martin
Title: VP Finance and Regulatory Compliance

SCHEDULE A

Description of Services

1. **"Finance Services"**, if any, will include treasury services, controllership services and audit services.

   (a) Treasury services will include financing, i.e., bond issue, operating line of credit, cash flow management and investment of funds, banking, financial guarantees, ie: letters of credit, bonds, prudentials, payroll services, accounts payable services, account receivables, office services, obtaining and maintaining credit ratings, Securities Commission reporting, management of customer deposits, interest and T5 reporting, taxation (PILs), GST and PST remittances and corporate VISA card.

   (b) Controllership services will include financial systems, financial processes, policies and procedures, financial controls and compliance, financial reporting and analysis, annual budgets, financial operations, billing, collecting, capitalization and depreciation, WIP and inventory, labour charging, allocations and burdens, managing external audit, risk and contract management, insurance programs, liability, D&O, fleet, facilities, OEB reporting, incentive plan reporting, billing system quality control.

   (c) Audit services will include risk management audit reports to Audit Committee and Board of Directors.

2. **"Corporate Support Services"**, if any, will include call centre services, human resources services, IT services, safety services and new services.

   (a) Call centre services will include call answering services and switchboard services.

   (b) Human resources services will include programming and consulting including recruitment, compensation and benefits, employee relations, labour relations.

   (c) IT services will include personal computer systems support and communications support.

   (d) Safety services will include safety program development, monitoring, reporting, implementation and support.

   (e) New support services will include such new services as may be agreed upon by the parties from time to time with a price to be negotiated at that time.

SCHEDULE B

Description of Service Standards

Service Standards

(a) NETWORKS will adhere to industry standards, based on standards set by the WSIB, Electric Utility Safety Association, and Occupational Health & Safety Standards as applicable and in any case shall perform the Services in a good and workmanlike manner and to a standard of performance that a competent professional and diligent independent provider of the services in the same circumstances would reasonably be expected to provide.

(b) NETWORKS will make all reasonable efforts to meet or exceed performance measures established by the Ontario Energy Board, Measurement Canada and by the IESO.

SCHEDULE C

Fees & Charges

	SERVICES	FEES	PERIOD OF FEE
1.	**Finance Services**	Cost	Monthly
2.	**Corporate Support Services**	Cost	Monthly
3.	**Wholesale Metering Maintenance Services**	$1,860	Monthly

Terms & Conditions		
1	Regular Business Hours	8:30 am to 4:30 pm weekdays, excluding holidays
2	Prices	Subject to Applicable Taxes
3	Payment	Monthly invoice, Net 30 days

"Cost" means Networks' fully allocated cost to provide the Services. Fully allocated cost includes a combination of labour, facilities, management information services (information technology), and supplies cost towards providing the service.

SERVICES AGREEMENT

THIS SERVICES AGREEMENT is made as of the 15th day of August, 2017

BETWEEN:

OSHAWA POWER and UTILITIES CORPORATION, a corporation incorporated pursuant to the laws of the Province of Ontario

(referred to as "OPUC" after this)

- and -

OSHAWA PUC NETWORKS INC., a corporation incorporated pursuant to the laws of the Province of Ontario

(referred to as "Networks" after this)

WHEREAS:

1. The Parties to this Agreement are corporations incorporated under the *Business Corporations Act* (Ontario);

2. Networks carries on the business of distributing electricity within the City of Oshawa; and

3. OPUC agrees to provide certain services to Networks on the terms as set forth in this Agreement.

NOW THEREFORE in consideration of the mutual covenants contained in this Agreement and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

ARTICLE 1 – INTERPRETATION

1.1 Definitions

Unless the context otherwise specifies or requires, for the purposes of this Agreement all capitalized terms shall have the meanings set forth below

(a) **"Agreement"** means this Services Agreement together with all Schedules attached to it, as they may be amended from time to time;

(b) **"Business Day"** means any day other than a Saturday, Sunday, statutory or bank holiday in the Province of Ontario;

(c) **"Claim"** has the meaning ascribed to it in **Section 4.4**;

(d) **"Confidential Information"** means information Networks has obtained relating to a specific consumer, retailer or generator in the process of providing current or prospective distribution service;

(e) **"Defaulting Party"** has the meaning ascribed to it in **Section 8.1**;

(f) **"Direct Costs"** means costs incurred directly by Networks for its own operations including all income, property and land taxes and payments in lieu of taxes of

Networks, fees and expenses in respect of directors of Networks, insurance in respect of Networks, its assets, employees, directors and agents, including, where insurance is jointly held with an affiliate, Networks' pro rata share of the premiums in respect of such insurance, regulatory, legal and accounting costs, fees and expenses of Networks, and costs of membership in industry organizations;

(g) **"Effective Date"** means 15th day of August, 2017;

(h) **"Event of Default"** has the meaning described to it in **Section 8.1**;

(i) **"Force Majeure Event"** has the meaning ascribed to it in **Section 11.1;**

(j) **"Law"** means any law, rule, regulation, code, order, writ, judgement, decree or other legal or regulatory determination by a court, regulatory agency, or governmental authority of competent jurisdiction;

(k) **"Party"** means a party to this Agreement and "Parties" means every party;

(l) **"Person"** means an individual, corporation, partnership, joint venture, association, trust, pension fund, union, governmental agency, official, board, tribunal, ministry, commission or department;

(m) **"Personnel"** means employees, agents, professional advisors, contractors and subcontractors;

(n) **"Prime Rate"** means, for any day, an annual rate of interest equal to the rate of interest which Networks' principal bank establishes at its principal office in Toronto as the reference rate of interest to determine interest rates that it will charge on such day for commercial loans in Canadian dollars made to its customers in Canada and which it refers to as its "prime rate of interest";

(o) **"Services"** are Services that are provided under **Section 3.1** of this Agreement;

(p) **"Term"** has the meaning ascribed to it in **Section 2.1** of this Agreement; and

1.2 **Construction of Agreement**

In this Agreement:

(a) words denoting the singular include the plural and vice versa and words denoting any gender include all genders;

(b) all usage of the word "including" or the phrase "e.g.," in this Agreement shall mean "including, without limitation," throughout this Agreement;

(c) any reference to a statute shall mean the statute in force as at the date hereof, together with all regulations promulgated under it, as the same may be amended, re-enacted, consolidated or replaced, from time to time, and any successor statute, unless otherwise expressly provided;

(d) any reference to a specific executive position or an internal division or department of a Party shall include any successor positions, divisions or departments having substantially the same responsibilities or performing substantially the same functions;

(e) when calculating the period of time within which or following which any act is to be done or step taken, the date which is the reference day in calculating such period shall be excluded, and if the last day of such period is not a Business Day, the period shall end on the next Business Day;

(f) all dollar amounts are expressed in Canadian dollars;

(g) the division of this Agreement into separate Articles, Sections, subsections and Schedules and the insertion of headings is for convenience of reference only and shall not affect the construction or interpretation of this Agreement;

(h) words or abbreviations which have well known or trade meanings are used in accordance with their recognized meanings;

(i) the terms and conditions are the result of negotiations between the Parties and the Parties therefore agree that this Agreement shall not be construed in favour of or against any Party by reason of the extent to which any Party or its professional advisors participated in the preparation of this Agreement.

ARTICLE 2 – TERM

2.1 Term

Unless terminated in accordance with **Section 10.1** of this Agreement, this Agreement shall come into force on the Effective Date and shall continue in full force and effect for a period of five (5) years.

ARTICLE 3 – NETWORKS SERVICES AND COVENANTS

3.1 Services

Subject to the terms, covenants and conditions contained in this Agreement, OPUC will provide, or cause to be provided, to Networks the services set out in **Schedule "A"** (collectively the "**Services**").

3.2 Service Standards

Subject to the terms, covenants and conditions contained in this Agreement, OPUC will provide the Services, or cause them to be provided, to the standards set out in **Schedule "B"** (collectively the "**Service Standards**").

3.3 Changes

The Parties may, from time to time, agree to modifications to a Service or a Service Standard by negotiating appropriate changes to the descriptions of the Service on the Service Standard and the consideration in connection with such changes and shall initial and attach amended schedules in this Agreement.

3.4 General OPUC Covenants

(a) OPUC shall be responsible for obtaining all necessary licences and permits and for complying with all applicable federal, provincial and municipal laws, codes and regulations in connection with the provision of the Services and OPUC shall, when requested, provide Networks with adequate evidence of its compliance with this **Section 3.4**;

(b) OPUC shall, while on the premises used by Networks, comply with all the rules and regulations of Networks from time to time in force, which are brought to its notice or of which it could reasonably be aware;

(c) OPUC shall pay for and maintain for the benefit of OPUC appropriate insurance concerning the operations and liabilities of OPUC relevant to this Agreement including, without limiting the generality of the foregoing, workers' compensation and employment insurance in conformity with applicable statutory requirements in respect of any remuneration payable by OPUC to any employees of OPUC and public liability and property damage insurance;

3.5 Regulatory Change

If any change of Law after the date of this Agreement renders this Agreement illegal or unenforceable, then the Parties shall be required to renegotiate in good faith for thirty (30) days with a goal of developing a substitute agreement with such amendments as are necessary to comply with such change of Law.

ARTICLE 4 – MUTUAL COVENANTS

4.1 Confidentiality of Confidential Information

No Personnel of a Party shall have access to any Confidential Information in the possession of another Party, except for purposes related to the Services and in compliance with the Affiliate Relationship Code for Electricity Distributors and Transmitters prescribed by the Ontario Energy Board.

4.2 Maintain Records

The Parties will maintain such records as may be necessary in connection with this Agreement and as are agreed upon by the Parties acting reasonably.

4.3 Notification of Changes of Circumstances

OPUC shall promptly give written notice to Networks of any changes or prospective changes in circumstances that would materially affect the resources required for the Services provided to Networks, including any anticipated material change in the nature or level of business of OPUC, the number of employees of OPUC, or any efforts relating to the organization of or collective bargaining by employees of OPUC, or any lease or service arrangements contemplated with any third parties.

4.4 Notice of Claims, Etc.

OPUC shall promptly give written notice to Networks, and Networks shall promptly give written notice to OPUC, of all material claims, proceedings, notice of regulatory non-compliance from any regulatory authority, disputes (including labour disputes) or litigation (collectively, "**Claims**") which it reasonably believes could have a material adverse effect on the fulfillment of any of the material terms of this Agreement by OPUC or Networks (whether or not any such Claim is covered by insurance) in respect of its own operations of which any of them is aware. Each Party shall provide the other Party with all information reasonably requested from time to time concerning the status of such Claims and any developments relating thereto.

ARTICLE 5 – FEES AND COSTS

5.1 Fees

(a) Networks shall pay to OPUC the fees and charges set out in **Schedule "C"** for services received from OPUC.

(b) Networks shall bear and assume all Direct Costs.

5.2 Taxes

In addition to the fees, Networks shall pay to OPUC an amount equal to any and all goods and services taxes, sales taxes, value-added taxes or any other taxes (excluding income taxes) properly eligible on the supply of services provided by a third party under this Agreement.

ARTICLE 6 – REPRESENTATIONS AND WARRANTIES

6.1 Representations and Warranties of Networks

Networks represents and warrants to OPUC as follows and acknowledges that OPUC is relying on such representations and warranties:

(a) Networks is a corporation, duly incorporated, validly existing and in good standing under the laws of the Province of Ontario and it has the rights, powers and privileges to execute and deliver this Agreement and to perform its obligations hereunder;

(b) the execution, delivery and performance of this Agreement has been duly authorized by all necessary corporate action;

(c) this Agreement constitutes a legal, valid and binding obligation of Networks, enforceable against Networks by OPUC in accordance with its terms; and

6.2 **Representations and Warranties of OPUC**

OPUC represents and warrants to Networks as follows and acknowledges that Networks is relying on such representations and warranties:

(a) OPUC is a company, duly organized, validly existing and in good standing under the laws of the Province of Ontario and it has the rights, powers and privileges to execute and deliver this Agreement and to perform its obligations hereunder;

(b) the execution, delivery and performance of this Agreement has been duly authorized by all necessary corporate actions; and

(c) this Agreement constitutes a legal, valid and binding obligation of OPUC, enforceable against OPUC by Networks in accordance with its terms.

(d) OPUC has the necessary resources and expertise to acquire or perform the Services.

6.3 **Warranty**

(a) OPUC warrants that the work and services it provides will be performed in a professional and workman like manner subject to Section 6.3(b) and 6.3(c) below. OPUC warrants that any fault or defect due solely or indirectly to workmanship of OPUC shall be corrected as soon as is reasonably possible upon notification by Networks at no cost to Networks;

(b) in respect of OPUC workmanship, this warranty period shall extend to a defect or failure occurring within 90 days of the date that the original Work was completed.

ARTICLE 7 – INDEMNIFCATION

7.1 **Indemnification**

(a) Networks shall indemnify, defend and hold harmless OPUC, its officers, directors, and employees (each an **"OPUC Indemnitee")** from and against any and all claims, demands, suits, losses, liabilities, damages, obligations, payments, costs and expenses and accrued interest thereon (including the costs and expenses of, and accrued interest in respect of, any and all actions, suits, proceedings, assessments, judgements, awards, settlements and compromises relating thereto and reasonable lawyers' fees and reasonable disbursements in connection therewith) (each an **"Indemnifiable Loss"),** asserted against or suffered by any OPUC Indemnitee relating to, or in connection with, or resulting from or arising out of the provision of the Services to Networks.

(b) OPUC shall deemed to hold the provisions of **Section 7.1(a)** that are for the benefit of the OPUC Indemnitees that are not party to this Agreement in trust for such persons as third party beneficiaries under this Agreement.

7.2 **Limit of Liability**

(a) Networks agrees that OPUC's liability, if any, to Networks or any third party in connection with or arising under this Agreement, including without limitation, any liability arising from any act or omission of OPUC in the provision of the Services, whether arising in contract, tort, equity or otherwise, shall be limited to actions or liabilities resulting solely from the fraud or wilful misconduct of OPUC in the provision of the Services and shall not exceed an amount equal to the total amount paid by Networks to OPUC under this Agreement over the twelve month period preceding the date that the cause of action or claim giving rise to the liability first arose.

(b) OPUC shall not be liable for any damages caused by delay in delivering or furnishing any Services referred to in this Agreement.

7.3 Notwithstanding anything else to the contrary in this Agreement, the Parties agree that **OPUC** shall not be responsible for any sanctions, fines, penalties, or similar obligations imposed on Networks, and Networks agrees to indemnify and hold harmless **OPUC** from any such sanctions fines, penalties or similar obligations.

ARTICLE 8 – DEFAULT

8.1 Events of Default

The occurrence of any one or more of the following events shall constitute a Default by a Party (the **"Defaulting Party")** under this Agreement and shall constitute an Event of Default if such Default is not remedied prior to the expiry of any notice period and any cure period applicable to such Default:

(a) if the Defaulting Party defaults in the payment of any amount due to the other Party under this Agreement and such default shall continue unremedied for sixty (60) days following notice in writing thereof to the Defaulting Party by the other Party; and

(b) if the Defaulting Party fails in any material respect to perform or observe any of its other material obligations under this Agreement and such failure shall continue unremedied for a period of sixty (60) days following notice in writing thereof (giving particulars of the failure in reasonable detail) from the other Party to the Defaulting Party or such longer period as may be reasonably necessary to cure such failure (if such failure is capable of being cured), provided that the Defaulting Party:

(i) proceeds with all due diligence to cure or cause to be cured such failure; and

(ii) in proceeding so, can be reasonably expected to cure or cause to be cured such failure within a reasonable time frame acceptable to the other Party acting reasonably.

ARTICLE 9 – REMEDIES

9.1 Default Remedies

(a) Unless otherwise agreed to in writing, in the event of an Event of Default the non-defaulting Party may terminate this Agreement as it relates to the non-defaulting Party upon notice in writing and all amounts payable by the defaulting Party hereunder shall become due and payable forthwith;

(b) The remedies in this section are expressly in lieu of any or all of the remedies which may be available to each of Networks and an Affiliate in respect of or under this Agreement resulting from the furnishing, the failure to furnish or the quality of any Services.

ARTICLE 10 – TERMINATION

10.1 Termination

This Agreement shall terminate in accordance with the provisions of **Section 9.1**;

10.2 Notice of Termination

Any termination hereof pursuant to Section 10.1 shall be by written notice of the terminating Party.

ARTICLE 11 – GENERAL

11.1 Force Majeure

No Party shall be liable for a failure or delay in the performance of its obligations pursuant to this Agreement:

(a) provided that such failure or delay could not have been prevented by reasonable precautions;

(b) provided that such failure or delay cannot reasonably be circumvented by the non-performing Party through the use of alternate sources, work around plans or other means; and

(c) if and to the extent such failure or delay is caused, directly or indirectly, by fire, flood, earthquake, elements of nature or acts of God, acts of war, terrorism, riots, civil disorders, rebellions, strikes, lock outs or labour disruptions or revolutions in Canada, or any other similar causes beyond the reasonable control of such Party, (each a "**Force Majeure Event**").

Upon the occurrence of a Force Majeure Event, the non-performing Party shall be excused from any further performance of those of its obligations pursuant to this Agreement affected by the Force Majeure Event only for so long as:

(a) such Force Majeure Event continues; and

(b) such Party continues to use commercially reasonable efforts to recommence performance whenever and to whatever extent possible without delay.

The Party delayed by a Force Majeure Event shall:

(a) immediately notify the other Party by telephone (to be confirmed in writing within five (5) days of the inception of such delay) of the occurrence of a Force Majeure Event; and

(b) describe in reasonable detail the circumstances causing the Force Majeure Event.

11.2 **Dispute Resolution**

If any dispute arising in relation to an event of default under **Section 8.1(b)** or its implementation of **Section 8.1(b)** cannot be resolved by negotiation between the Parties, then the dispute shall be referred to one arbitrator agreeable to and appointed by both Parties. If the Parties cannot agree on one arbitrator, the matter in dispute shall be referred to a panel of three arbitrators, one of which shall be appointed by Networks, one appointed by OPUC and the third appointed by the two arbitrators selected by the Parties. The arbitrator or arbitrators shall receive such oral and written evidence as may be required to investigate the matter in dispute and to render a decision, and shall be guided by this Agreement and the intent of this Agreement. The decision of the arbitrator or arbitrators shall be provided in writing to all of the Parties no later than thirty (30) days after the sole arbitrator or the third arbitrator has been appointed. The decision of the arbitrator or arbitrators shall be final and binding on the Parties.

11.3 **Assignment**

No Party shall, without the written consent of the other Party, which may be arbitrarily withheld in the sole discretion of that Party, assign or transfer its interest in this Agreement. This Agreement shall be binding on the Parties and their respective successors and permitted assigns. Any purported assignment in contravention of this Agreement shall be void.

11.4 **Notices**

All notices, request, approvals, consents and other communications required or permitted under this Agreement shall be in writing and addressed as follows:

(a) If to OPUC

100 Simcoe St. South
Oshawa, ON
L1H 7M7

Attn: Phil Martin, VP Finance and Regulatory Compliance
Fax: 905-723-7947

(b) if to Networks,

100 Simcoe St. South
Oshawa, ON
L1H 7M7

Attn: Ivano Labricciosa, CEO and President
Fax: 905-723-7947

and shall be sent by fax and the Party sending such notice shall telephone to confirm receipt. A copy of any such notice shall also be sent on the date such notice is transmitted by fax by registered express mail or courier with the capacity to verify receipt of delivery. Any Party may change its address or fax number for notification purposes by giving the other Party notice of the new address or fax number and the date upon which it will become effective in accordance with the terms of this Agreement. A notice shall be deemed to have been received as of the next Business Day following its transmission by fax.

11.5 **Severability**

If any provision of this Agreement is held by a court of competent jurisdiction to be unenforceable or contrary to law, then the remaining provisions of this Agreement, or the application of such provisions to persons or circumstances other than those as to which it is invalid or unenforceable shall not be affected thereby, and each such provision of this Agreement shall be valid and enforceable to the extent granted by law. If any clause is deemed unenforceable or contrary to law, the parties shall alter the said clause and this agreement to produce enforceability or compliance with law such that the intent of the original clause is maintained and such change or alteration may be established through the dispute resolution clause in this agreement.

11.6 **Waiver**

No delay or omission by a Party to exercise any right or power it has under this Agreement or to object to the failure of any covenant of any other Party to be performed in a timely and complete manner, shall impair any such right or power or be construed as a waiver of any succeeding breach or any other covenant. All waivers must be in writing and signed by the Party waiving its rights

11.7 **Entire Agreement**

This Agreement supercedes any prior agreement between OPUC and Networks in relation to the Services provided for in this Agreement, and constitutes the entire Agreement between the Parties with respect to the Services, and there are no other representations, understandings or agreements, either oral or written, between the Parties other than as set out in this Agreement.

11.8 **Amendments**

No amendment to, or change, waiver or discharge of, any provision of this Agreement shall be valid unless in writing and signed by authorized representatives of each Party.

11.9 **Governing Law**

This Agreement shall be governed by the laws of the Province of Ontario and the laws of Canada applicable therein. The Parties hereby agree that the courts of the Province of Ontario shall have exclusive jurisdiction over disputes under this Agreement, and the Parties agree that jurisdiction and venue in such courts is appropriate and irrevocably attorn to the jurisdiction of such courts.

11.10 **Survival**

The terms of **Article** 7, **Article 9** and **Article 11** shall survive the expiration of this Agreement or termination of this Agreement for any reason.

11.11 **Third Party Beneficiaries**

Each Party intends that this Agreement shall not benefit or create any right or cause of action in or on behalf of any person or entity other than the Parties.

11.12 **Covenant of Further Assurances**

The Parties agree that, subsequent to the execution and delivery of this Agreement and without any additional consideration, the Parties shall execute and deliver or cause to be executed and delivered any further legal instruments and perform any acts which are or may become necessary to effectuate the purposes of this Agreement and to complete the transactions contemplated under it.

IN WITNESS WHEREOF this Agreement has been executed by the duly authorized signatories of the parties hereto as of the date first written above.

OSHAWA POWER and UTILITIES CORPORATION

Per:

Name: Phil Martin
Title: VP Finance and Regulatory Compliance

OSHAWA PUC NETWORKS INC.

Per:

Name: Ivano Labricciosa
Title: CEO and President

SCHEDULE A

Description of Services

Corporate Governance, including services associated with the governance of a company's activities, such as activities to support its board of directors, board committees and executive management and legal and consulting services.

SCHEDULE B

Description of Service Standards

Service Standards

(a) OPUC will adhere to applicable industry standards, based on standards set by the WSIB, Electric Utility Safety Association, and Occupational Health & Safety Standards as applicable and in any case shall perform the Services in a good and workmanlike manner and to a standard of performance that a competent professional and diligent independent provider of the services in the same circumstances would reasonably be expected to provide.

(b) OPUC will make all reasonable efforts to meet or exceed applicable performance measures established by the Ontario Energy Board, Measurement Canada and by the IESO.

SCHEDULE C

Fees & Charges

	SERVICES	FEE	PERIOD OF FEE
1.	**Corporate Governance Services**	on a Cost basis	Monthly

Term & Conditions		
1	Regular Business Hours	8:30 am to 4:30 pm weekdays, excluding holidays
2	Prices	Subject to Applicable Taxes
3	Payment	Monthly invoice, Net 30 days

"Cost" means Networks' proportionate share of OPUC's cost to provide the Services to Networks, based on Networks' proportionate use of the Services.

APPENDIX J – 1-AMPCO-1 TERMS OF REFERENCE

PROJECT MONITORING COMMITTEE TERMS OF REFERENCE

Included:

Terms of Reference for Project Monitoring Committee

TERMS OF REFERENCE FOR:

Project Monitoring Committee of the Board

Purpose

The Committee is established to provide services and advice to Oshawa Power and Utilities Group of Companies.

The Committee assists the Board in fulfilling its oversight responsibilities in relation to practices, policies and procedures that address the Corporation's asset management activities and capital expenditures, and to provide major project investment and execution oversight.

Accountability

The chair of the Committee will report to the Board on the matters before the Committee. Minutes of the Committee's meetings will be made available to all Directors once approved by the Committee.

Composition

The Committee shall consist of no less than three3) members. Those members will be familiar with good practices in capital asset management. The Board Chair is an ex-offico of this Committee.

The Chair of the Committee is appointed by the Board on the recommendation of the Board Chair. The Committee members shall be appointed by resolution of the Board. Each member shall continue as a member until a successor is appointed, unless the member resigns, or is removed by resolution of the Board or otherwise ceases to be a member of the Board.

The VP Business Development shall act as the principle resource to the Committee. If the secretary is not present at any meeting of the Committee, the Committee may appoint an acting Secretary to perform the functions of the Secretary at that meeting.

The Committee shall assist with deliberations required for fulfillment of the Board's mandate and those specific responsibilities and duties assigned to the Committee; however, unless specifically stated otherwise, the Committee shall act in advisory capacity only, recommending decisions to the Board for approval.

Committee Operating Principles

The Committee shall fulfill its responsibilities within the context of the following overriding principles.

Committee Communications

The Chair and others on the Committee shall, to the extent appropriate, maintain an open avenue of contact with senior management and other Board members.

The Committee, through the Committee Chair, shall as necessary, but at least two (2) times per year, report its discussions to the Board by distributing the minutes of its meetings and where appropriate, by oral report at the next Board meeting.

External Resources

The Committee shall identify, through the Office of the President, or designate, the kind and frequency of information required by the Committee. The Committee shall have access to any and all books and records of the Corporation required for the execution of the Committee's obligations and, as necessary, shall discuss with appropriate corporate officers and employees, coordinated through the Office of the President, such records and other relevant matters.

Annual Work Plan

The Committee, with input from management and other key Committee advisors, shall develop an annual work plan responsive to the "primary committee responsibilities" detailed herein. The annual work plan shall be reviewed and approved by the full Board.

Expectations and Information Needs

The Committee shall communicate Committee expectations and the nature, timing and extent of Committee information needs to management, and external parties. Meeting conduct will assume Committee members have reviewed written materials in sufficient depth to participate in Committee/Board dialogue.

Self-Assessment

The Committee shall review, discuss and assess its own performance as well as its role and responsibilities, seeking input from senior management, the full Board and others. Changes in role and/or responsibilities, if any, shall be recommended to the full Board for approval.

Committee Meetings

- The committee shall meet a minimum of four times a year.
- A meeting of the Committee may be called by the Chair of the Committee, the Chair of the Board or President of the Corporation or by any two (2) members of the Committee.
- A quorum for meetings shall be two (2) directors present in person or, with the prior permission of the Committee Chair, by telephone or other telecommunications device.
- Reasonable notice, a minimum of seven (7) days before the meeting, shall be given in writing, by email or by facsimile communication to each member of the Committee.
- Committee meeting agenda shall be the responsibility of the Committee Chair, with input from Committee members. It is expected the Chair would also ask for management and key committee advisors, and perhaps others, to participate in this process.
- The Agenda and associated material shall be sent to each member of the Committee, prior, preferably seven (7) days, to the time for such meeting.
- The Committee shall have the right to determine who shall and shall not be present at any part of the meetings of the Committee, and may hold in camera sessions.
- The Committee shall review timetable and work plans annually.

Committee Duties and Responsibilities

The Committee shall:

1. Provide guidance and oversight regarding policies, practices and guidelines for asset management and capital budgets and expenditures, taking into account, among other things:
    - The health and safety of the public, employees and contractors
    - Regulatory compliance
    - Reliability of customer supply
    - Productivity and cost effectiveness
    - Environmental impact
    - Forecasting of customer demand
    - Forecasting of distributed generation
    - Life cycle costs
    - Criteria for make vs buy (self construct vs turn key acquisition)
    - Maintenance and replacement practices
    - Application of accounting policy
    - Information management (geographical information system and database)

2. Review, scrutinize, and as appropriate, recommend to the Board for planning purposes, the adoption of a five year distribution system plan as required by the Ontario Energy Board and other regulatory agencies.
3. Review, scrutinize, and as appropriate, recommend to the Board for approval, the annual capital expenditure budget.
4. Regularly receive reports from management on new developments and risks regarding the Distribution System Plan and to make assessments, and where desirable, recommendations to the Board for appropriate courses of action.
5. Review project proposals brought forward by the Non-Regulated businesses, and determine if the project should proceed through further analysis and due diligence.
6. Work with the Finance and Audit Committee to verify financial models for projects.
7. Upon completion of due diligence and analysis by management, review the proposal, and if deemed appropriate, make recommendations on the project to the Board.
8. Receive and review project status reports from Management.
9. Perform other functions that may from time to time be assigned by the Board.

APPENDIX K – 2-AMPCO-19

(SEE EXCEL SPREADSHEET)

APPENDIX L – 2.0-VECC-6 - INVOICES

hydro one

INVOICE

Mailing Address:
Hydro One Networks Inc.
483 BAY ST (ACCOUNTS RECEIVABLE UNIT - TCA8)
TORONTO, ON, M5G 2P5

Invoice No.: 3000216295
Customer Ref. No.: AR# 18533
Invoice Date: DEC 02, 2016
Due Date: JAN 01, 2017
Customer No.: 20000078
Payment Terms: Net 30
Interest on Late Payments: 19.56 % per year

OSHAWA PUC NETWORKS INC COMMISSION
100 SIMCOE ST SOUTH
OSHAWA, ON, L1H 7M7
CANADA

GST/HST No.: 870865821RT0001

For Billing Enquiries, please call: 1-877-554-7344
Business Hours: 8:00am - 4:00pm Eastern Standard Time

Attention: Mr. Eric Andres, P.Eng., Asset Manager, (905) 723-4626 x 5198; Payment is due Upon Receipt,
Wire Transfer Info: TD Bank, Toronto Swift Code TDOMCATTOR Hydro One Inc Account #0690-5202411 Branch 1020

Line Item No.	Description	Qty.	Unit Price	TOTAL
1	CCRA execution payment-Enfield TS CBR01050	1.000	2,614,471.00	2,614,471.00
	HST 13.00%			339,881.23

HYD045

C16-262

Subtotal	2,614,471.00
HST	339,881.23
TOTAL	$ 2,954,352.23

Wire Payment

Please note: Invoice is subject to Late Payment Interest Charges, if total payment is not received by due date.

Please return this portion with payment or write the complete invoice number on your cheque.

Please send your payment to:	Customer No.: 20000078 Customer Name:	Invoice No: 3000216295 Amount Due: $ 2,954,352.23
HYDRO ONE NETWORKS INC. ACCOUNTS RECEIVABLE UNIT - TCA8 483 BAY ST., TORONTO, ON, M5G 2P5	OSHAWA PUC NETWORKS INC COMMISSION 100 SIMCOE ST SOUTH OSHAWA, ON, L1H 7M7 CANADA	Due Date: JAN 01, 2017 Amount Remitted: _____ Date: _____

Please remit payment directly to address noted above For payment through Visa/Mastercard, call 1-877-554-7344.
This invoice cannot be paid against your energy account via your financial institution or Internet banking

hydro one

INVOICE

Mailing Address:
Hydro One Networks Inc.
483 BAY ST (ACCOUNTS RECEIVABLE UNIT - TCA8)
TORONTO, ON, M5G 2P5

Invoice No.: 3000207379
Customer Ref. No.: AR#18533
Invoice Date: DEC 20, 2016
Due Date: JAN 19, 2017
Customer No.: 20000078
Payment Terms: Net 30
Interest on Late Payments: 19.56 % per year

OSHAWA PUBLIC UTILITIES COMMISSION
100 SIMCOE ST SOUTH
OSHAWA, ON, L1H 7M7
CANADA

GST/HST No.: 870865821RT0001

For Billing Enquiries, please call: 1-877-554-7344
Business Hours: 8:00am - 4:00pm Eastern Standard Time

Attention: Mr. Eric Andres, P.Eng., Asset Manager, (905) 723-4626 x 5198; Payment is due upon receipt
Wire Transfer Info: TD Bank, Toronto Swift Code TDOMCATTOR Hydro One Inc Account #0690-5202411 Branch 1020

Line Item No.	Description	Qty.	Unit Price	TOTAL
1	PreCCRA 1st invoice	1.000	500,000.00	500,000.00
	HST 13.00%			65,000.00

1443045

C16-262

Subtotal	500,000.00
HST	65,000.00
TOTAL	$ 565,000.00

Wire Payment

Please note: Invoice is subject to Late Payment Interest Charges, if total payment is not received by due date.

Please return this portion with payment or write the complete invoice number on your cheque.

Please send your payment to:	Customer No.: 20000078 Customer Name: OSHAWA PUBLIC UTILITIES COMMISSION	Invoice No: 3000207379 Amount Due: $ 565,000.00 Due Date: JAN 19, 2017 Amount Remitted:
HYDRO ONE NETWORKS INC. ACCOUNTS RECEIVABLE UNIT - TCA8 483 BAY ST., TORONTO, ON, M5G 2P5	100 SIMCOE ST SOUTH OSHAWA, ON, L1H 7M7 CANADA	_____ Date: _____

Please remit payment directly to address noted above. For payment through Visa/Mastercard, call 1-877-554-7344.
This invoice cannot be paid against your energy account via your financial institution or Internet banking.

OSHAWA PUC NETWORKS INC.

092579

HYD045 HYDRO ONE NETWORKS INC. 30000000000106875 01/27/17 092579

3000207379	12/20/16	$565,000.00	$0.00	$0.00	$0.00
WIRE TRNFSER	12/21/16	($565,000.00)	$0.00	$0.00	$0.00
3000207462	12/21/16	$197,750.00	$197,750.00	$0.00	$197,750.00
		$197,750.00	$197,750.00	$0.00	$197,750.00

For Billing Enquiries, please call: 1-877-554-7344
Business Hours: 8:00am - 4:00pm Eastern Standard Time

Attention: Mr. Eric Andres, P.Eng., Asset Manager, (905) 723-4626 x 5198; Payment is due by February 2, 2017
Wire Transfer Info: TD Bank, Toronto Swift Code TDOMCATTOR Hydro One Inc Account #0690-5202411 Branch 1020

Line Item No.	Description	Qty.	Unit Price	TOTAL
1	PreCCRA 2nd invoice	1.000	175,000.00	175,000.00
	HST 13.00%			22,750.00
			Subtotal	175,000.00
			HST	22,750.00
			TOTAL	$ 197,750.00

RECEIVED
Oshawa PUC Networks Inc.
JAN 06 2017

HYD045

PO 59663
WO C16-262

Jan 24, 2017

EA

OSHAWA PUC NETWORKS INC.

087283

May 4/16 $186,833.07

cch
prov
Hydro One Networks Inc.
Inv # 3000170655.

A review of our Accounts Receivable indicates that the following account is considerably past due. The items that comprise the overdue amount are listed below.

PAID
MAY 0 4 2016

Invoice No.	Invoice Date	Invoice Amount	Late Payment Interest Charges	Total Amount Overdue	Due Date	Days Late
3000170655	05/26/2015	186,833.07	8,987.99	195,821.06	06/25/2015	97

Please remit total payment immediately to avoid further late payment interest charges to your account.

If you have any questions regarding your account please contact: Accounts Receivable Unit at 1-877-554-7344.

NO INVOICE
pay on statement

Pay original invoice amount only
$186,833.07

C16-262

Please return this portion with payment:

hydro one
ACCOUNTS RECEIVABLE UNIT - TCA8
483 BAY ST.
TORONTO, ON, M5G 2P5
CANADA

Reminder notice sent on: 09/30/2015

Customer Name: OSHAWA PUBLIC UTILITIES COMMISSION

Customer No. / Account Number	Amount Due	Amount Paid
20000078	~~$195,821.06~~	$ 186,833.07

Please remit payment directly to address noted above. For payment through Visa/Mastercard, call 1-877-554-7344.
This invoice cannot be paid against your energy account via your financial institution or Internet banking.

OSHAWA PUC NETWORKS INC.

089143

HYD045 HYDRO ONE NETWORKS INC. 00000000000102778 08/03/2016 089143

3000196205	07/22/2016	$372,900.00	$372,900.00	$0.00	$372,900.00

$372,900.00	$372,900.00	$0.00	$372,900.00

For Billing Enquiries, please call: 1-877-554-7344
Business Hours: 8:00am - 4:00pm Eastern Standard Time

Payment for release quality estimate to build Enfield TS (CCEA Payment)

Line Item No.	Description	Qty.	Unit Price	TOTAL
1	CCEA Payment	1.000	330,000.00	330,000.00
	HST 13.00%			42,900.00

Subtotal	330,000.00
HST	42,900.00
TOTAL	$ 372,900.00

RECEIVED
Oshawa PUC Networks Inc.
JUL 28 2016

Aug. 02, 2016
C16-262

Please note: Invoice is subject to Late Payment Interest Charges, if total payment is not received by due date.

Please return this portion with payment or write the complete invoice number on your cheque.

Please send your payment to:	Customer No.: 20025634 Customer Name: OSHAWA PUC NETWORKS INC	Invoice No: 3000196205 Amount Due: $ 372,900.00 Due Date: AUG 21, 2016 Amount Remitted:
HYDRO ONE NETWORKS INC. ACCOUNTS RECEIVABLE UNIT - TCA8 483 BAY ST., TORONTO, ON, M5G 2P5	100 SIMCOE ST SOUTH OSHAWA, ON, L1H 7M7 CANADA	_____ Date: _____

Please remit payment directly to address noted above. For payment through Visa/Mastercard, call 1-877-554-7344.
This invoice cannot be paid against your energy account via your financial institution or Internet banking.

APPENDIX M – 3.0-VECC-30 PERSISTENCE 2011-2014

(SEE EXCEL SPREADSHEET)

APPENDIX N – CCC-25 CULTURE TRANSFORMATION PLAN

Oshawa Power – Culture Transformation Plan

Action Plan for 2019 Employee Engagement Survey Results

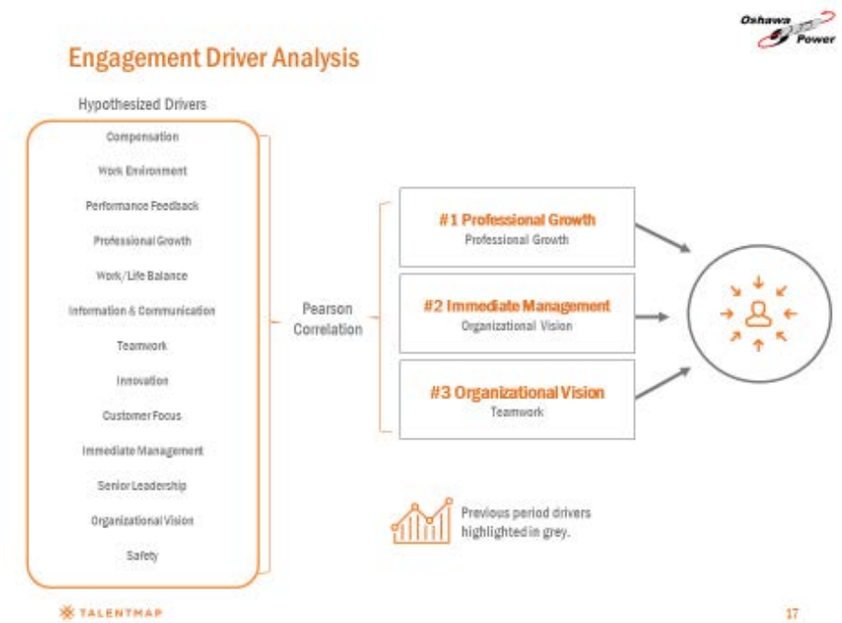
Prepared by:
Nancy Brandon – Director, Human Resources
Jessica Ford – Consultant, Human Resources

Background:

In September 2016, Oshawa Power completed its 1st Employee Engagement Survey with Talent Map. The survey achieved 100% participation and a total of 76 surveys were completed by all employees (full-time, contract, student). Talent Map delivered the results of the survey to all employees and identified 3 key areas to focus on to improve employee engagement at Oshawa Power: Teamwork, Professional Development, and Organizational Vision. An Employee Engagement Steering Committee, the Buzz, was created and worked to address these themes across the organization.

In September 2019, Oshawa Power completed its 2nd Employee Engagement Survey with Talent Map. The survey achieved 100% participation and a total of 96 surveys were completed by all employees (full-time, part-time, contract, student). In November 2019, Talent Map delivered the results of the survey to all employees and identified the 3 key areas that are most impactful to employee engagement at Oshawa Power. The three areas identified are: Immediate Management, Professional Development, and Organizational Vision. Teamwork was no longer identified as a top 3 theme but will be embedded in future action plans to maintain the progress made in this area. This Culture Transformation Plan is a corporate plan to address these survey results and help drive employee engagement across the organization. The action items embedded in this plan are to be implemented over a three (3) year timeline (2020-2022). This timeline is relevant as our next Employee Engagement survey is scheduled for Q4 2022. This plan is primarily focused on action planning for Leadership Development within the Management Team and will help lead the organization through change and culture transformation in line with John Kotter's 8 step model for Successful Change: Create a sense of urgency, Form a guiding coalition, Create a vision for change, Communicate the vision, Empower action, Create quick wins, Build on the change, Make it stick.

2019 Employee Engagement Survey Results:



Action Plan:

2020

Action	Strategic Value	Link to Employee Engagement Driver	Action Ownership	Timeline for Implementation/Completion
1) Create Culture Transformation Plan	Demonstrate corporate commitment to address & build an action plan for 2019 Employee Engagement Survey results	Organizational Vision Professional Development Immediate Management Teamwork	HR/Executive Team	**End of Q1**
2) Re-Distribute Weighting for Management Performance Plan Assessment to increase value of Competencies for Incentive Payouts (i.e. Goals & Objectives = 25% and Competencies = 15%)	This change better aligns rewards to performance expectations and demonstrates the importance of Corporate Competencies to the Management Team	Immediate Management	HR/Executive Team	**End of Q1**
3) Implementation of Development Goal across Management Group Giving & Receiving Feedback – Quality Performance Discussions & Service Quality Meetings with Peers	Further demonstrate the importance of Managerial Competencies by holding the team accountable for Leadership Development on their performance plans and rewarding incentive payments accordingly via a shared goal that is applied consistently	Immediate Management	HR/Executive/Management Team	**End of Q2**
4) Roll out of Mission, Vision, and Core Values to All Employees	Communicate key corporate update to all employees that will inform the Organizational Vision that all need to understand and support for required performance	Organizational Vision	Executive Team/Management Team	**End of Q2**
5) Provide access to YMCA's Career Planning & Development Services to employees	Connect employees with resources that will assist with professional development and career pathing available in the community	Professional Development	HR	**End of Q2**
6) Host Townhall All Employee Meeting to discuss Organizational Vision & Corporate Strategy (Regulated & Unregulated)	Present key messaging about organizational vision to build awareness and buy-in at all levels of the organization	Organizational Vision	Executive Team	**End of Q3**

7) Deliver Respect in the Workplace training via Morneau Shepell	Provide training around key are of culture shift to support corporate Core Value of “Living a Culture of Respect”	Organizational Vision Professional Development Teamwork	HR to Schedule/All Employees to Participate	**End of Q3**
8) Buzz Event Participation – 90% of employees to attend at least 1 Buzz event throughout the year	Measurement of reach of employee engagement/social activities across entire organization	Teamwork	Buzz Committee/All Employees	**End of Q4**
9) Leadership Development – Host/Attend leadership development session & implement learning from training into 2020 performance 2020 Focus Areas: Giving & Receiving Feedback, Emotional Intelligence & Servant Leadership	Provide training to leadership team to establish baseline skills towards management competencies and performance objectives	Professional Development Immediate Management	HR/Executive/Management Team	**Q2 – Schedule & Attend Session** **Q3 – Implement Learning & Seek Feedback** **Q4 – Demonstrate application of learning by updating leader on feedback given and received at Q4 performance evaluation**
10) Training - Support of Tuition Reimbursement Program & KPI Tracking of Average Training Days per Employee	Demonstrate corporate commitment to professional development, skill building, and succession planning through training & development activities. Success on this action will require Managers to include professional development/training needs as part of ongoing Check In discussions	Professional Development Immediate Management	Management Team	**Q1/Q2/Q3/Q4**
11) Succession Planning – HR Team to meet with Executives and develop the following for their business units: a) Short Term Succession Plan	Identity gaps, build performance/development plans for potential incumbents suited to future needs, manage risk of talent leaving the organization.	Professional Development	HR/Executive Team	**Q2 – Meetings to be scheduled** **Q3 – Short Term Succession Plan Development** **Q4 – Formalize/Complete**
12) Maintain Corporate Meeting Structure for Communication Maintain & Support Performance Review/Check In Meeting Structure via PiiQ by Cornerstone	Management Team to check in with each employee at end of Q1/Q2/Q3 and conduct performance review at end of Q4 to assist with career planning, development, performance improvement, organizational vision, and communication	Professional Development Immediate Management Organizational Vision	Management Team to execute with support of Human Resources	**Q1/Q2/Q3/Q4**
13) Develop Quarterly content for distribution to Management Team for roll out at Department Meetings	Involve all employees in corporate vision and direction with Unregulated/Energy Services projects.	Organizational Vision	Energy Services Team to develop	**Q1- March 20, 2020** **Q2 – June 19, 2020** **Q3 – September 18, 2020** **Q4 – December 11, 2020**

regarding Unregulated business activity and updates on projects			Management Team to implement	
14) Celebrating Unregulated Success – Host minimum of 2 events to celebrate a project launch/unregulated update with broader, all employee team	Engage all employees in business activities and success of the Energy Services team and build stronger vision of "Oshawa Power" as a united entity	Organizational Vision Teamwork	Executive/Management Team	**End of Q2** **End of Q4**
15) Buzz Team to develop & execute social calendar of events for All Employees with minimum of 1 event held in each quarter of the year	Continue to build upon Teamwork success as a driver of Employee Engagement	Teamwork	Buzz Committee/All Employees	**Event in Q1** **Event in Q2** **Event in Q3** **Event in Q4**
16) Communication of Performance – Sharing Results/KPI Tracking Leverage email/communication boards/intranet to broadcast 2020 KPI tracking & performance to all employees	Build understanding, engagement & sense of urgency across all departments to contribute and meet annual corporate KPIs and performance requirements	Organizational Vision	Communications to compile/post/distribute Management Team to discuss at Department Meetings	**Q1 Results Communication** **Q2 Results Communication** **Q3 Results Communication** **Q4 Results Communication**

- As per the above chart, there are 36 actions to implement in 2020
- Immediate Management – 6 actions, Organizational Vision – 8 actions, Professional Development – 7 actions, Teamwork – 4 actions
- Q1 – 7 actions, Q2 – 11 actions, Q3 – 9 actions, Q4 – 9 actions

2021

Action	Strategic Value	Action Owner	Link to Employee Engagement Driver	Timeline for Implementation
1) Host Townhall All Employee Meeting to discuss Organizational Vision & Corporate Strategy (Regulated & Unregulated)	Present key messaging about organizational vision to build awareness and buy-in at all levels of the organization	Organizational Vision	Executive Team	**End of Q1**
2) Develop Metrics to Measure Culture Shift	Indicators of Culture Transformation and How to Measure Results – Proactive Customer Service, Community Involvement, Silo Breakdown, Customer Service Mindset, Attendance, Safety Record Results, Involvement in Company Events, Leadership Competencies	Immediate Management Organizational Vision	HR/Executive Team	**End of Q1**

3) Buzz Event Participation – 95% of employees to attend at least 1 Buzz event throughout the year	Measurement of reach of employee engagement/social activities across entire organization	Teamwork	Buzz Committee/All Employees	**End of Q4**
4) Each Non Union employee to complete a minimum of 1 Field/Site Visit in 2021.	Enhance Leadership engagement with field staff & projects and develop exposure to Operations	Professional Development Immediate Management	Management Team	**End of Q4**
5) Leadership Development – Host/Attend leadership development session & implement learning from training into 2020 performance 2021 Focus Areas: Career Planning & Team Development	Provide training to leadership team to establish baseline skills towards management competencies and performance objectives	Professional Development Immediate Management	HR/Executive/Management Team	**Q2 – Schedule & Attend Session** **Q3 – Implement Learning & Seek Feedback** **Q4 – Demonstrate application of learning by updating leader on progress at Q4 performance evaluation**
6) Development Plans – Each People Leader to develop and implement development plan for 2 direct reports (ex. 1 high performer, 1 performance improvement plan)	Opportunity for leaders to demonstrate competence and apply learning to coach and mentor employees for career pathing, professional development, and performance improvement	Professional Development Immediate Management	People Leaders HR	**End of Q4**
7) Training - Support of Tuition Reimbursement Program & KPI Tracking of Average Training Days per Employee	Demonstrate corporate commitment to professional development, skill building, and succession planning through training & development activities. Success on this action will require Managers to include professional development/training needs as part of ongoing Check In discussions	Professional Development Immediate Management	Management Team	**Q1/Q2/Q3/Q4**
8) Succession Planning – HR Team to meet with Executives and develop the following for their business units: a) Update Short Term Succession Plans a) Long Term Succession Plan	Identity gaps, build performance/development plans for potential incumbents suited to future needs, manage risk of talent leaving the organization.	Professional Development	HR/Executive Team	**Q2 – Meetings to be scheduled** **Q3 – Long Term Succession Plan Development** **Q4 – Formalize/Complete**
9) Maintain Corporate Meeting Structure for Communication – Update Timing of Meetings to Reflect Execution of Strategic Plan	Management Team to check in with each employee at end of Q1/Q2/Q3 and conduct performance review at end of Q4 to assist with career planning, development, performance	Professional Development Immediate Management Organizational Vision	Management Team to execute with support of Human Resources	**Q1/Q2/Q3/Q4**

Maintain & Support Performance Review/Check In Meeting Structure via PiiQ by Cornerstone	improvement, organizational vision, and communication			
10) Develop Quarterly content for distribution to Management Team for roll out at Department Meetings regarding Unregulated business activity and updates on projects	Involve all employees in corporate vision and direction with Unregulated/Energy Services projects.	Organizational Vision	Energy Services Team to develop Management Team to implement	**Q1 – March 19, 2021** **Q2 – June 18, 2021** **Q3 – September 10, 2021** **Q4 – December 10, 2021**
11) Involve Regulated Teams in Unregulated Project Planning & Action Plans	Engage all employees in business activities and success of the Energy Services team and build stronger vision of "Oshawa Power" as a united entity	Organizational Vision Teamwork	Executive/Management Team	**End of Q2** **End of Q4**
12) Buzz Team to develop & execute social calendar of events for All Employees with minimum of 1 event held in each quarter of the year	Continue to build upon Teamwork success as a driver of Employee Engagement	Teamwork	Buzz Committee/All Employees	**Event in Q1** **Event in Q2** **Event in Q3** **Event in Q4**
13) Communication of Performance – Sharing Results/KPI Tracking Implement enhancements to better leverage the employee portal of the intranet to broadcast company updates, KPI tracking & performance to all employees	Build understanding and engagement across all departments for corporate initiatives & build a sense of urgency for employees to contribute to and meet annual corporate KPIs and performance requirements	Organizational Vision	Communications/HR	**End of Q3**

- As per the above chart, there are 30 actions to implement in 2021
- Immediate Management – 6 actions, Organizational Vision – 6 actions, Professional Development – 6 actions, Teamwork – 3 actions
- Q1 – 6 actions, Q2 – 7 actions, Q3 – 7 actions, Q4 – 10 actions

2022

Action	Strategic Value	Action Owner	Link to Employee Engagement Driver	Timeline for Implementation
1) Host Townhall All Employee Meeting to discuss Organizational Vision & Corporate Strategy (Regulated & Unregulated)	Present key messaging about organizational vision to build awareness and buy-in at all levels of the organization	Organizational Vision	Executive Team	**End of Q1**
2) Buzz Event Participation – 100% of employees to attend at least 1 Buzz event throughout the year	Measurement of reach of employee engagement/social activities across entire organization	Teamwork	Buzz Committee/All Employees	**End of Q4**

3) Each Non Union employee to complete a minimum of 1 Field/Site Visit in 2020.	Enhance Leadership engagement with field staff & projects and develop exposure to Operations	Professional Development Immediate Management	Management Team	**End of Q4**
4) Leadership Development – Host/Attend leadership development session & implement learning from training into 2020 performance 2020 Focus Areas: Knowledge Transfer Planning	Provide training to leadership team to establish baseline skills towards management competencies and performance objectives	Professional Development Immediate Management	HR/Executive/Management Team	**Q2 – Schedule & Attend Session** **Q3 – Implement Learning & Seek Feedback** **Q4 – Demonstrate application of learning to leader at end of year performance evaluation**
5) Each Department Manager/Leader to Develop Knowledge Transfer Plan for their Business Unit	Assist with succession planning efforts and knowledge transfer with upcoming retirements and workforce generation. Opportunity for leaders to demonstrate competence and apply learning from training session	Professional Development Immediate Management	Managers/Department Heads with HR	**End of Q4**
6) Training - Support of Tuition Reimbursement Program & KPI Tracking of Average Training Days per Employee	Demonstrate corporate commitment to professional development, skill building, and succession planning through training & development activities. Success on this action will require Managers to include professional development/training needs as part of ongoing Check In discussions	Professional Development Immediate Management	Management Team	**Q1/Q2/Q3/Q4**
7) Succession Planning – HR Team to meet with Executives and update Short Term & Long Term Succession Plans for each business unit	Identity gaps, build performance/development plans for potential incumbents suited to future needs, manage risk of talent leaving the organization.	Professional Development	HR/Executive Team	**Q2 – Meetings to be scheduled** **Q4 – Documentation Update to be Completed**
8) Maintain Corporate Meeting Structure for Communication Maintain & Support Performance Review/Check In Meeting Structure via PiiQ by Cornerstone	Management Team to check in with each employee at end of Q1/Q2/Q3 and conduct performance review at end of Q4 to assist with career planning, development, performance improvement, organizational vision, and communication	Professional Development Immediate Management Organizational Vision	Management Team to execute with support of Human Resources	**Q1/Q2/Q3/Q4**
9) Evolve Fall Management Offsite Meeting to a Management Strategy	Management team to engage in corporate strategy development &	Organizational Vision	Executive Team/Management Team	**End of Q3**

Session for 2022 Action Plan Development	proactively address emerging trends and challenges			
10) Develop Quarterly content for distribution to Management Team for roll out at Department Meetings regarding Unregulated business activity and updates on projects	Involve all employees in corporate vision and direction with Unregulated/Energy Services projects.	Organizational Vision	Energy Services Team to develop Management Team to implement	**Q1 – March 18, 2022** **Q2 – June 17, 2022** **Q3 – September 16, 2022** **Q4 – December 9, 2022**
11) Establish a cross-functional project team across Regulated and Unregulated divisions	Engage all employees in business activities and success of the Energy Services team and build stronger vision of "Oshawa Power" as a united entity	Organizational Vision	Executive/Management Team	**End of Q3**
12) Buzz Team to develop & execute social calendar of events for All Employees with minimum of 1 event held in each quarter of the year	Continue to build upon Teamwork success as a driver of Employee Engagement	Teamwork	Buzz Committee/All Employees	**Event in Q1** **Event in Q2** **Event in Q3** **Event in Q4**
13) Communication of Performance – Sharing Results/KPI Tracking Implement display screens & digital technology across the organization to better broadcast corporate messages and KPI tracking	Build understanding & engagement across all departments for corporate initiatives and build a sense of urgency to contribute to and meet annual corporate KPIs and performance requirements	Organizational Vision	Communications/HR	**End of Q3**
14) 2021 Employee Engagement Survey	Conduct follow-up employee engagement survey across organization to gauge success. Achieve 100% participation rate	Professional Development Immediate Management Organizational Vision	HR with Support of Executive & Management Team	**End of Q4**

- As per the above chart, there are 29 actions to implement in 2022
- Immediate Management – 6 actions, Organizational Vision – 7 actions, Professional Development – 7 actions, Teamwork – 2 actions
- Q1 – 5 actions, Q2 – 6 actions, Q3 – 8 actions, Q4 – 10 actions

APPENDIX O – 1-EP-5 – DIVIDEND POLICY

Oshawa Power & Utilities Corporation

Title	Dividend Policy
Policy #	CO-0101
Policy Area	Corporate
Date	April 20, 2017
Previous Date	June 30, 2011
Related Policies	Finance Policy

Contents

Dividend Policy 2
Alignment with Corporate Bylaws 2
Dividend Payout Ratio 2
Liquidity Tests 2

OSHAWA POWER AND UTILITIES CORPORATION
Dividend (thousands)

As per the Dividend payout ratio of 40% approved in the enclosed Dividend Policy, the 2018 Dividend to be considered for approval is $2,260 (2017 - $2,300).

Oshawa Power & Utilities Corporation

Dividend Policy

As part of its year-end annual financial evaluation process, the Board of Directors will consider whether it is appropriate and prudent to declare a dividend payable from cumulative retained earnings of Oshawa Power and Utilities Corporation (the "Corporation") to the Corporation of the City of Oshawa ("Shareholder").

Alignment with Corporate Bylaws

The applicable Corporate Bylaws set out *Dividends and Rights* as follows:

Part X, Section 10.01 Dividends

Subject to the provisions of the Act (Business Corporations Act (Ontario)), the Articles and the Shareholder Declaration, the board may from time to time declare dividends payable to the shareholder. Dividends may be paid in money or property, or by issuing fully paid shares of the Corporation.

Further, the Corporate Bylaws constitute the record date for dividends and rights as follows:

Part X, Section 10.02 Record Date for Dividends and Rights

The board may fix in advance a date, preceding by not more than 50 days the date for payment of any dividend or the date for the issue of any warrant or other evidence of the right to subscribe for securities of the Corporation, as a record date for the determination of the persons entitled to receive payment of such dividend or to exercise the right to subscribe for such securities, and notice of any such record date shall be given no less than 7 days before such record date in the manner provided by the Act. If no record date is so fixed, the record date for the determination of the persons entitled to receive payment of any dividend or to exercise the right to subscribe for securities of the Corporation shall be at the close of business on the day on which the resolution relating to such dividend or right to subscribe is passed by the board.

Dividend Payout Ratio

Dividends are distributions of the Corporation's current or cumulative earnings to its shareholder. Dividends are not considered an operating cost, therefore, are not recoverable through the electricity distribution rate base. As per applicable Corporate Bylaws, dividends can be in the form of cash, stock, or property.

Subject to the Corporate Bylaws and pursuant to the Corporation meeting the requirements identified below under **Liquidity Tests**, the Board of Directors may declare an annual dividend payout ratio of up to 40% based upon the *Consolidated Net Income, After Net Movements In Regulatory Balances* as reported in the Corporation's audited consolidated statements of comprehensive income for the preceding year.

Liquidity Tests

The following liquidity tests will be applied to ensure prudence is exercised prior to the distribution of dividends:

- The Corporation will not jeopardize the financial health of the utility. Profits from the Corporation's operations are needed to finance capital expenditures, operating expenses, taxes and interest on debt, as well as to provide for reasonable working capital reserves to meet its short term commitments.

- On an annual basis, within 120 days of year-end, an updated five-year financial projection for the Corporation will be prepared. The analysis will include all expected sources and uses of funds for the current year accompanied by a minimum five-year projection of future commitments.
- A minimum working capital reserve equal to three months of operating costs must be maintained at all times. Operating cost is defined as total operating expenses less depreciation and interest.
- Adequate funds must be provided for interest and associated debt coverage requirements including third-party financial covenants that might apply.
- A minimum allowance for capital expenditures equal to the average annual depreciation expense over the five-year forecast period should be maintained.

Payment

Dividends will be declared and subsequently paid upon the approval of the Corporation's audited Consolidated Financial Statements by its Board of Directors and certification that the liquidity tests have been met.

Special dividends may be considered at the Shareholder's request.

APPENDIX P – 2-DRC-1 - EXCERPT OF GRANT PROPOSAL

Zero-Emission Vehicle Awareness Initiative

Request for Project Proposals

Application Form

CONFIDENTIAL WHEN COMPLETED

Clean Fuels Branch

July 2020

Ce document est aussi disponible en français. Veuillez envoyer un courriel à nrcan.zev-vze.rncan@canada.ca en indiquant à la ligne Objet « Formulaire du demandeur – Initiative de sensibilisation aux véhicules à zéro émission ».

Canada

Notes

1. Natural Resources Canada (NRCan) strongly recommends that applicants familiarize themselves with the Zero Emission Vehicle Awareness Initiative Applicant's Guide before completing this Application Form.

2. Unless otherwise specified, the "proposed project", the "application", or the "proposal" in this template refers to the proposed project submitted in response to the request from NRCan for a project proposal to the Zero Emission Vehicle Awareness Initiative (the "Initiative").

3. Completion and submission of this project proposal to NRCan does not imply that the proposed project will be approved for funding by the Initiative.

4. Applicants, their partners and collaborators must submit all information required under this request. The following **required** documents need to be submitted with your application:

   - Application Form, including Appendix A
   - Proof of incorporation or registration (see Section 1 of this Form)
   - Proof of 50% secured funding of the proponent's share of total project cost (see Section 3.1.3 of this Form)

Incomplete applications will not be considered for funding.

5. The completed project proposal must be submitted by e-mail, courier or registered mail by **23:59 Eastern Daylight Time, September 8, 2020**. Please refer to Section 4 of the Applicants' Guide for the submission procedure. **Submissions sent after that time will not be accepted**. It is the applicant's responsibility to retain proof of the time the complete proposal package was sent to NRCan. This may be required in the event that NRCan does not receive the complete proposal package by the deadline for reasons that are beyond the control of the sender.

1 General Information:

Please note that the applicant's name, project partners' names, project title, non-confidential overview, and amount awarded will be disclosed publicly if the proposal is selected for funding by the Zero Emission Vehicle Awareness Initiative.

Legal Entity:	Oshawa PUC Networks (Trade Name Oshawa Power)	
Organization Address:	100 Simcoe Street South, Oshawa ON, L1H 7M7	
Organization Size:	75	
Contact Name:	Janet Taylor	
Contact Title:	Manager – Sustainability and Business Advocacy	
Email Address:	jtaylor@opuc.on.ca	
Preferred Language of Communication:	Written: ☒ English ☐ French	Spoken: ☒ English ☐ French
Telephone Number:	(905) 723-4626 x 5249	

Please provide a copy of the articles of incorporation or registration to confirm that the organization is validly incorporated or registered.

2 Project Summary

2.1 Project Title:	Durham ZEV Virtual Showroom

2.2 Planned Start Date:	2020-10-16	**Planned End Date:**	2021-03-31

2.3 Outstanding Legal Actions: Is there any legal action currently underway against the applicant, parent companies or any partner, including any potential related financial loss?	☐ **Yes** ☒ **No**
If "yes", please provide details.	

2.4 Consultation with First Nations Required: Is this project occurring on or near First Nations territories?	☐ **Yes** ☒ **No**
If "yes", First Nations consultation is required. Please indicate which First Nations would be implicated should the project proceed and describe the consultation process by explaining the major steps and indicate the status of the consultation.	

3 Project Selection Criteria

IMPORTANT: You must ensure that your project application meets all of the mandatory requirements in order to be considered for funding. In addition, you must include all proofs or support documentation requested in the Applicant's Guide and/or in this Application Form.

To help you in your application process, NRCan prepared a list of documents to provide in your application which is included in Section 5 of this Application Form.

3.1 Mandatory Criteria

Please refer to section 3.1 of the Applicant's Guide for more details.

3.1.1. Eligible Projects

☒ *You are confirming that your project supports activities that addresses Canadians' awareness and knowledge gaps about zero-emission vehicles as defined in* Section 2.3.2. of the Applicants' Guide.

⚠ **This will be validated by program staff based on the information provided in Section 3.2.1 of this Form.**

3.1.2. Project completion timelines

☒ *You are confirming that the project will be completed no later than March 31, 2021.*

⚠ **This will be validated by program staff based on the information provided in Appendix A of this Form.**

3.1.3. Minimum secured funding

☒ *You are confirming that you have secured at least 50% of your share of the total project costs.*

⚠ **This will be validated by program staff based on the information provided in Section 4.1 of this Form and based on the receipt of the supporting documentation as described in 3.1.3 of the Applicant's Guide.**

3.2 Merit Criteria

Please refer to section 3.2 of the Applicant's Guide for more details.

3.2.1. **Project Objectives** (Maximum 20 points)

Please describe how your project will support the Initiative's objective to increase awareness and encourage greater adoption of ZEVs in Canada. Applications should include clear and achievable objectives. The objectives should be described in terms of quantifiable and/or qualifiable goals to be achieved through this project.

Provide any relevant information that supports the rationale for the project, for example, by highlighting the needs assessments, target users, commitments, strategies, organizational priorities, etc.

Demonstrate how the project will build on, but does not duplicate existing activities.

Describe your organization's ongoing activities and explain how they differ from the proposed project activities. Note that the project funding should not be directed to ongoing activities.

Introduction

The Regional Municipality of Durham's Community Energy Plan (DCEP) identified and quantified priority areas for Greenhouse Gas (GHG) emissions reductions. The plan, which was endorsed in 2019, highlights the critical importance of zero emissions vehicle (ZEV) adoption in meeting the Region's GHG emissions reduction targets. Electrification of personal, municipal and commercial vehicle fleets is estimated to represent close to 20% of the total GHG emissions reductions needed to align with Durham's "Low Carbon Pathway". By 2030 all new vehicles purchased in the Region will need to be zero emissions.

To address the need to improve ZEV adoption, the DCEP outlines an Electric Vehicle Joint Venture (EVJV) program between the Region of Durham, local municipalities and electric utilities to coordinate infrastructure investments, educational activities and municipal policies. Oshawa Power has been collaborating with partners across the Region on EV initiatives, including the successful joint application to ZEVIP for 61 public level 2 EV charging stations which will be deployed across over the coming 12-16 months.

The purpose of this initiative is to support implementation of DCEP, and in particular the EVJV program by increasing awareness of electric vehicles (EVs) and the availability of public charging infrastructure, in order to encourage greater adoption of ZEVs in Durham Region.

The concept for this proposal is a "ZEV Virtual Showroom", which will be expressed through a wrap-around, timed campaign that will make ZEV information and vehicle availability ubiquitous for the residents of Durham throughout February and March of 2021. The initiative will include:

1. Four events across Durham Region featuring:
    - Plug'n Drive Canada's Mobile EV Education Trailer (MEET) Activation;
    - Test drives;
    - ZEV testimonials from EV Society volunteers;
    - Booths from the municipalities and electric utilities of Durham; and,
    - Other value-add lifestyle content that will augment attendance.

2. Partnerships with Dealerships across Durham's entire geographic reach. These Dealerships will commit to featuring ZEV models on their lots and promoting ZEV test-drives throughout a month-long campaign in exchange for being promoted as "Official Dealers of the Durham ZEV Virtual Showroom". Dealers will be encouraged to offer promotional pricing on ZEVs, or other incentives to drive adoption.

3. A comprehensive outreach campaign that will include paid and earned media, as well as communications through the partners' extensive networks and channels; targeted at the residents of Durham.

4. The development of a Region-wide EV brand, marketing strategy as well as advertising collateral that can be used during the initiative and for future campaigns going forward, after the Virtual Showroom concludes.

5. The deployment of an engaging digital platform that leverages branding and marketing collateral and hosts virtual aspects of the showroom during the initiative and on a go-forward basis.

6. The gathering of data to help with future planning, as well as measuring the success of the event.

Needs Assessment

To develop the concept for this proposal, the project partners undertook a detailed, three part needs assessment. The needs assessment included:

1. A review of two target audiences to determine the impact that can be made through their engagement;
2. Primary research to understand exactly how to affect change in their levels of awareness and willingness to adopt ZEV technology; and,

3. A review of commitments and organizational priorities that align with the stated federal policy goals under the Pan-Canadian Framework on Clean Growth and Climate Change (PCF).

Details on the findings from the needs assessment, and therefore the rationale for this application are provided in the following sections.

1. Target Audiences

This project will aim to engage two target audiences, as identified in the following chart.

Figure 1 – High-level Summary of Target Audiences

Audience Type	Audience	Population	Description
Primary	Light Duty (Residential) Vehicle Drivers in the Region of Duram	227,900 Households	Adults aged 16 or older who use or own a light-duty vehicle for personal, non-commercial use.
Secondary/ Enabling Audience	New Light Duty Vehicle Dealerships – Must be under an Original Equipment Manufacturer (OEM) brand that features at least one ZEV make/model in the Region of Durham	43 Dealerships	Channel partner whose engagement will enable the proposed initiative while also increasing local capacity to drive ZEV adoption beyond the scope of this project.

To align with the DCEP and Government of Canada's light-duty ZEV adoption targets, this proposal will target the residential sector as its primary audience. The majority of project awareness activities will be directed at this segment, in order to increase their likelihood of adopting a ZEV.

In order to capitalize on the awareness built through targeting Durham's residential sector, this initiative will also engage a secondary audience, which will include new vehicle dealerships. Through ensuring this group is educated and engaged, and through ensuring that they have ZEV products available on their lots, the Durham ZEV Virtual Showroom initiative is expected to amplify adoption rates.

Details on the target audiences are outlined in the following sections.

Target Audience 1 – Light Duty Vehicle Drivers in the Regional Municipality of Durham

Oshawa Power's research indicates that Durham's residential sector displays three characteristics relevant to meeting the PCF's goals, including:

1. A substantial size, meaning that the proposed initiative will reach a large proportion of Canadians.

According to Statistics Canada, Ontario accounts for approximately 38% of all road motor vehicles in Canada, with approximately 8.7M registered within this province as of 2017. Durham Region, with its 227,905 households, may reasonably account for 4% of Ontario vehicles, based on the average number of vehicles per Canadian household of 1.5.

2. Driving habits that are comparatively GHG intensive and are therefore important to target.

According to the 2016 census, Durham Region commuters have the highest percentage of commutes over an hour each way (22.4%) within the Greater Toronto and Hamilton area (GTHA), and thus commensurately higher levels of vehicle kilometres travelled (VKT) and GHG emissions relating to personal vehicle usage.

3. Slow ZEV adoption rates that highlight the need for the proposed project.

According to Ministry of Transportation Ontario (MTO) statistics secured by the Clean Air Partnership, ZEV adoption in the Regional Municipality of Durham has seen slow growth, with an approximate year-over-year improvement of 31% among electric vehicles and 7% among plug-in hybrid electric vehicles between 2018 and 2019. Comparatively, Electric Mobility Canada reports increases in EV adoption rates of 174% in British Columbia and 93% in Quebec during the same time-frame. This suggests that Durham, despite being a significant portion of Canada's most populous province, is falling behind. Data also shows that EV adoption rates are inconsistent across the communities of Durham; making uniform outreach across all of the communities a low-hanging-fruit in terms of closing awareness and adoption gaps.

In conclusion, when examining Durham's residential driver population, the high-concentration of drivers in this area, their relatively long commutes and their slow uptake of ZEV technologies suggests that initiatives focused on Durham will strongly contribute to meeting the goals of the PCF.

Target Audience 2 – Light-Duty Vehicle Dealerships in the Region of Durham

According to a recent study done by Transport Canada, Zero-Emission Vehicle Availability in Canada is a major structural challenge that needs to be addressed. Their "Zero-Emission Vehicle Availability" report, which was released by Dunsky Engineering in September 2020 highlights that ZEV inventory levels have dropped by over 20% between December 2018 and February 2020. For this reason, this application will seek to engage local dealerships as a key enabling and capacity-building initiative.

In preparation for this proposal, Oshawa Power identified a total of 43 qualifying dealerships across the Regional Municipality of Durham. Together, these dealerships account for every make and model of ZEV currently available, from luxury vehicles to more modestly priced models, with the exception of Tesla, which operates with relatively few retail locations. Please see Appendix B for a summary of dealerships and their locations throughout the region. It is important to note that there is geographic diversity among the dealerships, meaning that the more rural communities of Durham will benefit equitably alongside the more urban areas, which are often prioritized based on their higher population densities and household incomes.

As a next step in vetting the proposed project, Oshawa Power reached-out to a representative sample of the dealerships that were identified, in order to gage their interest and availability. The majority of respondents immediately agreed to participate. Additionally, most noted that they would need to order makes and models to their lots in order to participate. These responses indicate strong support for this initiative, and highlight the importance of increasing access to ZEV models in Durham as a means of improving adoption.

Please note: Although used ZEV sales are becoming an important aspect of ZEV adoption, only new vehicle dealerships will be included in the scope of this proposal. This decision was made in order to maximize the availability of the various makes-and-models of ZEV.

2. Supporting Research

Beyond researching our target audiences, Oshawa Power conducted primary research in the form of detailed surveys throughout 2018 and 2019, to feed into the rationale for future awareness and adoption strategies. Three surveys were deployed, respectively targeting the following audiences:

- EV owners in Oshawa – 113 responses;
- EV owners living outside of Oshawa – 72 responses; and,
- Non-EV owners located anywhere in Canada – 473 responses.

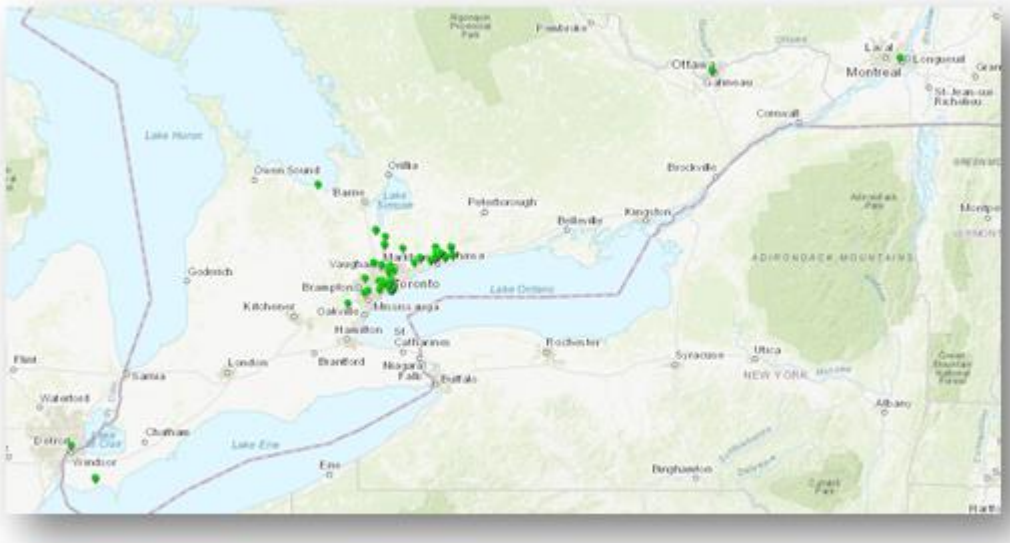
Findings from the first survey are statistically valid, with nearly 20% of the local eligible population within Oshawa participating. Findings from the other two surveys are representative, and work to validate findings from other studies such as market research done by Plugn' Drive, one of Canada's leading ZEV adoption organizations.

Key findings from Oshawa Power's research highlighted the need for ongoing infrastructure development, as well as the need for outreach to address myths associated with ZEV technologies. Some stats include:

- Nearly 19% of current EV owners rely on level 1 home charging as a result of the expense and complexity of installing a level 2 charger (and therefore look to public charging solutions);
- Barriers to uptake for non-owners were (in order of importance):
    - High cost of ZEVs;

- Availability of public chargers;
- Range anxiety;
- Fear of battery failure;
- Charging time; and,
- Limited cargo space.

Figure 2 – EV Owner Survey Respondent Locations



The project team has taken important steps to address the structural concerns highlighted in the survey responses. Thanks in part to The Government of Canada's recent ZEVIP grant opportunities, Oshawa Power, Elexicon Energy, The Regional Municipality of Durham and the associated area municipalities have closed gaps in public charging infrastructure availability. As noted in the introduction, a total of 61 level 2 chargers and 24 level 3 chargers will be installed across Durham's communities by the end of 2021 as a result of ZEVIP; making range issues a thing of the past. A logical and important next step to moving more of the population toward ZEV adoption will be to communicate about the new, widely available chargers, while also targeting other perceived, non-structural barriers that concern prospective buyers, as determined by our research and as noted above.

3. Commitments and Organizational Priorities

In addition to the rationale determined through studying our target audiences and researching their needs, The Regional Municipality of Durham, Elexicon Energy and Oshawa Power are strongly aligned in terms of their commitments and organizational priorities when it comes to ZEV adoption.

The guiding policy framework supporting this proposal is the DCEP, which was endorsed by Durham Regional Council in April of 2019. The plan, which was supported by both Oshawa Power and Elexicon

Energy, outlines six programs for reducing greenhouse gases via targeted and prioritized actions. The fourth program, entitled “Electric Vehicle Joint Venture” was designed to reduce GHG emissions within the transport sector by 14,500 $KTCO^2_e$ compared to business as usual, which is one of the most significant GHG reduction actions under Durham’s “Low Carbon Pathway”. Most of the transport sector’s GHG emissions result from light duty/passenger vehicle uses. At a high-level, this program sets the expectation that the area municipalities, The Regional Municipality of Durham and all energy-sector stakeholders will maximize outcomes by coordinating resources and efforts to support ZEV awareness and adoption.

Complementing the EVJV is Durham’s intention to implement a residential sector home energy retrofit program in Q2 2021 in partnership with Oshawa Power and Elexicon Energy and other stakeholders across the Region. Durham Region has committed $350,000 in funds towards development of the Durham Home Energy Savings Program, and submitted a funding application to the Federation of Canadian Municipalities’ Community Efficiency Financing Program in June 2020 in order to capitalize a home retrofit program focused on the Region’s existing single-family housing stock. In addition to traditional home renovation opportunities, the Program is planned to include a $600 rebate for homeowners who wish to install an EV charging station at their home. This education and awareness program will complement the anticipated launch of the Durham Home Energy Savings Program, and the EV charger incentive, and thereby help amplify engagement in both electric mobility and home energy efficiency simultaneously.

As noted in the previous section, The Regional Municipality of Durham and Oshawa Power have both led successful ZEVIP proposals to kick-off the DCEP coordinated approach. Layering-in this initiative will ensure that the target audiences know about the important investments made by The Government of Canada and their local municipal partners to create a supporting network of ZEV infrastructure. Furthermore, the proposed project will represent the kick-off of ongoing efforts undertaken by all DCEP supporters to drive ZEV adoption until the 2030, 100% market transformation target is met. It should be highlighted that DCEP’s ZEV adoption target is more aggressive than the Government of Canada’s meaning that our sustained efforts could contribute to accelerated target achievement.

Beyond Region-wide efforts, Elexicon Energy also has a history of supporting the early adoption of ZEVs through projects such as their 2016 EV Charging Microgrid, which featured Tesla Energy Powerwall battery storage along with residential solar generation and electric vehicle charging, deployed as two residential microgrids connected and managed by Opus One’s GridOS™ Microgrid Energy Management System and Elexicon’s 24/7 grid operations system. The components include 10 kW of solar generation, 14 kWh lithium-ion battery storage with hybrid inverter; Level 2 and Level 3 electric vehicle charging – integrated with Elexicon’s SCADA system – along with a customer information display at the utility’s corporate headquarters in Ajax; and 7 kWh Tesla Energy Daily Powerwall with solar system and microgrid controls in Pickering. The residential microgrid was aggregated with Elexicon’s corporate headquarters and operated as a “Virtual Power Plant”. Beyond leading projects like this, Elexicon has been a strong supporter of the DCEP and recent ZEVIP applications submitted by the Region of Durham. Please note - Elexicon Energy’s charging system is still fully operational and available to the public for use.

In addition to the DCEP and Elexicon Energy's efforts, Oshawa Power developed a ZEV initiative called E-Mission. Launched in August 2018, E-Mission was created under the guiding principles of offering a symbiotic, non-duplicative and meaningful initiative that would give back to the community, while also helping Oshawa Power foster an important new electrical load. The work outlined in this proposal will mark an evolution for E-Mission, which will be grown and improved to support broader Regional objectives under the DCEP. The following provides a summary of the work done in order to create a basis for the Durham ZEV Virtual Showroom.

E-Mission features "three e's"; each designed to target barriers to EV uptake. These program pillars include:

1. Educate – We strive to offer Oshawa Power customers a robust collection of resources aimed at providing the knowledge necessary to develop a complete understanding of the EV landscape.
2. Empower – We work to provide a streamlined experience to assist in making EV transitions as simple and affordable as possible.
3. Evolve - We gather information about EV habits in and around our service territory to ensure our infrastructure meets the needs of EV users and the local transit agency.

Some of the shared-value elements of E-Mission include: detailed surveys, an EV network, the installation of level 2 and level 3 chargers and EV events.

The work done by the Regional Municipality of Durham, Elexicon Energy and Oshawa Power represents foundational activities that aren't ongoing, but can be built-upon to support this application. To be clear, the proposed activities will differ from the project work previously done by the partners in the following ways:

- All work will be undertaken on a collaborative basis to create a seamless experience for the light-duty vehicle-driving population in Durham, through the DCEP EVJV program;
- The geographic scope of the work will be explicitly geared to be Region-wide;
- The awareness activities will leverage a greater number of communication channels, including new partnerships with dealerships;
- The work will include developing new platforms for communicating, such as a Regionally-hosted E-Mission site, a new marketing strategy and new communications collateral.

Funding for these more effective, collaborative activities would not be available without support from the Government of Canada, through this grant opportunity.

Strategies

Based on the results from the E-Mission surveys, the project team has designed the Durham ZEV Virtual Showroom to incorporate the following strategies.

Strategy 1 - Removing Barriers to ZEV Accessibility

ZEV availability on dealer lots throughout Durham was found to be very low. This indicates an availability/accessibility barrier for individuals who may be curious about ZEVs. This also creates a false sense that ZEV technology is uncommon and perhaps therefore less reliable. Increasing the availability of ZEVs on dealer lots will normalize the technology and increase the notion that ZEVs represent a plausible and reasonable option for those seeking new vehicles.

ZEVs are also perceived to be inaccessible from a price-point perspective. This initiative will highlight incentives from the Government of Canada, as well as Plugn' Drive (for used vehicles that may be on the lot). As indicated earlier, the Durham ZEV Virtual Showroom will also highlight a new level 2 charging incentive will be offered through the DCEP Residential Deep Home Energy Retrofit program. Finally, communications will also highlight the reduced fuel and maintenance costs associated with ZEVs, in order to dispel this price accessibility myth.

Strategy 2 - Creating a Sense of Urgency

Nation-wide, successful market transformation activities typically rely on a combination of ongoing awareness campaigns, as well as timed sales events that drive consumer urgency. An example is the widely successful Save On Energy spring and fall retail events that helped Ontario achieve 1.66 TWh in energy conservation outcomes between 2015-2019 (according to the April 2019 Participation and Cost Report from the Independent Electricity System Operator). The project partners will aim to create a sense of urgency to drive ZEV adoption among the target audiences through:

- Strongly encouraging participating retailers to provide promotional pricing on the ZEVs on their lots;
- Communicating about the relatively short window Durham homeowners will have to benefit from ramped-up, on site outreach events, such as Plugn' Drive's MEET Activation.

The narrative will focus on the uniqueness of the opportunity and the importance of acting while the special promotions are available.

Strategy 3 - Addressing Misconceptions and Knowledge Gaps with Locally-Focused Material

The most significant portion of project work will include the development of a marketing strategy for the E-Mission initiative during the Durham ZEV Virtual Showroom, and beyond. A component of the strategy will include the development of multi-channel communications collateral that focuses on Durham drivers. The following breakdown highlights how each trusted municipal/utility channel will be used to educate the target audience.

Digital Outreach

- Online Platform - A multi-media and interactive platform will be built and hosted by the Regional Municipality of Durham. Messaging will centre on the DCEP, the role light-duty vehicle drivers

play in reducing GHGs and educational features that address the misconceptions identified through the E-Mission surveys. During the Durham ZEV Virtual Showroom, the site will include a map and calendar of all Durham ZEV Virtual Showroom events/locations.

- Emails - Elexicon Energy and Oshawa Power have an estimated 25,000 emails that are tied to residential billing accounts. Where possible, within the limits of the Canadian Anti-Spam Legislation, the utility partners will email customers in advance of and during the campaign. The purpose of the messaging will be to drive the target audience to the online platform and/or directly to the promotional events.
- Social Media and Call Hold Messaging - Residential markets are effectively targeted through Facebook and Twitter. The combined social media following for the project partners is 14,117 and 33,068 respectively across these two platforms. A boosted/paid drip-campaign will build excitement leading into the Durham ZEV Virtual Showroom, and informational posts will work to dispel misconceptions about the technologies. A custom hashtag and filters will be developed to create peer-to-peer influencing opportunities that will amplify the efforts of the project team. These elements will likely focus on the importance of GHG-reducing activities. Beyond social media, both Elexicon Energy and Oshawa Power can leverage "call hold" messaging to educate customers who call to speak with customer service representatives.
- Digital Ad Campaign - A geofenced digital ad campaign will be launched within a selection of Durham's local media outlets.
- Website Updates - the project collaborators each have websites that can feature the proposed project. The average visitors to their combined sites per month is approximately half a million hits.

Traditional Print Outreach

Four traditional print pieces have been planned. The first two will cover detailed information about ZEVs, while the others will focus on advertising the campaign. These pieces include:

- An Educational Leave Behind - educational materials to be supplied in limited numbers to audience members showing strong interest in pursuing ZEV adoption. Can be shared with other decision-makers in the household.
- Bill inserts and On-bill Messaging to all 197,200 of Elexicon Energy and Oshawa Power's residential accounts.
- Advertising in Durham's Activity Guide, Waste Calendar, roadside signage/marquees and local newspapers.
- Signage for Events - Lawn signs, in store signs and other event signage.

Earned Media

A joint press-release will be issued by Durham, Elexicon Energy and Oshawa Power. Follow-up calls and emails will be made to news outlets to drive earned-media uptake. The press-release will also be sent to like-minded local organizations, to share within their networks. Messaging will centre on driving customers to the Durham ZEV Virtual Showroom and its components.

Promotional Events

Four promotional events will be held as a key component of this initiative. These events will be in addition to the ongoing promotions occurring at the ZEV dealerships. Events will be anchored by Plugn' Drive's MEET Activation, which features informational displays, interactive touch-screens and a selection of EV makes and models for test driving in a sales-free, no-pressure environment. MEET is staffed by two Plug'n Drive specialists who answer commonly-asked questions about EVs and provide test drives. The trailer is collapsible for overnight storage and will be moved to an estimated 4 locations throughout the Durham ZEV Virtual Showroom event. Locations could include municipal headquarter parking lots and/or the parking lots at the 2021 Ajax/Pickering and Oshawa Home Shows.

The events will also feature:

- Participation from Canada's Electric Vehicle Society, which consists of EV enthusiasts who bring their vehicles to events to provide testimonials and demonstrations. Oshawa Power has relied on volunteers from the EV Society to enrich past E-Mission events.
- Booths from the project partners, area municipalities and participating dealers, who may also bring vehicles to improve test-drive availability.
- Booths/contributions from other organizations focused on helping the residential sector reduce GHG emissions.

Please note - as a result of COVID-19, all events will be subject to at least the following safety protocols:

- Events will take place out-of-doors and may rely on advance scheduling or other crowd-reducing/spacing measures;
- All staff and attendees will be required to use personal protective equipment;
- Strict cleaning protocols will be in place for any test-drives or demonstration-based activities;
- All-other provincially or federally-mandated safety requirements will be adhered-to based on the circumstances at the time.

Dealership Promotions

A unique feature of our proposal will be sanctioned promotions taking place at participating ZEV dealerships across Durham. Dealers will be engaged with key selling information through capacity building calls. Subsequently, they will be furnished with signage and other supporting collateral to create a seamless brand experience for participants. Beyond this, dealers will be encouraged to feature ZEVs prominently on their lots, offer reduced pricing on their makes and models, and make-available extensive sales literature about their stock.

Together, these three points of strategy should effectively create a wrap-around experience for Durham light-duty vehicle drivers throughout February and March of 2021.

Objectives and Goals

The elements described in the previous section on strategy have been translated into the following goals and measurable objectives.

Goal #1 Increase the Accessibility of a Wide Range of EV Models for Durham Residents

Objectives:

1. Secure partnerships with at least 50% of Durham ZEV dealerships, across at least 4 Durham Communities.
2. Ensure dealers feature at least one ZEV make and model on their lot during the Month of March.
3. Communicate about ZEV availability for test drives and purchase through digital communication channels.

Goal #2 Increase the Awareness of the Primary Target Audience about ZEV Technologies

Objectives:

1. Engage a marketing agency to support the development of a ZEV marketing strategy.
2. Engage local area partners such as First Nations communities and local area municipalities to provide inputs on content for the Durham ZEV Virtual Showroom.
3. Develop collateral for deployment through the outreach channels described in section 3.2.1 under strategy #3.
4. Initiate pre-campaign communications in February 2021.
5. Initiate during-campaign communications including going live with web platform in March 2021.
6. Coordinate test drive/showcase events to take place in four different locations across Durham throughout March 2021.
7. Gather performance indicator data through surveys and by recording participation statistics.

Goal #3 Increase the Capacity of the Secondary Audience to Promote ZEV Adoption

Objectives

1. Host pre-event capacity-building calls with partner dealers to educate them about the DCEP EVJV, DCEP home charger incentives, other facets of the Durham ZEV Virtual Showroom initiative and other important information such as locations of ZEVIP chargers and incentives from the Government of Canada/Plugn' Drive.
2. Provide dealers with signage and educational materials to support their month-long ZEV promotions.
3. Engage dealerships on their feedback from the project, and ideas for collaborating going forward.

In conclusion, targeting Durham's light-duty vehicle drivers and dealerships with the aforementioned strategies, goals and objectives is anticipated to create a measurable and significant boost in awareness and capacity to support ZEV adoption across the GTHA East.

3.2.2. **Benefits of the Project** (Maximum 20 points)

Describe the key target audience(s), their role/engagement in the project and how it is anticipated that they may benefit from the results. Identify beneficiaries other than the target audience(s), if applicable. The description should include the type of target audience(s) (i.e. local, provincial/territorial, national/ pan-Canadian), the benefits and expected outcomes of your project.

The proponent will be expected to identify and report on project outcomes. Project outcomes should help increase the awareness of ZEVs among Canadians by addressing knowledge gaps or increasing capacity. Identify the expected outcomes, performance indicators and the type of evidence to be gathered to demonstrate that outcomes have been achieved (e.g. survey, number of visits, studies, etc).

It is recommended that proponents support or base their project idea with relevant research or analysis. Include an explanation describing the knowledge and awareness gap(s) and how your project addresses it/them.

In the case that an applicant is seeking funding to improve or expand an existing awareness initiative, the applicant is required to demonstrate innovation in the planning and delivery of the proposed new project

Benefits by Key Target Audiences

A description of the key target audiences has been provided in section 3.2.1 under the heading “Needs Assessment”.

Relevant research and analysis supporting this project idea has been provided in section 3.2.1 under the heading “Supporting Research”.

Target Audience 1 - Light-Duty (Residential) Vehicle Drivers in the Region of Durham

This audience will be engaged to increase the awareness of ZEVs among Canadians living in the Regional Municipality of Durham. The project is focused on introducing members of the public, as well as employees of public institutions and commercial enterprises to ZEVs through a comprehensive awareness strategy outlined in section 3.2.1 under the headline “Strategies”.

The expected benefit/outcome for this audience is the development of awareness of the following:

- Local ZEV infrastructure that would support their adoption of a ZEV;
- Rebates/incentives that encourage their adoption of a ZEV;
- Information to dispel misconceptions about ZEVs, as identified through the E-Mission surveys and outlined in section 3.2.1 under “Supporting Research”.

To determine if awareness has been built, this project will measure the following performance indicators:

1. # unique visitors to the online digital platform;
2. # of test drives completed;
3. # of EVs purchased in Q12021 compared to year prior;
4. # of survey respondents indicating increased awareness of the benefits of EVs; and,
5. # of survey respondents indicating an increased desire to purchase an EV as their next vehicle.

Target Audience 2 - New Light-duty Vehicle Dealership in the Region of Durham

This audience will be engaged to increase Durham’s local capacity for driving ZEV adoption. The project will focus on fostering relationships, educating and enabling the 43 dealerships across Durham to improve their ZEV offering. This group will benefit from free promotional marketing, increases to brand reputation, and increased ability to sell technologies that will become more pervasive going forward. It is hoped that this group will also economically benefit from selling more ZEVs. To determine if capacity was built, this project will measure the following performance indicators:

- # of dealers signed-on to participate;

- # dealers attending a capacity-building training call;
- # of ZEV makes and models brought-in to Durham dealership lots; and,
- QA/QC results (see risk register for more details).

Other Beneficiaries

ZEV adoption is a foundational component of Canada's green economy. As such, this project is anticipated to generate a number of other beneficiaries in the Region of Durham.

The Regional Municipality of Durham's economic development strategy, EN3, focuses on intersectionalities between Energy, Environment and Engineering. This project will align with the work of a broader Transportation Innovation Consortium that is currently running an estimated $30M of programming focused on zero-emission and autonomous technology development. The proposed work will continue to help Durham grow its international reputation as a clean energy innovation cluster and could help secure future investments/job growth to the area.

Two of the project partners are local distribution companies (LDCs) for electricity. In the short-term, Elexicon Energy and Oshawa Power will benefit from this work through the fuel switching/electrification that will occur. A secondary beneficial outcome of this load growth will be two forms of energy cost reductions. Firstly, drivers will benefit by switching from higher-cost fossil fuels to lower-cost electricity. Secondly, the electricity sector will see major load curve flattening from the substantial adoption of ZEVs (assuming they charge off-peak). Flattening of load curves is associated with reduced system-wide costs that result from base-load dumping during off-peak times, and inefficient peak load capacity builds.

Finally, the area municipalities that make-up the Region of Durham will also be beneficiaries of this work. Most of the communities are working toward environmental targets through frameworks such as the Federation of Canadian Municipalities' Partners for Climate Protection program. This initiative would help each municipality further align under the DCEP while also achieving their Community Greenhouse Gas Reduction plans. Effectively, this project will help streamline municipal activities for greater impact with lower resourcing cost.

Innovation

As noted in the previous section, the Durham ZEV Virtual Showroom project will build on the E-Mission branded initiative, established by Oshawa Power. While E-Mission has many beneficial attributes, its reach is limited by the highly localized nature of utility initiatives. The proposed work represents an innovation based on the increased number of outreach channels, the improved content and educational components, the new capacity-building partnership with local dealerships and the development of a marketing strategy for the DCEP EVJV, which will be an ongoing effort that focuses on an aggressive target of 100% ZEV adoption by 2030 (ten years sooner than the federal target!).

3.2.3. Project Activities and Timeline (Maximum 20 points)

List the key activities in a logical sequence, including timelines and/or duration of each, and descriptions where needed. Activities are the steps that will be taken to carry out the project. Activities should be specific, measurable, realistic and relevant to the project objectives.

The project timeline must be clear and feasible. As required under 3.1.2, the project must provide a project timeline with phases (milestones) and must be completed no later than March 31, 2021.

This criteria will be evaluated based on how well the activities are described, if all key activities have been identified and if the timeline is realistic.

Activities may include elements such as procurement, on-going project development maintenance, visibility and marketing activities; etc.

*Please complete the **Project Activities and Timeline** list located in Appendix A of this form.*

3.2.4. Capacity to Deliver Projects (Maximum 15 points)

Capacity Overview

Each of the project collaborators have proven capabilities in deploying leading initiatives in a timely and effective manner. As Oshawa Power will be project managing the proposed work, this section focuses on their team's ability to deliver projects on scope, on-time and on-budget.

Please note that the Project Manager for the proposed Durham ZEV Virtual Showroom was involved in each of the following three examples. Please see section Appendix C to review Janet Taylor's project management experience and expertise.

Please also note that each project has a distinct mandate to drive awareness of either GHG emissions reductions and/or low carbon transportation fuels.

Finally, please note that in each example, the team relied on techniques from the Project Management Institute to control resources, schedule time and produce high-quality work outputs. Some tools employed included a kick-off meetings and project charters to initiate the projects, Gantt charts to track detailed project management objectives and milestones, budgets to prevent financial overruns, team meetings to coordinate efforts and risk and contingency plans to avoid issues or delays.

Project 1 - Solar Energy Management Systems (SEMS)

This project demonstrates Oshawa Power's capacity to deliver a residential-targeted program that focused on energy-innovation at the household level, on behalf of governmental organizations. The target outcome from this project was an advanced energy system proof of concept that included GHG reductions as a part of the value-chain.

Client Organization - New Energy and Technology Development Organization (NEDO) Japan
Dates and Duration - September 2015 to February 2019
Budget - $1,200,000 CDN

Brief Description - In 2015, Oshawa Power partnered with NEDO Japan (similar to NRCan), Panasonic Eco Solutions and Tabuchi Electric to pilot residential renewable energy management systems in the Canadian residential market. The goals of this international collaboration were to:

- Demonstrate the effectiveness of solar-plus-battery energy management systems;
- Demonstrate the benefits of the technology, including their ability to contribute to GHG reductions as well as enhanced household climate resilience; and,
- Define a business case for mass marketing these technologies in Canada.

The scope of the project was to install 7kW Solar Energy Management Systems (SEMS) that incorporated tri-functioning inverters and 10kW Li batteries at a sample of thirty homes across Oshawa and then study/evaluate system performance for up-to five years. The project was concluded in 2019 with favourable results showing that the systems effectively provided back-up power during outages, reduced electricity costs by more than 50%, could be deployed in a virtual power plant configuration for utility grid benefits and reduced GHGs by an estimated 3.38tCO2e, based on the Ontario GHG coefficient for electricity. The project won runner-up for Quest's 2017 Smart Energy Communities Award, won the EDA's 2017 Environmental Excellence Award and received an honourable mention in 2019 for the International Smart Grid Association's Award of Excellence.

Methodologies and Approaches - Oshawa Power was responsible for the key, time-sensitive portions of this project, which needed to have 30 systems commissioned simultaneously as a function of the analytical testing. Oshawa Power was responsible for homeowner engagement and contracting, stakeholder and project team management, technical assessments from a utility perspective, the development of a virtual power plant control system and the final reporting which included an international forum between Japanese and Canadian organizations. Panasonic Eco Solutions was responsible for the installation and maintenance of the systems (along with their sub-contractor Sol Smart) and Tabuchi Electric was responsible for the technical trials and system effectiveness evaluations. NEDO Japan was the project funder.

To achieve its objectives, Oshawa Power:

- Deployed an educational mass marketing campaign within local news outlets to create public awareness of the opportunity;
- Set-up multiple inclusive channels through which community members could apply to participate;
- Held an open-house at a community centre to further educate prospective participants;
- Developed user-friendly legal forms for participating home-owners;
- Engaged industry liaisons to assist home-owners with their project onboarding, such as insurance brokers from across Durham who specialized in renewable energy installations;
- Coordinated municipal approvals and oversight committee meetings;
- Engaged technical, regulatory and billing teams on virtual power plant control system development, bill savings analysis and GHG reductions estimates;
- Engaged media, government consulates, industry stakeholders, homeowners and project partners for a final results forum.

Oshawa Power led this project with the following key team members.

Ivano Labricciosa, President and CEO of Oshawa Power
Ivano's role was executive oversight. With over 3 decades of utility experience, Ivano drew on his background at Toronto Hydro to lead this project. At Toronto Hydro, Ivano was responsible for leading energy storage projects such as their transformer-level battery work with E-Camion, their Smart Car and EV pilots, and their innovative market transformation programs, such as Take a Load Off. Ivano is a professional electrical engineer with a master's in business administration and a masters in electrical engineering.

Jayesh Shah, Director of Asset Management for Oshawa Power
Jayesh's role was to oversee the technical analysis and grid interoperability aspects of the systems. With nearly two decades in the utility environment, Jayesh established himself as a leading expert in advanced designs and grid optimization projects. Jayesh went above-and-beyond the typical call of duty for Asset Managers, in that he sought to implement leading projects that would push the boundaries of grid vs distributed energy assets. Jayesh was responsible for approving the interaction of the SEMS within the utility grid, monitoring their performance and supplying critical inputs to the project analytics. Jayesh is a professional electrical engineer and has a master's of business administration.

Janet Taylor, Manager of Conservation and Demand Management (now manager of Sustainability and Business Advocacy)
Janet's role was the day-to-day project management/administration of the project, including all aspects of organizing stakeholders and work flows, engaging participants and coordinating milestone reports. Janet drew on nearly ten years of environmental consulting experience to implement project management practices and effective public engagement with regard to complex energy concepts. Janet also drew on conservation programming to effectively communicate about topics like the benefits of bi-directional energy flows to electricity system GHG reductions.

Key collaborators from other teams included:
Harumi Fuji McLure - Managing Director of Tabuchi Electric America
Walter Buzelli - Managing Director of Panasonic Eco Solutions Canada
Kazumi Ueda - Smart Community Department lead at NEDO Japan
Blair Beesley - Owner/President of SolSmart
Paul Ralph - Commissioner of Planning and Community Services at City of Oshawa

Project 2 - Peak Power Pricing

This project demonstrates Oshawa Power's capacity to launch an advanced, multi-month, multi-channel communications campaign targeted at changing the energy consumption behaviours of the residential market through advanced educational techniques. Target outcomes of this project were statistically significant peak load shifting behaviours that reduced household energy costs and GHG emissions.

Client Organization - Ontario Energy Board
Dates and Duration - February 2017 to October 2019
Budget - $5,515,000 CDN
Brief Description - Oshawa Power partnered with Publicis.Sapient to deploy an advanced communications ecosystem that was paired in an experimental format with three peak demand electricity pricing plans to determine the impacts of industry-leading educational strategies on residential peak load shifting. The time-sensitive campaign ran for 12 months so that peak load shifting impacts could be studied across every season. Key communication components included an artificial-intelligence-enabled app with push notifications and text messaging, a web portal, bill inserts, on-bill messaging, emails, a dedicated customer service representative and targeted social media posts. Educational outcomes were measured through statistical comparisons of participant vs representative population behaviour, surveys and consumption data analytics. The project was successful in generating up to nearly 10% peak load shifts in some experimental conditions, thereby demonstrating that effective communications can enhance the impacts of energy pricing in terms of consumer behaviour.

Methodologies and Approaches - Oshawa Power was accountable for all project deliverables and was specifically responsible for advising on educational content, providing an adapted billing system, securing customer recruitment of at least 500 participants per each of the three experimental groups and for providing ongoing customer support throughout the registration, in-market and pilot close-out phases. To achieve these outcomes, Oshawa Power:

- Held internal and external stakeholder meetings;
- Secured expert support in the form of technical billing resources and marketing collateral development;
- Leveraged various outreach channels including emails, mass print media, direct mailers, radio, press releases and social media to recruit participants;
- Hosted project management meetings to ensure collaborative contributions were coming-in as planned, on-time and on-budget.

Oshawa Power led this project with the following key team members:

Ivano Labricciosa, President and CEO of Oshawa Power (see above for experience and expertise).

Janet Taylor, Manager of Sustainability and Business Advocacy, Oshawa Power (see above and Appendix C for experience and expertise).

Kari Houlieff, Billing Team Lead, Oshawa Power
Kari Houlieff is a veteran Customer Service Representative, with over 20 years of in-field experience. Kari's expertise lies in understanding all bill calculations for every customer type within Ontario's electricity sector offering. Kari drew upon her experience to help customers estimate the impact of their participation in the Peak Power project from a financial and lifestyle point of view.

Key collaborators on this project included:
John Pendleton - Vice President Strategy & Consulting at Publicis Sapient
Shona Adamson - Policy Advisor at Ontario Energy Board
Laurie Palmer - Vice President IT & Solutions at ERTH Corporation
Peter Grecco - Owner, Peter Grecco Design and Illustration

Project 3 - Scaling-up to Zero Emission Transit in the Region of Durham

This project demonstrates Oshawa Power's capacity to develop and deliver on a ZEV adoption project that has GHG reductions and knowledge development/dissemination as target outcomes. This project also demonstrates Oshawa Power's capacity to engage ZEV OEMs and dealers to affect environmental outcomes.

Client Organization - Durham Region Transit (DRT)
Dates and Duration: January 2020 - December 2024
Budget - OPUC budget $42,000 (plus significant in-kind pro-bono contributions. DRT's total project value including equipment is over $10.2M)
Brief Description - Through the DCEP, DRT has been mandated to transition to zero-emission technologies by 2030. Starting in 2020, DRT will initiate an eight-bus, four charger scaling-up initiative to inform their transition to zero-emission propulsion technologies. The desired outcome of this pilot is that DRT has the necessary experience, lessons learned, data and analytics required for planning the effective transition of its fleet to zero-emission technologies, including information that will inform the design of a dedicated zero-emission bus depot. To achieve this outcome, DRT will gather information while piloting eight electric propulsion buses and four charging technologies out of our Farewell depot

facilities in Oshawa, Ontario. Through these trials, DRT will gather information about:
· Life cycle capital and operating costs for electric versus diesel buses (including fuel and maintenance savings);
· Operational performance (e.g. operator feedback, charging times, frequency, reliability and range in different weather, traffic and route conditions);
· Infrastructure requirements and costs;
· Passenger, community and operator satisfaction; and,
· Environmental benefits.

Outcomes from this pilot will be widely shared to transit agencies and municipalities across Canada, to accelerate the adoption of transit ZEVs through knowledge sharing. An expected additional outcome will be the substantial reduction in GHGs emitted by DRT's fleet. To support this work, Oshawa Power is leading engineering tasks, as well as work to assist with charging equipment selection and installation.

Methodologies and Approaches - Oshawa Power is accountable for supporting DRT's connection work, including reviewing existing site loads, reviewing new load requirements, providing options for increasing electrical supply and providing strategic advice regarding the installation, configuration and programming of ZEV charging equipment. To achieve these outcomes, Oshawa Power:
- Engaged a team of internal and external experts;
- Hosts milestone-related project management meetings between all collaborators;
- Executes primary research by engaging charging equipment manufacturers and reviews technical data;
- Compiles and synthesizes complex electrical engineering information into usable reports for the transit industry and other municipal stakeholders.

Oshawa Power is leading this project with the following key team members:

Matt Strecker, VP Operations and Engineering
Matt is an experienced professional engineer, master electrician, engineering manager, and entrepreneur, open to exploring new business opportunities. Matt has extensive EV charging background through his roles at AddEnergy and Metrolinx respectively. Matt is a professional electrical engineer, a Master Electrician and holds a Masters in Energy Sector Leadership, as well as a Master's of Business Administration.

Janet Taylor, Manager of Sustainability and Business Advocacy, Oshawa Power (see above and Appendix C for experience and expertise).

Key collaborators on this project include:
Jamie Austin, Deputy General Manager of Durham Region Transit
Andrew Durward, Owner of Raven Engineering
Ian McVey, Manager of Sustainability at the Regional Municipality of Durham

Identify the Project Manager and other key members of the project team and state their specific expertise and experience related to the work involved. It is important that the roles of project team members (including representatives of key collaborators) be clearly described.

Name	Organization	Role in Project	Expertise and Experience

Ivano Labricciosa, President and CEO, Oshawa Power	Oshawa Power	Oversight	Business professional with 35 years of utility distribution, transmission and generation experience including the development of numerous EV charging projects across the GTA
Janet Taylor Manager – Sustainability and Business Advocacy, Oshawa Power	Oshawa Power	Project Manager, accountable for on-time and on-budget delivery of the project.	Nearly 15 years of not-for-profit environmental program design, implementation and delivery expertise. Currently responsible for ~$30M in conservation, innovation and zero emission vehicle projects, including Save On Energy incentives, Ontario Energy Board pilots, as well as grant projects from NRCan and The Atmospheric Fund. Please see Appendix C for CV.
Josh McCulloch Marketing Analyst	Oshawa Power	Marketing and communications lead	Led the development of the original E-Mission brand, including market research and analysis, creative concept and outreach materials. Currently responsible for market analytics and ZEV target population engagement.
Ian McVey Manager – Sustainability, Regional Municipality of Durham	Regional Municipality of Durham	General project implementation with a focus on overseeing the marketing strategy and web development from a content and hosting perspective.	Leads implementation of the Durham Community Energy Plan, and related programs including the Electric Vehicle Joint Venture between the Region, electric utilities and local municipalities. More than 10 years of experience in research and implementation of climate action initiatives across government, and corporate sectors.
Heather Hogan-Cherniak Communications Advisor	Regional Municipality of Durham	Coordinate development and implementation of	More than 10 years of experience in leading strategic communication

		program's digital marketing strategy	initiatives in the areas of marketing communications, creative direction, copywriting, event planning and digital communications.
Rob Scarffe Vice President, Customer Experience	Elexicon Energy Inc.	Oversight	Over 30 years' experience within the energy sector. Rob has held senior positions in strategic/operational planning, account management/sales management and marketing.
Melanie Walls Key Accounts, Elexicon Energy	Elexicon Energy Inc.	Contract support, project implementation.	More than 10 years experience delivering Conservation Demand Management programs, CDM plan development, budgeting, reporting. Liaison for Elexicon's large commercial/industrial accounts, Municipalities and Region of Durham for 12+ years.

3.2.5. Risk Mitigation (Maximum 15 points)

Describe all potential risks to the Project and/or circumstances that may negatively affect the successful delivery, or cause delays of the Project objectives. List mitigation strategies for addressing the risks identified, should they occur.

This criteria will be evaluated based on how well the applicant described the project risks (are all key risks well defined and explained) and on the relevance and appropriateness of proposed risk mitigation strategies.

Risk Name	Impact	Likelihood [1]	Mitigation Measures
Dealers fail to secure vehicles for their lots.	Accessibility of ZEV models is reduced.	Low	Pre-proposal discussions with dealers indicates a high level of engagement. Dealers will be expected to sign participation agreements. Their being

[1] Likelihood definitions: Low -unlikely to occur; Medium – moderately likely to occur; High – very likely to occur.

			featured on event materials will be contingent on their securing vehicles.
Low quality project delivery from partners.	The ZEV Virtual Showroom will leverage other organizations such as dealerships to help deliver programming across the Region. Because of the large number of participating organizations, and because ZEV adoption may not be their business focus, it is possible that their ability to drive ZEV awareness and adoption will be compromised and result in low quality project delivery. This would in-turn reduce the educational capacity of the initiative.	Medium	The project partners will be implementing QA/QC protocols to ensure target audiences receive high-quality interactions that build awareness and drive ZEV adoption. Protocols will include pre-event training and check-in calls, during event secret shopping and surveys. A special focus on survey results from the first week of the event will inform delivery tweaks to improve project delivery for the remaining three weeks of the Virtual Showroom.
Winter weather negatively impacts participation.	Reduced numbers of ZEV test-drives.	Medium	Many elements of this proposal will take place virtually. The in-person elements will be scheduled throughout the entire month of March, to reduce the chances that weather will significantly impact participation.
Plugn' Drive activation not available.	Reduced educational capacity of the initiative.	Low	The project partners have approached Plugn Drive for their availability and pricing. A tentative booking has been made, and will be finalized with assurance of funding through this application.
Target audiences are not reached through communications channels.	Reduced educational capacity of the initiative.	Low	The project partners have purposely chosen to communicate about ZEVs through a broad array of channels
COVID 19 Prevents In-Person Events	Reduced educational capacity of the initiative.	Medium	As the regional health authority, The Regional Municipality of Durham is uniquely positioned to assess

			and manage health-related risks during this pandemic setting. Beyond the safety measures outlined in section 3.2.1 under “Events”, we recognize that it may be necessary to cancel events due to a second-wave of COVID-19. To mitigate against a loss in educational capacity, this project will shift events to an online interactive forum if need-be. Furthermore, it is assumed that dealerships will continue to be open, barring another shut-down. Resources could be shifted toward their locations as a means of retaining educational value.

3.2.6. Involvement of Partners and Collaborators (Maximum 5 points)

This project involves a collaboration between the Regional Municipality of Durham, which developed and is accountable for the DCEP and its EVJV program, and the two local electric companies that represent the vast majority of household electricity accounts in Durham’s territory. These three organizations are uniquely positioned as shared-value stakeholders that mutually benefit from encouraging ZEV awareness and adoption. Each of the Regional Municipality of Durham, Elexicon Energy and Oshawa Power are confirmed supporters. Each have provided support letters as Appendix D, E and F to this proposal.

Collaborators not formally confirmed at this time include the eight area municipalities within Durham, which will be coordinated by the Regional Municipality of Durham, and the ZEV dealerships. Please note, ZEV dealerships have been contacted and are in support of this proposal, however no formal agreements have been signed at this time.

Partner 1 Name:	Oshawa Power

Oshawa Power and Utilities Corporation (OPUC) is a 130+ year-old wholly-owned subsidiary of the City of Oshawa, and represents a group of strategic energy and communications companies including: Oshawa Power, the regulated electrical utility for Oshawa, EnerFORGE, an unregulated energy project and services organization operating across the GTHA and a regional fibre optic services group.

Oshawa Power’s role will be to lead and manage this project. Oshawa Power will be accountable for delivering on the strategies, goals, objectives, performance indicators and reports, as well as budget management. Oshawa Power will also contribute significantly to content development in collaboration with the Regional Municipality of Durham and Elexicon Energy.

Oshawa Power is uniquely positioned to manage this body of work. The proposed activities will build on the base of engagement and knowledge developed through its E-Mission initiative, which has yielded

proven successes since 2018. Details on E-Mission can be found in section 3.2.1 under “Organizational Commitments and Priorities”.

In terms of capacity to deliver, Oshawa Power has secured the necessary internal resources and established essential external relationships to ensure this project’s success. Furthermore, Oshawa Power has a strong history of delivering on behalf of governmental clients. Please see section 3.2.4 for details on our recent projects, which all involve a strong outreach and educational component with regard to public GHG mitigation.

Partner 2 Name:	Elexicon Energy Inc.

Elexicon Energy was formed in 2019, through the merger of former Verdian Connections and Whitby Hydro. Elexicon Energy provides more than 169,000 residential and business customers in parts of Durham Region and beyond with reliable and affordable energy services. The company is the fourth largest municipally owned electricity distributor in Ontario. Elexicon Energy is owned by five municipalities, four of which are located in Durham: the Town of Whitby, the City of Pickering, the Town of Ajax, the City of Belleville and the Municipality of Clarington. .

Elexicon’s role in this project will be to leverage their direct lines of communications to Durham households to ensure seamless communications across the entire Region. Elexicon will support in terms of delivering the objectives stated in this proposal, crafting high-impact messaging and extending communications out through their extensive networks.

Partner 3 Name:	Regional Municipality of Durham (Durham Region)

Durham Region is an upper-tier municipality located just east of the City of Toronto with a jurisdiction spanning more than 2500 sq Km and with a fast-growing population of 650,000. There are eight local area municipalities in Durham including: Pickering, Ajax, Whitby, Oshawa, Clarington, Uxbridge, Brock and Scugog.

Durham Region’s role in this project will be to coordinate the development and implementation of a region-wide marketing strategy to promote participation in the various EV test drive opportunities that will be available over the course of Q1 2021. The Region will engage a strategic marketing firm to refresh the E-mission brand that was developed by Oshawa Power in 2018, and develop a website and marketing collateral to support outreach. Furthermore, the Region’s communication department will coordinate with the communication teams at the eight local area municipalities to implement Region-wide advertising through: recreational activity guides, waste calendars, local newspapers, community centres, etc. The goal of the advertising campaign will be to drive engagement with the digital web platform and pop-up test drive events being planned across the Region.

<Add rows as required>

3.2.7. Participation from Indigenous Organization (Maximum 5 points)

NRCan encourages projects with participation from Indigenous-led organizations, including incorporated for-profit and not-for-profit Indigenous controlled organizations, Indigenous controlled unincorporated associations, Indian Act bands, tribal councils and Indigenous self-government entities.

Durham Region forms a part of the traditional and treaty territory of the Mississaugas of Scugog Island First Nation, the Mississauga Peoples and the treaty territory of the Chippewas of Georgina Island First

Nation. Additionally, Durham is home to a significant population from the Métis Nation of Ontario.

As this program targets residential households, we will consult with Durham's indigenous organizations to ensure the development of materials relevant for their communities. The project partners will commit to amending our approach wherever possible, based on their recommendations. We will also consider options for bringing local First Nation and Metis organizations on as partners/collaborators, depending on their level of interest.

4 Budget

The following section details the project's budget and funding sources.

4.1 Secured Project Financing

At a minimum, each applicant must show that they have already secured 50% of their share of the project costs (see Mandatory Requirement 3.1.3 of this Form).

You must reflect all funding including all government contributions in the following table. Please ensure that the "Total Contributions" in this table matches the "Total Project Costs" in the table in Section 4.2 (Detailed Cost Breakdown).

Please provide supporting documentation as per Section 3.1.3 of the Applicant's Guide.

Contributions ($)	Cash	In-kind	TOTAL	Firm or Conditional	Funding evidence provided
Private Sector Contributions					
Oshawa Power		$ 25,000	$ 25,000	Firm	
Elexicon Energy Inc.		$ 12,514	$ 12,514	Firm	
			$ -		
Contributions	**$ -**	**$ 37,514**	**$ 37,514**		
Government Contributions					
NRCan	***$ 50,000***	**N/A**	**$ 50,000**	**N/A**	**N/A**
Durham Region	$ 25,000	$ 10,000	$ 35,000	Firm	
			$ -		
			$ -		
Contributions	**$ 75,000**	**$ 10,000**	**$ 85,000**		
Total Contributions	**$ 75,000**	**$ 47,514**	**$ 122,514**		
Committed Funding			**$ 72,514**		

4.2 Detailed Cost Breakdown

Provide an overall budget describing the costs per the federal government's fiscal year (April 1 - March 31).

Approved Budget ($)	**2020-2021**
The Program (NRCan Contribution)	**$ 50,000**
ELIGIBLE EXPENDITURES	
Salaries and benefits	$ 47,514
Professional services	$ 50,000
Reasonable travel costs, including transportation, meals and accommodation, at rates comparable to the Treasury Board travel guidelines	
Capital expenses, including informatics and other equipment or infrastructure	
Rental fees or leasing costs	$ 25,000
License fees and permits	
Costs associated with Environmental Assessment	
GST, PST and HST net of any tax rebate to which the recipient is entitled	
Overhead expenses directly related to the Project will be considered to a maximum of 15% of Eligible Expenditures	
Total by Fiscal Year:	$ 122,514
Total Eligible Expenditures	
INELIGIBLE COSTS	
INELIGIBLE EXPENDITURES	
Ineligible Expenditure Description 1 **(specify)**	
Ineligible Expenditure Description 2 **(specify & insert or delete rows as applicalbe)**	
Ineligible Expenditure Description 3 **(specify & insert or delete rows as applicalbe)**	

5 Supporting Documentation Checklist

Applicants must ensure that the following documents are included with their proposal:

- ☒ Application Form, including Appendix A
- ☒ Proof of incorporation or registration (see Section 1 of this Form)
- ☒ Proof of 50% firm funding of the proponent's share of total project cost (see Section 3.1.3 of this Form)

Please note that incomplete applications will not be considered for funding.

Applicant's Attestations

By submitting this proposal, the project applicant attests that:

- It is acting on behalf of all partners and collaborators and has received written permission from them to do so.
- All funding (cash and in-kind) identified by the applicant and its partners and collaborators in the proposal is expected to be available for commitment at the time of the signing of the contribution agreement by duly authorized representatives of the project applicant and its partners and collaborators.
- Any proprietary or confidential information provided as part of the submission, by any party, is provided with the approval of that party. Federal reviewers are bound by the requirements of the Access to Information Act and the Privacy Act regarding the treatment of confidential information.
- It understands and acknowledges that should the project be accepted for co-funding from the Initiative no liability and no commitment or obligation exists on the part of NRCan to make a financial contribution to the project until a written contribution agreement is signed by both parties, and, furthermore, that any costs or expenses incurred or paid by the applicant prior to the execution of a written contribution agreement by both parties are the sole responsibility of the applicant, and no liability exists on the part of NRCan.
- It understands and acknowledges that NRCan officials will not entertain any request by project proponents to review or revisit NRCan's project approval decisions.
- It understands and acknowledges that NRCan reserves the right to alter or cancel the currently envisaged process at its sole discretion.
- It understands and acknowledges that no Member of the House of Commons shall be admitted to any share or part of the contribution agreements, or any resulting benefit.

The individual signing below attests that he/she has the authority to sign a legally binding contribution agreement between NRCan and the project proponent.

Please sign below to confirm these attestations:

Ivano Labricciosa	President and CEO
Name of Duly Authorized Officer:	**Title:**
	September 14, 2020
Signature:	**Date:**

Appendix A: Project Activities and Timeline

Please provide and describe the list of key activities in a logical sequence, including timelines and/or duration of each, and descriptions where needed. Activities are the steps that will be taken to carry out the project. Activities should be specific, measurable, realistic and relevant to the project objective.

The project timeline must be clear and feasible. As required under 3.1.2 of the Applicant's Guide, the project must provide a project timeline with phases (milestones) and must be completed no later than March 31, 2021.

Please complete the **Project Activities and Timeline** list below. Once completed, you can click here to go back to Section 3.2.3.

Activities	Principal Milestones	Initiation Date	Completion Date	Notes
Sign Agreement with NRCan	Planning	October 16, 2020	October 16, 2020	Project timelines can start sooner, if NRCan agreements are available sooner.
Release RFP for Marketing & Web Services	Planning	October 21, 2020	October 21, 2020	
Select four sites for test-drive/showcase events	Planning	October 16, 2020	October 30, 2020	Review opportunities, mutually agree upon best locations.
Secure event partners such as EV Society and Plugn' Drive	Planning	October 16, 2020	October 30, 2020	Sign agreements, as discussed in development for this proposal.
Book space in each of the available market channels	Planning	October 16, 2020	October 30, 2020	Space often needs to be reserved in advance for things like municipal calendars.
Reach out to all 43 dealers with official partnership offer	Planning	October 26, 2020	November 20, 2020	
Host stakeholder engagement session to develop key messaging and align their resources	Planning	November 2, 2020	November 2, 2020	

Onboard marketing agency with key messaging and existing DCEP/ E-Mission Resources	Initiation	November 9, 2020	November 9, 2020	
Develop multi-channel collateral and outreach assets (including website)	Initiation	November 10, 2020	January 25, 2021	Creative design, signage, digital and printed materials; etc.
Formalize partnerships with at least 22 dealerships	Initiation	November 21, 2020	December 31, 2020	
Host dealer capacity building session	Initiation	January 15, 2021	January 15, 2021	
Launch website	Soft-Launch	January 25, 2021	January 25, 2021	
Deploy pre-event communications	Soft-Launch	February 1, 2021	February 28, 2021	
Monitor dealer set-ups and ZEV availability	Soft-Launch	February 1, 2021	February 28, 2021	
Deploy during-event communications	In-Market	March 1, 2021	March 31, 2021	
Host four events	In-Market	March 1, 2021	March 31, 2021	
Monitor and support dealership events	In-Market	March 1, 2021	March 31, 2021	
Implement QA/QC and data gathering to inform key performance indicators	In-Market	March 1, 2021	March 31, 2021	
Compile results and share with NRCan and project stakeholders	Close-Out	April 1, 2020	April 15, 2021	Note – project can close-out earlier if reporting must take place within March 31 timeline. The proposed timeline reflects a maximization of the allowable time-frame, assuming reporting can take place after March 31.

<add rows as necessary>

APPENDIX Q – 1-DRC-7 TAKING AIM PROPOSAL

Appendix C

Taking AIM proposal

Taking A.I.M.

(Applied Insights Methodology)

Creating a valued enterprise by engaging customers and other stakeholders.

Operational Plan

UtilityPULSE

Taking A.I.M. (Applied Insights Methodology)

April 5, 2018

Sheila Risorto
Oshawa PUC Networks Inc
100 Simcoe Street S
Oshawa, ON L1H 7M7

Dear Sheila:

The whole idea of gathering input & opinions from LDC customers is to gain insights which the LDC can use to be more effective in meeting the needs of its customers and be more operationally efficient. While this RFI submission is focused on meeting the Ontario Energy Board's requirements for a Cost of Service Rate application, the reality is customers want their voices heard.

As I understand it, Oshawa PUC is looking for assistance in developing a framework for the customer engagement piece which is to be included as part of your rate application. Important to include customer engagement specifically as it relates to the DSP.

From a timing point of view, there is a need to get moving quickly because Oshawa PUC intends on filing its application in May/June 2019 in order to have new rates in place for January 1, 2020

Helping Oshawa PUC get the most out of their customer engagement activities is the purpose of the UtilityPULSE A.I.M. system. Having a system can help ensure there is a robust set of activities which engage customers and gather the information you need in order to ensure your plans reflect customer needs and preferences.

The Purpose of Customer Engagement

Our understanding is:

- 'The OEB expects distributors to provide an overview of customer needs, preferences and expectations learned through its customer engagement activities, and demonstrate that the distributor has reflected customer input into the application. The goal is to provide better alignment between distributor plans and customer needs and expectations.'
- 'The OEB expects distributors to provide an overview of customer engagement activities that the distributor has undertaken with respect to its plans and how customer needs, preferences and expectations have been reflected in the distributor's application.'
- 'Distributors should specifically discuss in the application how they informed their customers of the proposals being considered for inclusion in the application, and the value of those proposals to customers (i.e., costs, benefits and the impact on rates that customer would face). The application should discuss any feedback provided by customers and how this feedback shaped the final application.'

If there are more OEB items than those shown above please let us know. In addition, please let us know if there are any specific Oshawa PUC requirements.

I do wish to remind you, our survey work through 2015, 2016 and 2017 tells us, about 17-25% of an LDC's customer base is not willing to pay more for ANY capital items. Support for operational items is all over the map. We are seeing more polarization in viewpoints as well. This means two things:

1- There will be opposition to "anything" Oshawa PUC wants to do and there will be support for "everything" Oshawa PUC wants to do. Of course, the goal is to have less opposition and more support for the plans of the LDC.
2- Customers are looking through the lens of costs and affordability; which is dramatically shaping how they look at "future plans".

I've split this proposal into 4 phases:

1- Planning and Preparation
2- Customer Engagement Activities – Fieldwork
3- Discussion, Analysis and Reporting for Internal Use
4- Report Development/delivery for COS/DSP Application
5- Post Project Review & Additional Recommendations

There are some key decisions to be made by you and your team.

1- How many engagement activities you believe is enough to meet OEB and other requirements (this would be done during Phase 1 – Planning & Preparation)
2- Determine whether your Board of Directors ought to be surveyed regarding operations/performance (again during Phase 1 – Planning & Preparation)
3- Whether Customer focus groups are a requirement or value-added customer engagement activity. (I have not included these in this proposal as there are other effective activities to garner insights, etc. However, the decision to add Focus Groups would have to be made towards the end of the Fieldwork phase.)
4- How to get the best from your internal resources.
5- Whether a DSP technical resource, such as [redacted] would be valuable experience to the development/writing of the DSP. (As you know you'd be contracting directly with [redacted])

I have made an assumption that Oshawa PUC would like to become more pro-active as it relates to customer engagement i.e., gaining wisdom, insights, feedback and information on a more regular basis beyond the immediate needs for the COS/DSP. Therefore, helping your internal resources to be able to monitor & maintain CE activities without the help, (or much help), from external resources is a priority.

Project Phases

Phase 1: Planning and Preparation

- Conduct a review of current CE activities
- Identify desirable CE activities
- Identify ways to get the best from internal resources
- Project administration requirements
- Output 1: Listing of CE activities
- Output 2: Project details with timelines

Phase 2: Customer Engagement Activities - Fieldwork

- Operationalize CE activities

Phase 2: Online DSP

- Five online survey "rounds" soliciting feedback and comment re: DSP
- Variable: Explainer video support (optional not included in pricing)

Phase 2: Online CE

- Optional Service Quality 60-90 day "campaigns"
- Electricity Safety Awareness
- Optional Wisdom survey
- Optional Findings validation survey

Phase 2: Telephone Survey

- Regular Residential & Small Commercial Survey 10 minute in length N=400 [340 Residential 60 Sm Commercial] Last done Fall 2017, need to talk about leveraging the next survey and the timing of the next survey
- Specialized Residential & Small Commercial Survey - DSP
- Specialized Large Commercial Customer Survey- DSP

Phase 2: Customer & Community Outreach

- Support requirements (if any) for BOT, BIA, BOMA, OEL, etc meetings
- Support requirements (if any) for Tradeshows, Exhibitions, etc.

Phase 2: Additional Activities

- Focus groups (pricing not included)
- Board of Director survey (pricing not included)
- Undertake various UtilityPULSE quality control steps
- Monitor and report on progress

Phase 3: Discussion, Analysis and Reporting for Internal Use

- Develop initial tables, graphs and other statistical information
- Synthesize all "qualitative" [open-ended questions] responses
- Review findings with internal LDC personnel
- Assist with integration of findings into COS/DSP
- Reporting is done on a continuous basis when various CE activities are completed

Phase 4: Report Development/deliver for COS/DSP

- Complete Appendix 2-AC
- Prepare materials for inclusion in Chapter 5 filing
- Timing for May/June 2019

Phase 5: Post Project Review & Additional Recommendations

- Lessons learned
- Getting the most from the AIM system
- Intervenor Q&A support (pricing not included)
- Next steps

We believe UtilityPULSE is uniquely positioned to help LDCs gather wisdom, insights, feedback and information from Customers, after-all we've been conducting the Annual Customer Satisfaction Survey for Ontario LDCs for twenty years. In addition, we understand what it takes to create an organization where employees are engaged and enthusiastic about customers and the work that they do. Knowing what is going on with your customers and employees is one thing; doing something about it is another. Helping our clients get the most out of their customer research through various engagement activities is the reason for our existence.

Key Assigned Personnel

For each of the projects listed above:

- [redacted] Project Manager and is held responsible for every aspect of a project. He will also be your primary contact.
- [redacted] Project Administration, data analysis, data reporting
- [redacted], VP- Client operations
- [redacted] or [redacted]- Project Manager / Team Leader (survey/field operations)
- [redacted] is also available to you via direct contract engagement for specialized DSP expertise

We **collaborate** which means we act as a true partner. We like to take an enterprise wide orientation to a project with an eye of helping you get more out of your investment in time, money and opinion gathering activities.

Pricing and Investment

Wherever possible we, UtilityPULSE, have a preference to present fixed rates thereby reducing costs/ risks with clients. However, there are 2 instances where a fixed rate may not be in your best interest:

1- Online surveys have a 'cost per survey' component which helps manage the costs of the project.
2- Consulting type of work. We have included a de-briefing of the CE activities, what we don't know is how much support may be needed to integrate the findings into Oshawa PUC's application, or assistance which may be needed in writing or editing various documents, or strategic advice.

What I can say is, we won't let our reputation be marred by feelings of unfairness. We're in this for the long haul. Also, A.I.M. as a 'system' is a packaged approach to profiling the CE activities of an LDC, as such, I have applied what is called an early adopter pricing model.

Phase 1: Planning and Preparation	[redacted]
Phase 2: Customer Engagement Activities - Fieldwork	
Phase 2: Online DSP	[redacted]
Phase 2: Online CE	**TBD**
- TBD Optional online surveys [redacted]	
- Electricity Safety Awareness [redacted]	
Phase 2: Telephone Survey	[redacted]
- Need to discuss whether to leverage your Bi-annual investment in the Res/Sm Comm Survey (approx.. [redacted] not included in Phase 2 above)	
- Specialized Residential & Small Commercial Survey – DSP (Approx.. [redacted] N=400)	
- Specialized Large Commercial Customer Survey- DSP	
- (Approx. [redacted] N=50)	
Phase 2: Customer & Community Outreach	**TBD**
Phase 2: Additional Activities	[redacted]
Phase 3: Discussion, Analysis and Reporting for Internal Use	[redacted]
Phase 4: Report Development/deliver for COS/DSP	[redacted]
Phase 5: Post Project Review & Additional Recommendations	**TBD**
Sub-total	[redacted]
HST	[redacted]
Total	[redacted]

*Invoicing 50% invoicing at the beginning of each CE project, balance upon delivery of the project.
*We do need to discuss the need for other CE online activities
*There is, unfortunately, the potential for variables as they related to consulting/meeting
*There may be a possibility to internally shift monies from other budgets.

UtilityPULSE professional hourly rates:

- Consulting [redacted]
  - [redacted]
- Leads/Senior Analysts [redacted]
- Analysis/Report Writing/Meetings [redacted]

About CE Activities

We have assumed, for pricing purposes, all materials are produced/conducted in English. That Oshawa PUC is identified as the client in all surveys/CE activities. Things such as email invites to surveys, twitter/social media postings, are all handled by Oshawa PUC staff.

Expected Outcomes from Mr. [redacted]'s email:

1- *We are looking for assistance in developing a framework for the customer engagement piece to be included as part of our rate application; specifically the DSP.* ***[Phase 1]***
2- *The framework should include an outline of outreach activities to be carried out by our staff (town halls, meetings with applicable associations, etc.) and yours (surveys…). In addition, what qualitative information and statistical data should we be collecting and what is the process for compiling it in a way that supports the reporting requirements.* ***[Phase 2]***
3- *We also will require assistance with incorporating the customer engagement process and outcomes in our DSP although we will be the primary author in delivering the DSP.* ***[Phase 3]***
4- *Simulcorp will deliver a customer engagement report which will summarize the process, activities, findings, etc. utilizing your applied science; similar, I expect, to the customer service survey reports issued on our behalf in the past. This report should provide evidence to the OEB that Oshawa met their key objectives outlined in regulation.* ***[Phase 4]***

Why Simul/UtilityPULSE?

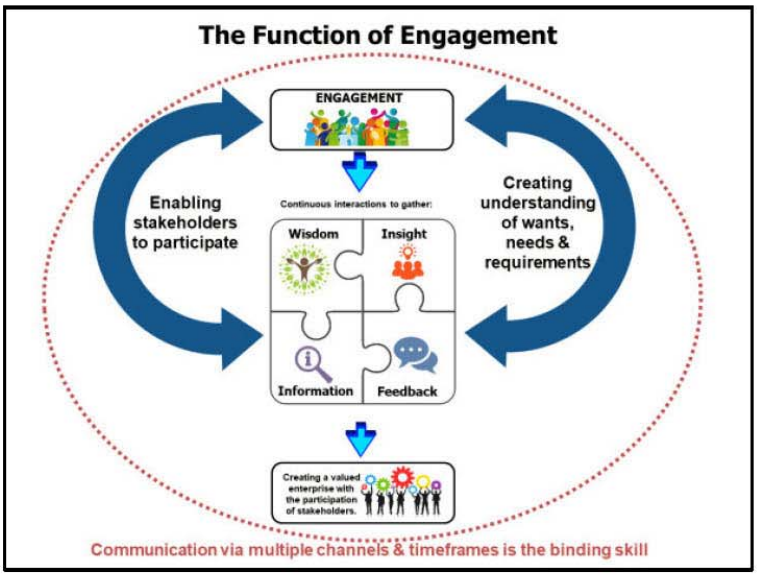
We have a 20-year history serving the LDC industry in Ontario and will continue to provide excellent expertise and service to our clients. Frankly, helping you get the most from your investment in various customer engagement activities is very important to us.

We understand strategy development, we understand the challenges of implementation, we understand what it can take to get others in the organization to support a plan, program or initiative. We believe 'data + context = insights'. We also understand that questions from OEB professionals and intervenors can, and often are, challenging.

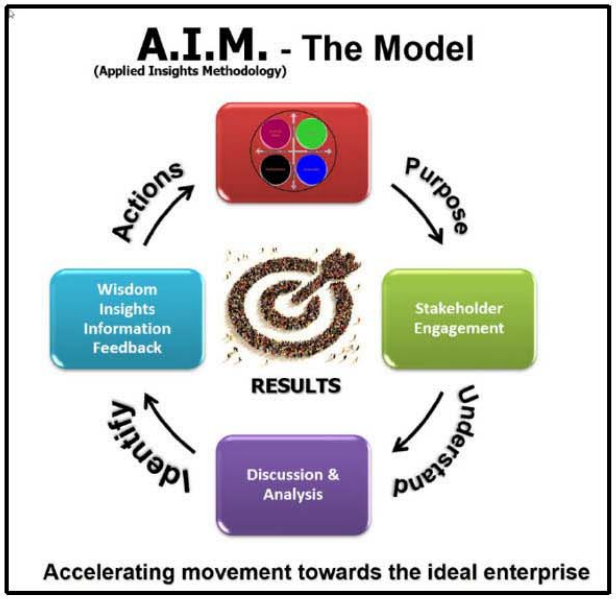
Most importantly, we listen to understand, and we'd like to work on this project with you.

[redacted]
UtilityPULSE
March 2018
[redacted]

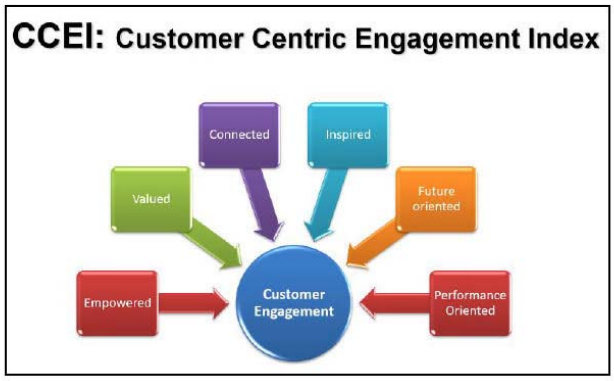
Models embedded in A.I.M. (Applied Insights Methodology)



A.I.M. - The Model



Five levels of engagement



Total Enterprise Development