REVENUE SUFFICIENCY/DEFICIENCY

TABLE OF CONTENTS

Page

REVENUE DEFICIENCY	2
Overview Revenue Requirement	
APPENDIX 6-1: BOARD REVENUE REQUIREMENT MODEL 2015	10
APPENDIX 6-2: BOARD REVENUE REQUIREMENT MODEL 2016	19
APPENDIX 6-3: BOARD REVENUE REQUIREMENT MODEL 2017	28
APPENDIX 6-3: BOARD REVENUE REQUIREMENT MODEL 2018	37
APPENDIX 6-5: BOARD REVENUE REQUIREMENT MODEL 2019	46

REVENUE DEFICIENCY

Overview

The information in this Exhibit supports and summarizes OPUCN's request in this Application for increases in its revenue requirements for each of the 2015 – 2019 Test Years based on its revenue deficiencies for 2015 – 2019, relative to that computed by applying its 2015 - 2019 load forecasts to 2014 Board approved electricity distribution rates and the proposed rates for each of the 2015 – 2019 Test Years. OPUCN requires these increases in order to:

- provide necessary cash flow to support its capital and operating budgets for 2015 – 2019 as described in Exhibits 2 and 4;
- continue to provide a safe, reliable supply of electricity to the customers it serves;
- allow it to earn a fair return on the cost of its financial capital in a manner consistent with the *Report of the Board on Cost of Capital for Ontario's Regulated Utilities* issued December 11, 2009 and as provided in Exhibit 5; and
- meet its Payments in Lieu of Taxes liabilities as provided in Exhibit 4.

OPUCN has provided detailed calculations supporting its 2015 - 2019 revenue deficiencies in the Board's Revenue Requirement Work Form (the "RRWF"), which accompanies this Application as Appendix 6-1 through Appendix 6-5. Table 6-1 identifies the inputs and calculations used to determine the deficiency.

	\$000s	2015	2016	2017	2018	2019
Rate Base		104,991	112,853	119,891	127,128	133,201
Cost of Capital		6.35%	6.37%	6.38%	6.39%	6.39%
Return on Rate Base	А	6,670	7,194	7,653	8,122	8,513
Distribution Expenses	В	12,146	12,614	12,887	13,110	13,183
Amortization	С	3,896	4,847	5,001	5,203	5,371
Payment in Lieu of Taxes	D	189	399	482	622	645
Service Revenue Requirement	A+B+C+D=E	22,902	25,055	26,022	27,058	27,711
Less Revenue Offsets	F	1,336	1,507	1,631	1,452	1,518
2015 Base Revenue Requirement	E-F=G	21,565	23,548	24,391	25,605	26,194
Revenue with Test Year Load at PY Rates	н	18,703	21,885	23,951	24,855	26,089
Revenue Deficiency	G-H=I	2,862	1,663	441	750	105

TABLE 6-1 - REVENUE DEFICIENCY (\$000s)

The primary drivers behind the deficiency in 2015 are the cumulative capital investments made in the years 2013 and 2014, increasing the Rate Base from \$80.8 million approved for 2012 to \$105.0 million in the 2015 Test Year, plus the associated amortization expense. Table 6-2 below summarises the movement in revenue requirement from 2012 Approved to the 2015 Test Year, and the resulting revenue deficiency.

TABLE 6-2 – ANALYSIS OF 2015 REVENUE DEFICIENCY BY COMPONENT (\$000s)

	2012	2013 IRM	2014 IRM	2014	2015	2015
	Approved	1.1%	1.55%	Adjusted	Test Yr	Change
	Revenue	Increase	Increase	Revenue	Revenue	
	Requirement			Requirement	Requirement	
Return on Rate Base	5,380	59	84	5,523	6,670	1,147
OM&A Expenses	11,480	126	180	11,786	12,146	359
Amortization	2,858	31	45	2,934	3,896	963
PILS	325	4	5	334	189	(145)
Load & Customer Growth						35
Revenue Offsets	(1,792)	(20)	(28)	(1,840)	(1,336)	504
Revenue Requirement / Deficiency	18,251	-		18,738	21,565	2,862

Table 6-3 below summarises the deficiency by component for each of the years 2015 to 2019.

	2015	2016	2017	2018	2019
Return on Rate Base	1,147	524	459	469	390
OM&A Expenses	359	469	272	223	74
Amortization	963	951	154	202	168
PILS	(145)	209	83	140	22
Load & Customer Growth	35	(319)	(403)	(464)	(483)
Revenue Offsets	504	(171)	(124)	179	(65)
Revenue Deficiency	2,862	1,663	441	750	105

TABLE 6-3 - REVENUE DEFICIENCY BY COMPONENT 2015–2019 (\$000s)

Revenue Requirement

OPUCN's revenue requirement is comprised of the following components:

- Operations, Maintenance, and Administration Expenses;
- Amortization Expense;
- PILs; and
- Return on Rate Base (Debt Interest Expense + Return on Equity).

OPUCN derives its service revenue requirement through: i) distribution rates charged to its customers; and ii) other revenues. Other revenues comprise: Board-approved specific service charges; late payment charges; and other miscellaneous sources. These other revenues, described in detail in Exhibit 3, are treated as offsets against OPUCN's service revenue requirement, the net amount of which represents the base revenue requirement upon which class-specific distribution rates are calculated.

OPUCN's revenue deficiency is detailed by item in Tables 6-4 through 6-8.

	2014 Bridge	2015 Test	2015 Test - Required
Description	Actual	Existing Rates	Revenue
Revenue:			
Revenue Deficiency			2,862,090
Distribution Revenue	18,265,790	18,703,174	18,703,174
Other Operating Revenue (Net)	1,245,698	1,336,319	1,336,319
Total Revenue	19,511,488	20,039,493	22,901,582
Costs and Expenses:			
Administrative & General, Billing & Collecting	8,774,330	9,352,959	9,352,959
Operation & Maintenance	2,336,763	2,634,298	2,634,298
Depreciation & Amortization	3,845,383	3,896,463	3,896,463
Property Taxes	155,338	158,445	158,445
Deemed Interest	2,842,078	2,764,441	2,764,441
Total Costs and Expenses	17,953,892	18,806,605	18,806,605
Utility Income Before Income Taxes	1,557,595	1,232,887	4,094,977
		-,,	.,
Income Taxes:	(72.004)	(404 755)	100.000
Corporate Income Taxes Total Income Taxes	(72,884)	(431,755)	<u>189,328</u> 189,328
	(72,884)	(431,755)	109,320
Utility Net Income	1,630,479	1,664,643	3,905,649
ncome Tax Expense Calculation:			
Accounting Income	1,557,595	1,232,887	4,094,977
Tax Adjustments to Accounting Income	(1,832,629)	(3,176,430)	(3,176,430)
Taxable Income	(275,034)	(1,943,542)	918,548
Income tax expense before credits	(72,884)	(421,755)	199,328
Credits	0	10,000	10,000
Income Tax Expense	(72,884)	(431,755)	189,328
Tax Rate Refecting Tax Credits	26.50%	21.70%	21.70%
Actual Return on Rate Base:			
Rate Base	98,382,652	104,990,574	104,990,574
Interest Expense	2,842,078	2,764,441	2,764,441
Net Income	1,630,479	1,664,643	3,905,649
Total Actual Return on Rate Base	4,472,557	4,429,084	6,670,090
Total Actual Return on Rate Dase	4,472,337	4,423,004	0,070,030
Actual Return on Rate Base	4.55%	4.22%	6.35%
Required Return on Rate Base:			
Rate Base	98,382,652	104,990,574	104,990,574
Return Rates:			
Return on Debt (Weighted)	4.81%	4.39%	4.39%
Return on Equity	9.42%	9.30%	9.30%
Deemed Interest Expense	2,842,078	2,764,441	2,764,441
Return On Equity	3,707,058	3,905,649	3,905,649
Total Return	6,549,136	6,670,090	6,670,090
Expected Return on Rate Base	6.66%	6.35%	6.35%
Revenue Deficiency After Tax	2,076,579	2,241,006	(0)
Revenue Deficiency Before Tax	2,825,278	2,862,090	(0)

TABLE 6-4 - REVENUE DEFICIENCY MAPPING 2015

	2016 Test	2016 Test -
Description	Existing Rates	Required Revenue
Revenue:		
Revenue Deficiency		1,663,120
Distribution Revenue	21,884,533	21,884,533
Other Operating Revenue (Net)	1,506,940	1,506,940
Total Revenue	23,391,473	25,054,593
Costs and Expenses:		
Administrative & General, Billing & Collecting	9,592,928	9,592,928
Operation & Maintenance	2,859,662	2,859,662
Depreciation & Amortization	4,847,338	4,847,338
Property Taxes	161,613	161,613
Deemed Interest	2,996,107	2,996,107
Total Costs and Expenses	20,457,649	20,457,649
Utility Income Before Income Taxes	2,933,824	4,596,944
		, , -
Income Taxes: Corporate Income Taxes	2 224	200 015
Total Income Taxes	<u>2,321</u> 2,321	<u> </u>
	2,521	550,015
Utility Net Income	2,931,503	4,198,129
Income Tax Expense Calculation:		
Accounting Income	2,933,824	4,596,944
Tax Adjustments to Accounting Income	(2,882,143)	(2,882,143)
Taxable Income	51,681	1,714,801
Income tax expense before credits	12,321	408,815
Credits	10,000	10,000
Income Tax Expense	2,321	398,815
Tax Rate Refecting Tax Credits	23.84%	23.84%
Actual Return on Rate Base:		
Rate Base	112,852,918	112,852,918
Interest Expense	2,996,107	2,996,107
Net Income	2,931,503	4,198,129
Total Actual Return on Rate Base	5,927,610	7,194,236
	·	
Actual Return on Rate Base	5.25%	6.37%
Required Return on Rate Base:		
Rate Base	112,852,918	112,852,918
Return Rates:		
Return on Debt (Weighted)	4.42%	4.42%
Return on Equity	9.30%	9.30%
Deemed Interest Expense	2,996,107	2,996,107
Return On Equity	4,198,129	4,198,129
Total Return	7,194,236	7,194,236
Expected Return on Rate Base	6.37%	6.37%
Revenue Deficiency After Tax	<u>1,266,625</u> 1,663,120	0

TABLE 6-5 - REVENUE DEFICIENCY MAPPING 2016

	2017 Test	2017 Test -
Description	Existing Rates	Required Revenue
Revenue:		
Revenue Deficiency		440,556
Distribution Revenue	23,950,683	23,950,683
Other Operating Revenue (Net)	1,631,192	1,631,192
Total Revenue	25,581,875	26,022,430
Costs and Expenses:		
Administrative & General, Billing & Collecting	9,722,715	9,722,715
Operation & Maintenance	2,998,966	2,998,966
Depreciation & Amortization	5,000,972	5,000,972
Property Taxes	165,007	165,007
Deemed Interest	3,192,821	3,192,821
Total Costs and Expenses	21,080,481	21,080,481
Utility Income Before Income Taxes	4,501,394	4,941,949
Income Taxes:		
Corporate Income Taxes	375,235	482,020
Total Income Taxes	375,235	482,020
Utility Net Income	4,126,159	4,459,929
Income Tax Expense Calculation:		
Accounting Income	4,501,394	4,941,949
Tax Adjustments to Accounting Income	(2,912,063)	(2,912,063)
Taxable Income	1,589,330	2,029,886
Income tax expense before credits	385,235	492,020
Credits	10,000	10,000
Income Tax Expense	375,235	482,020
Tax Rate Refecting Tax Credits	24.24%	24.24%
Actual Return on Rate Base:		
Rate Base	119,890,558	119,890,558
Interest Expense	3,192,821	3,192,821
Net Income	4,126,159	4,459,929
Total Actual Return on Rate Base	7,318,980	7,652,750
Actual Return on Rate Base	6.10%	6.38%
	0.1070	0.0070
Required Return on Rate Base: Rate Base	119,890,558	119,890,558
Return Rates:		
Return on Debt (Weighted)	4.44%	4.44%
Return on Equity	9.30%	9.30%
Deemed Interest Expense	3,192,821	3,192,821
Return On Equity	4,459,929	4,459,929
Total Return	7,652,750	7,652,750
Expected Return on Rate Base	6.38%	6.38%
Revenue Deficiency After Tax	333,770	0
Revenue Deficiency Before Tax	440,556	0

TABLE 6-6 - REVENUE DEFICIENCY MAPPING 2017

	2018 Test	2018 Test -
Description	Existing Rates	Required Revenue
Revenue:		
Revenue Deficiency		749,846
Distribution Revenue	24,855,397	24,855,397
Other Operating Revenue (Net)	1,452,379	1,452,379
Total Revenue	26,307,776	27,057,622
Costs and Expenses:		
Administrative & General, Billing & Collecting	9,926,112	9,926,112
Operation & Maintenance	3,015,221	3,015,221
Depreciation & Amortization	5,203,071	5,203,071
Property Taxes	168,473	168,473
Deemed Interest	3,393,088	3,393,088
Total Costs and Expenses	21,705,965	21,705,965
Utility Income Before Income Taxes	4,601,812	5,351,658
Income Taxes:		
Corporate Income Taxes	437,326	622,498
Total Income Taxes	437,326	622,498
Utility Net Income	4,164,486	4,729,159
Income Tax Expense Calculation:		
Accounting Income	4,601,812	5,351,658
Tax Adjustments to Accounting Income	(2,790,390)	(2,790,390)
Taxable Income	1,811,422	2,561,268
Income tax expense before credits	447,326	632,498
Credits	10,000	10,000
Income Tax Expense	437,326	622,498
Tax Rate Refecting Tax Credits	24.69%	24.69%
Actual Return on Rate Base:		
Rate Base	127,127,942	127,127,942
Interest Expense	3,393,088	3,393,088
Net Income	4,164,486	4,729,159
Total Actual Return on Rate Base	7,557,574	8,122,247
Actual Return on Rate Base	5.94%	6.39%
Required Return on Rate Base:		
Rate Base	127,127,942	127,127,942
Return Rates:		
Return on Debt (Weighted)	4.45%	4.45%
Return on Equity	9.30%	9.30%
Deemed Interest Expense	3,393,088	3,393,088
Return On Equity	4,729,159	4,729,159
Total Return	8,122,247	8,122,247
Expected Return on Rate Base	6.39%	6.39%
Revenue Deficiency After Tax Revenue Deficiency Before Tax	<u> </u>	0 0

TABLE 6-7 - REVENUE DEFICIENCY MAPPING 2018

	2019 Test	
Description	Existing Rates	Required Revenue
Revenue:		405 000
Revenue Deficiency		105,296
Distribution Revenue	26,088,546	26,088,546
Other Operating Revenue (Net) Total Revenue	1,517,631	1,517,631
	27,606,177	27,711,473
Costs and Expenses:		
Administrative & General, Billing & Collecting	10,133,613	10,133,613
Operation & Maintenance	2,877,866	2,877,866
Depreciation & Amortization	5,370,697	5,370,697
Property Taxes	172,010	172,010
Deemed Interest	3,557,656	3,557,656
Total Costs and Expenses	22,111,843	22,111,843
Utility Income Before Income Taxes	5,494,334	5,599,631
Income Taxes:		
Corporate Income Taxes	618,481	644,541
Total Income Taxes	618,481	644,541
Utility Net Income	4,875,854	4,955,089
Income Tax Expense Calculation:		
Accounting Income	5,494,334	5,599,631
Tax Adjustments to Accounting Income	(2,955,025)	(2,955,025)
Taxable Income	2,539,309	2,644,606
Income tax expense before credits	628,481	654,541
Credits	10,000	10,000
Income Tax Expense	618,481	644,541
Tax Rate Refecting Tax Credits	24.75%	24.75%
Actual Return on Rate Base:		
Rate Base	133,201,327	133,201,327
Interest Expense	3,557,656	3,557,656
Net Income	4,875,854	4,955,089
Total Actual Return on Rate Base	8,433,510	8,512,746
Actual Return on Rate Base	6.33%	6.39%
Required Return on Rate Base:		
Rate Base	133,201,327	133,201,327
Return Rates:		
Return on Debt (Weighted)	4.45%	4.45%
Return on Equity	9.30%	9.30%
Deemed Interest Expense	3,557,656	3,557,656
Return On Equity	4,955,089	4,955,089
Total Return	8,512,746	8,512,746
Expected Return on Rate Base	6.39%	6.39%
Revenue Deficiency After Tax	79,235	(0)
Revenue Deficiency Before Tax	105,296	(0)

TABLE 6-8 - REVENUE DEFICIENCY MAPPING 2019

APPENDIX 6-1: BOARD REVENUE REQUIREMENT MODEL 2015



Utility Name	Oshawa PUC Networks Inc.	
Service Territory	Oshawa	
Assigned EB Number	EB-2014-0101	
Name and Title	David Savage, Corporate Controller	
Phone Number	905-743 5219	
Email Address	dsavage@opuc.on.ca	

This Workbook Model is protected by copyright and is being made available to you solely for the purpose of filing your application. You may use and copy this model for that purpose, and provide a copy of this model to any person that is advising or assisting you in that regard. Except as indicated above, any copying, reproduction, publication, sale, adaptation, translation, modification, reverse engineering or other use or dissemination of this model without the express written consent of the Ontario Energy Board is prohibited. If you provide a copy of this model to a person that is advising or assisting you in preparing the application or reviewing your draft rate order, you must ensure that the person understands and agrees to the restrictions noted above.

While this model has been provided in Excel format and is required to be filed with the applications, the onus remains on the applicant to ensure the accuracy of the data and the results.



1. Info

2. Table of Contents

3. Data Input Sheet

6. Taxes PILs 7. Cost of Capital

8. Rev Def Suff

9. Rev Reqt

4. Rate Base

5. Utility Income

Notes:

- (1) Pale green cells represent inputs
- Pale green boxes at the bottom of each page are for additional notes
- (2) (3) (4) (5) Pale yellow cells represent drop-down lists
 - Please note that this model uses MACROS. Before starting, please ensure that macros have been enabled.
 - Completed versions of the Revenue Requirement Work Form are required to be filed in working Microsoft Excel



Data Input (1)

		Initial Application	(2)			(6)	Per Board Decision	-
1	Rate Base Gross Fixed Assets (average) Accumulated Depreciation (average) Allowance for Working Capital:	\$173,132 (\$85,403)	(5)	\$	173,132 <mark>(\$85,403)</mark>		\$173,132 (<mark>\$85,403)</mark>	
	Controllable Expenses Cost of Power Working Capital Rate (%)	\$12,146 \$120,635 13.00%	(9)	\$ \$	12,146 120,635 13.00%	(9)	\$12,146 \$120,635 13.00%	(9)
2	Utility Income Operating Revenues: Distribution Revenue at Current Rates Distribution Revenue at Proposed Rates Other Revenue: Specific Service Charges Late Payment Charges Other Income and Deductions Total Revenue Offsets Operating Expenses: OM+A Expenses Depreciation/Amortization Property taxes	\$18,703 \$21,565 \$758 \$290 \$160 \$128 \$1,336 \$11,960 \$3,896 \$158		\$ \$ \$	11,960 3,896 158		\$11,960 \$3,896 \$158	
	Other expenses	\$27		:	27.45977693		\$27	
3	Taxes/PILs Taxable Income: Adjustments required to arrive at taxable income Utility Income Taxes and Rates: Income taxes (not grossed up) Income taxes (grossed up) Federal tax (%) Provincial tax (%) Income Tax Credits	(\$3,176) \$148 \$189 15.00% 6.70% (\$10)	(3)					
4	Capitalization/Cost of Capital Capital Structure: Long-term debt Capitalization Ratio (%) Short-term debt Capitalization Ratio (%) Common Equity Capitalization Ratio (%) Prefered Shares Capitalization Ratio (%)	56.0% 4.0% 40.0% 0.0% 100.0% 4.55%	(8)			(8)		(8)
	Short-term debt Cost Rate (%) Common Equity Cost Rate (%) Prefered Shares Cost Rate (%)	2.16% 9.30% 0.00%						

tes

General Data inputs are required on Sheets 3. Data from Sheet 3 will automatically complete calculations on sheets 4 through 9 (Rate Base through Revenue Requirement). Sheets 4 through 9 do not require any inputs except for notes that the Applicant may wish to enter to support the results. Pale green cells are available on sheets 4 through 9 to enter both footnotes beside key cells and the related text for the notes at the bottom of each sheet.

(1) All inputs are in dollars (\$) except where inputs are individually identified as percentages (%)

Data in column E is for Application as originally filed. For updated revenue requirement as a result of interrogatory responses, technical or settlement conferences, etc., use colimn M and Adjustments in column I

(2) (3) (4)

Net of addbacks and deductions to arrive at taxable income.

Average of Gross Fixed Assets at beginning and end of the Test Year



Rate Base and Working Capital

Line No.	Rate Base Particulars	-	Initial Application				Per Board Decision
1	Gross Fixed Assets (average)	(3)	\$173,132	\$ -	\$173,132	\$ -	\$173,132
2	Accumulated Depreciation (average)	(3)	(\$85,403)	\$ -	(\$85,403)	\$ -	(\$85,403
3	Net Fixed Assets (average)	(3)	\$87,729	\$ -	\$87,729	\$ -	\$87,729
4	Allowance for Working Capital	<u>(</u> 1)	\$17,261	\$ -	\$17,261	\$ -	\$17,261
5	Total Rate Base		\$104,991	\$ -	\$104,991	\$ -	\$104,991

(1) Allowance for Working Capital - Derivation

6	Controllable Expenses		\$12,146	\$ -	\$12	2,146	\$ -	\$12,146
7	Cost of Power		\$120,635	\$ -	\$120	0,635	\$ -	\$120,635
8	Working Capital Base		\$132,781	\$ -	\$132	2,781	\$ -	\$132,781
9	Working Capital Rate %	(2)	13.00%	0.00%	13	3.00%	0.00%	13.00%
	•	.,						
10	Working Capital Allowance		\$17,261	\$ -	\$17	7,261	\$ -	\$17,261

<u>Notes</u>

(2) Some Applicants may have a unique rate as a result of a lead-lag study. The default rate for 2014 cost of service applications is 13%.

(2) Some Applicants may have a unique rate as a result of a
 (3) Average of opening and closing balances for the year.



Utility Income

Line No.	Particulars	Initial Application				Per Board Decision
	Operating Revenues:					
1	Distribution Revenue (at Proposed Rates)	\$21,565	(\$21,565)	\$ -	\$ -	\$ -
2		(1) \$1,336	(\$1,336)	\$ -	\$ -	\$ -
3	Total Operating Revenues	\$22,902	(\$22,902)	\$ -	\$ -	\$ -
	Operating Expenses:					
4	OM+A Expenses	\$11,960	\$ -	\$11,960	\$ -	\$11,960
5	Depreciation/Amortization	\$3,896	\$ -	\$3,896	\$ -	\$3,896
6	Property taxes	\$158	\$ -	\$158	\$ -	\$158
7	Capital taxes	\$ -	\$ -	\$ -	\$ -	\$ -
8	Other expense	\$27	<u> </u>	\$27	<u> </u>	\$27
9	Subtotal (lines 4 to 8)	\$16,042	\$ -	\$16,042	\$ -	\$16,042
10	Deemed Interest Expense	\$2,764	(\$2,764)	\$	\$	\$ -
11	Total Expenses (lines 9 to 10)	\$18,807	(\$2,764)	\$16,042	\$ -	\$16,042
12	Utility income before					
	income taxes	\$4,095	(\$20,137)	(\$16,042)	\$ -	(\$16,042)
13	Income taxes (grossed-up)	\$189	\$	\$189	<u> </u>	\$189
14	Utility net income	\$3,906	(\$20,137)	(\$16,231)	<u> </u>	(\$16,231)
	01 D (D	011				
Notes	Other Revenues / Reve	nue Offsets				
(1)	Specific Service Charges	\$758		\$ -		\$ -
. /	Late Payment Charges	\$290		\$ -		\$ -
	Other Distribution Revenue	\$160		\$ -		\$ -
	Other Income and Deductions	\$128		\$		\$ -
	Total Revenue Offsets	\$1,336	<u> </u>	<u> </u>	<u> </u>	<u> </u>



Taxes/PILs

Line No.	Particulars	Application		Per Board Decision
	Determination of Taxable Income			
1	Utility net income before taxes	\$3,906	\$ -	\$ -
2	Adjustments required to arrive at taxable utility income	(\$3,176)	\$ -	(\$3,176)
3	Taxable income	\$729	<u> </u>	(\$3,176)
	Calculation of Utility income Taxes			
4	Income taxes	\$148	\$148	\$148
6	Total taxes	\$148	\$148	\$148
7	Gross-up of Income Taxes	\$41	\$41	\$41
8	Grossed-up Income Taxes	\$189	\$189	\$189
9	PILs / tax Allowance (Grossed-up Income taxes + Capital taxes)	\$189	\$189	\$189
10	Other tax Credits	(\$10)	(\$10)	(\$10)
	Tax Rates			
11 12 13	Federal tax (%) Provincial tax (%) Total tax rate (%)	15.00% 6.70% 21.70%	15.00% 6.70% 21.70%	15.00% 6.70% 21.70%



Capitalization/Cost of Capital

Line No.	Particulars	Capitaliza	ation Ratio	Cost Rate	Return
		Initial A	oplication		
		(%)	(\$)	(%)	(\$)
1	Debt Long-term Debt	56.00%	\$58,795	4.55%	\$2,674
2	Short-term Debt	4.00%	\$4,200	2.16%	\$2,074 \$91
3	Total Debt	60.00%	\$62,994	4.39%	\$2,764
	Equity				
4	Common Equity	40.00%	\$41,996	9.30%	\$3,906
5 6	Preferred Shares Total Equity	0.00% 40.00%	<u>\$ -</u> \$41,996	0.00% 9.30%	<u>\$ -</u> \$3,906
7	Total	100.00%	\$104,991	6.35%	\$6,670
		(%)	(\$)	(%)	(\$)
	Debt	(70)	(Ψ)	(70)	(Ψ)
1	Long-term Debt	0.00%	\$ -	0.00%	\$ -
2	Short-term Debt	0.00%	\$ -	0.00%	\$ -
3	Total Debt	0.00%	\$	0.00%	<u> </u>
4	Equity Common Equity	0.00%	\$ -	0.00%	\$ -
5	Preferred Shares	0.00%	\$ -	0.00%	\$ \$-
6	Total Equity	0.00%	\$ -	0.00%	\$ -
7	Total	0.00%	\$104,991	0.00%	\$ -
		Per Boar	d Decision		
		(%)	(\$)	(%)	(\$)
•	Debt	0.000/	¢	4 550/	•
8 9	Long-term Debt Short-term Debt	0.00%	\$ - \$ -	4.55% 2.16%	\$ - \$ -
10	Total Debt	0.00%	\$ -	0.00%	\$ -
	Equity				
11	Common Equity	0.00%	\$ -	9.30%	\$ -
12 13	Preferred Shares Total Equity	0.00%	<u> </u>	0.00%	<u> </u>
					<u>_</u>
14	Total	0.00%	\$104,991	0.00%	\$
Notes					
4			en e		



Revenue Deficiency/Sufficiency

		Initial Application				Per Board Decision		
Line No.	Particulars	At Current Approved Rates	At Proposed Rates	At Current Approved Rates	At Proposed Rates	At Current Approved Rates	At Proposed Rates	
1	Revenue Deficiency from Below		\$2,862		(\$3,554)		\$16,042	
2 3	Distribution Revenue Other Operating Revenue	\$18,703 \$1,336	\$18,703 \$1,336	\$18,703 \$ -	\$25,119 \$ -	\$ - \$ -	(\$16,042) \$ -	
4	Offsets - net Total Revenue	\$20,039	\$22,902	\$18,703	\$21,565	\$ -	\$ -	
5	Operating Expenses	\$16,042	\$16,042	\$16,042	\$16,042	\$16,042	\$16,042	
6 8	Deemed Interest Expense Total Cost and Expenses	\$2,764 \$18,807	\$2,764 \$18,807	\$ - \$16,042	\$ - \$16,042	<u> </u>	- \$ \$16,042	
9	Utility Income Before Income Taxes	\$1,233	\$4,095	\$2,661	\$5,523	(\$16,042)	(\$16,042)	
10	Tax Adjustments to Accounting Income per 2013 PILs model	(\$3,176)	(\$3,176)	(\$3,176)	(\$3,176)	\$ -	\$ -	
11	Taxable Income	(\$1,944)	\$919	(\$515)	\$2,347	(\$16,042)	(\$16,042)	
12 13	Income Tax Rate Income Tax on Taxable Income	21.70% (\$422)	21.70% \$199	21.70% (\$112)	21.70% \$509	21.70% (\$3,481)	21.70% (\$3,481)	
14 15	Income Tax Credits Utility Net Income	<mark>(\$10)</mark> \$1,665	<mark>(\$10)</mark> \$3,906	<mark>(\$10)</mark> \$2,783	(\$10) (\$16,231)	\$ - (\$12,561)	- \$ (\$16,231)	
16	Utility Rate Base	\$104,991	\$104,991	\$104,991	\$104,991	\$104,991	\$104,991	
17	Deemed Equity Portion of Rate Base	\$41,996	\$41,996	\$ -	\$ -	\$ -	\$ -	
18	Income/(Equity Portion of Rate Base)	3.96%	9.30%	0.00%	0.00%	0.00%	0.00%	
19	Target Return - Equity on Rate Base	9.30%	9.30%	0.00%	0.00%	0.00%	0.00%	
20	Deficiency/Sufficiency in Return on Equity	-5.34%	0.00%	0.00%	0.00%	0.00%	0.00%	
21 22	Indicated Rate of Return Requested Rate of Return on Rate Base	4.22% 6.35%	6.35% 6.35%	2.65% 0.00%	0.00% 0.00%	-11.96% 0.00%	0.00% 0.00%	
23	Deficiency/Sufficiency in Rate of Return	-2.13%	0.00%	2.65%	0.00%	-11.96%	0.00%	
24 25 26	Target Return on Equity Revenue Deficiency/(Sufficiency) Gross Revenue Deficiency/(Sufficiency)	\$3,906 \$2,241 \$2,862 (1)	\$3,906 \$ -	\$ - (\$2,783) (\$3,554) (1)	\$ - \$ -	\$ - \$12,561 \$16,042 (1)	\$ - \$ -	

Notes: (1) Revenue Deficiency/Sufficiency divided by (1 - Tax Rate)



Revenue Requirement

Line No.	Particulars	Application		Per Board Decision
1	OM&A Expenses	\$11,960	\$11,960	\$11,960
2	Amortization/Depreciation	\$3,896	\$3,896	\$3,896
3	Property Taxes	\$158	\$158	\$158
5	Income Taxes (Grossed up)	\$189	\$189	\$189
6	Other Expenses	\$27	\$27	\$27
7	Return	* =-	•=-	•
	Deemed Interest Expense	\$2,764	\$ -	\$ -
	Return on Deemed Equity	\$3,906	\$ -	\$ -
8	Service Revenue Requirement			
	(before Revenues)	\$22,902	\$16,231	\$16,231
9	Revenue Offsets	\$1,336	\$ -	\$ -
10	Base Revenue Requirement	\$21,565	\$16,231	\$16,231
	(excluding Tranformer Owership Allowance credit adjustment)			
11	Distribution revenue	\$21,565	\$ -	\$ -
12	Other revenue	\$1,336	\$ -	\$ -
13	Total revenue	\$22,902	\$ -	\$ -
14	Difference (Total Revenue Less Distribution Revenue			
	Requirement before Revenues)	<u> </u>	(1) (\$16,231) (1) (\$16,231) (1
Notes				
(1)	line 11 - Line 8			

(1) Line 11 - Line 8

APPENDIX 6-2: BOARD REVENUE REQUIREMENT MODEL 2016



Utility Name	Oshawa PUC Networks Inc.	
Service Territory	Oshawa	
Assigned EB Number	EB-2014-0101	
Name and Title	David Savage, Corporate Controller	
Phone Number	905-743 5219	
Email Address	dsavage@opuc.on.ca	

This Workbook Model is protected by copyright and is being made available to you solely for the purpose of filing your application. You may use and copy this model for that purpose, and provide a copy of this model to any person that is advising or assisting you in that regard. Except as indicated above, any copying, reproduction, publication, sale, adaptation, translation, modification, reverse engineering or other use or dissemination of this model without the express written consent of the Ontario Energy Board is prohibited. If you provide a copy of this model to a person that is advising or assisting you in preparing the application or reviewing your draft rate order, you must ensure that the person understands and agrees to the restrictions noted above.

While this model has been provided in Excel format and is required to be filed with the applications, the onus remains on the applicant to ensure the accuracy of the data and the results.



<u>1. Info</u>

2. Table of Contents

3. Data_Input_Sheet

6. Taxes_PILs 7. Cost_of_Capital

8. Rev_Def_Suff

4. Rate_Base

5. Utility Income

9. Rev_Reqt

Notes:

- (1) Pale green cells represent inputs
- (2) Pale green boxes at the bottom of each page are for additional notes
- Pale yellow cells represent drop-down lists
- Please note that this model uses MACROS. Before starting, please ensure that macros have been enabled.
- (3) (4) (5) Completed versions of the Revenue Requirement Work Form are required to be filed in working Microsoft Excel



Data Input (1)

		Initial Application	(2)			(6)	Per Board Decision	<u>.</u>
1	Rate Base							
	Gross Fixed Assets (average) Accumulated Depreciation (average) Allowance for Working Capital:	\$183,128 (\$87,830)	(5)	\$	183,128 (\$87,830)		\$183,128 (<mark>\$87,830)</mark>	
	Controllable Expenses Cost of Power	\$12,614 \$122,429		\$ \$	12,614 122,429		\$12,614 \$122,429	
	Working Capital Rate (%)	13.00%	(9)		13.00%	(9)	13.00%	(9)
2	Utility Income							
	Operating Revenues:							
	Distribution Revenue at Current Rates Distribution Revenue at Proposed Rates Other Revenue:	\$21,885 \$23,548						
	Specific Service Charges	\$913						
	Late Payment Charges	\$300						
	Other Distribution Revenue	\$166						
	Other Income and Deductions	\$128						
	Total Revenue Offsets	\$1,507	(7)					
	Operating Expenses:							
	OM+A Expenses	\$12,423		\$	12,423		\$12,423	
	Depreciation/Amortization	\$4,847		\$	4,847		\$4,847	
	Property taxes	\$162		\$	162		\$162	
	Other expenses	\$30		3	30.06442053		\$30	
3	Taxes/PILs							
	Taxable Income:	(00.000)	-					
	Adjustments required to arrive at taxable income Utility Income Taxes and Rates:	(\$2,882)	(3)					
	Income taxes (not grossed up)	\$304						
	Income taxes (grossed up)	\$399						
	Federal tax (%)	15.00%						
	Provincial tax (%)	8.84%						
	Income Tax Credits	(\$10)						
4	Capitalization/Cost of Capital Capital Structure:							
	Long-term debt Capitalization Ratio (%)	56.0%						
	Short-term debt Capitalization Ratio (%) Common Equity Capitalization Ratio (%)	4.0% 40.0%	(8)			(8)		(8)
	Prefered Shares Capitalization Ratio (%)	40.0%						
		100.0%						
	Cost of Capital	4.59%						
	Long-term debt Cost Rate (%) Short-term debt Cost Rate (%)	4.59% 2.16%						
	Common Equity Cost Rate (%)	9.30%						
	Prefered Shares Cost Rate (%)	0.00%						

General Data inputs are required on Sheets 3. Data from Sheet 3 will automatically complete calculations on sheets 4 through 9 (Rate Base through Revenue Requirement). Sheets 4 through 9 do not require any inputs except for notes that the Applicant may wish to enter to support the results. Pale green cells are available on sheets 4 through 9 to enter both footnotes beside key cells and the related text for the notes at the bottom of each sheet.

(1)

All inputs are in dollars (\$) except where inputs are individually identified as percentages (%) Data in column E is for Application as originally filed. For updated revenue requirement as a result of interrogatory responses, technical or settlement conferences, etc., use colimn M and Adjustments in column I (2)

Net of addbacks and deductions to arrive at taxable income.

(3) (4) (5) (6)

Net of adobacks and beductions to almost advance income. Average of Ross Fixed Assets at beginning and end of the Test Year Average of Accumulated Depreciation at the beginning and end of the Test Year. Enter as a negative amount. Select option from drop-down list by clicking on cell M10. This column allows for the application update reflecting the end of discovery or Argument-in-Chief. Also, the outcome of any Settlement Process can be reflected.

Input total revenue offsets for deriving the base revenue requirement from the service revenue requirement

(7) (8) (9) 4.0% unless an Applicant has proposed or been approved for another amount. Starting with 2013, default Working Capital Allowance factor is 13% (of Cost of Power plus controllable expenses). Alternatively, WCA factor based on lead-lag study or approved WCA factor for another distributor, with supporting rationale.



Rate Base and Working Capital

Rate Base

Line No.	Particulars	_	Initial Application				Per Board Decision
1	Gross Fixed Assets (average) Accumulated Depreciation (average)	(3) (3)	\$183,128 (\$87,830)	\$ - \$ -	\$183,128 (\$87,830)	\$ - \$ -	\$183,128 (<mark>\$87,830</mark>)
3	Net Fixed Assets (average)	(3)	\$95,297	\$ -	\$95,297	<u> </u>	\$95,297
4	Allowance for Working Capital	(1)	\$17,556	<u> </u> \$ -	\$17,556	\$ -	\$17,556
5	Total Rate Base	-	\$112,853	<u> </u>	\$112,853	<u> </u>	\$112,853

Allowance for Working Capital - Derivation (1)

7	Controllable Expenses Cost of Power Working Capital Base		\$12,614 <u>\$122,429</u> \$135,043	\$ - \$ - \$ -	\$12,614 <u>\$122,429</u> \$135,043	\$ - <u>\$ -</u> \$ -	\$12,614 \$122,429 \$135,043
9	Working Capital Rate %	(2)	13.00%	0.00%	13.00%	0.00%	13.00%
10	Working Capital Allowance		\$17,556	\$ -	\$17,556	\$ -	\$17,556

<u>Notes</u> (2) (3)

Some Applicants may have a unique rate as a result of a lead-lag study. The default rate for 2014 cost of service applications is 13%.

Average of opening and closing balances for the year.



Utility Income

Line No.	Particulars	Initial Application				Per Board Decision
	Operating Revenues:					
1	Distribution Revenue (at Proposed Rates)	\$23,548	(\$23,548)	\$ -	\$ -	\$ -
2	Other Revenue (1)\$1,507	(\$1,507)	\$ -	\$ -	\$ -
3	Total Operating Revenues	\$25,055	(\$25,055)	<u> </u>	\$ -	\$ -
	Operating Expenses:					
4	OM+A Expenses	\$12,423	\$ -	\$12,423	\$ -	\$12,423
5	Depreciation/Amortization	\$4,847	\$ -	\$4,847	\$ -	\$4,847
6	Property taxes	\$162	\$ -	\$162	\$ -	\$162
7	Capital taxes	\$ -	\$ -	\$ -	\$ -	\$ -
8	Other expense	\$30	\$ -	\$30	\$ -	\$30
9	Subtotal (lines 4 to 8)	\$17,462	\$ -	\$17,462	\$ -	\$17,462
10	Deemed Interest Expense	\$2,996	(\$2,996)	<u> </u>	\$ -	\$ -
11	Total Expenses (lines 9 to 10)	\$20,458	(\$2,996)	\$17,462	\$ -	\$17,462
12	Utility income before					
	income taxes	\$4,597	(\$22,058)	(\$17,462)	\$ -	(\$17,462)
13	Income taxes (grossed-up)	\$399	\$	\$399	\$	\$399
14	Utility net income	\$4,198	(\$22,058)	(\$17,860)	\$ -	(\$17,860)
	Other Revenues / Reven					
Notes	Other Revenues/ Reven	ueonsets				
(1)	Specific Service Charges	\$913		\$ -		\$ -
(.)	Late Payment Charges	\$300		\$ -		\$-
	Other Distribution Revenue	\$166		\$ -		\$- \$-
	Other Income and Deductions	\$100		\$ - \$ -		\$ - \$ -
	Total Revenue Offsets	\$1,507	\$ -	<u> </u>	<u> </u>	\$ -



Taxes/PILs

Line No.	Particulars	Application		Per Board Decision
	Determination of Taxable Income			
1	Utility net income before taxes	\$4,198	\$ -	\$ -
2	Adjustments required to arrive at taxable utility income	(\$2,882)	\$ -	(\$2,882)
3	Taxable income	\$1,316	<u> </u>	(\$2,882)
	Calculation of Utility income Taxes			
4	Income taxes	\$304	\$304	\$304
6	Total taxes	\$304	\$304	\$304
7	Gross-up of Income Taxes	\$95	\$95	\$95
8	Grossed-up Income Taxes	\$399	\$399	\$399
9	PILs / tax Allowance (Grossed-up Income taxes + Capital taxes)	\$399	\$399	\$399
10	Other tax Credits	(\$10)	(\$10)	(\$10)
	Tax Rates			
11 12 13	Federal tax (%) Provincial tax (%) Total tax rate (%)	15.00% <u>8.84%</u> 23.84%	15.00% 8.84% 23.84%	15.00% 8.84% 23.84%



Capitalization/Cost of Capital

Line No.	Particulars	Capitaliza	tion Ratio	Cost Rate	Return
		Initial Ap	plication		
		(%)	(\$)	(%)	(\$)
	Debt		• • • • • •		• • • • •
1	Long-term Debt	56.00%	\$63,198	4.59%	\$2,899
2 3	Short-term Debt	4.00%	\$4,514	2.16%	\$98
3	Total Debt	60.00%	\$67,712	4.42%	\$2,996
	Equity				
4	Common Equity	40.00%	\$45,141	9.30%	\$4,198
5	Preferred Shares	0.00%	\$ -	0.00%	\$ -
6	Total Equity	40.00%	\$45,141	9.30%	\$4,198
7	Total	100.00%	\$112,853	6.37%	\$7,194
		(%)	(\$)	(%)	(\$)
	Debt		(1)		(**)
1	Long-term Debt	0.00%	\$ -	0.00%	\$ -
2	Short-term Debt	0.00%	\$ -	0.00%	\$ -
3	Total Debt	0.00%	\$ -	0.00%	\$ -
	Equity	0.000/	¢	0.00%	¢
4 5	Common Equity Preferred Shares	0.00%	\$ - \$ -	0.00% 0.00%	\$ - \$ -
5	Total Equity	0.00%		0.00%	
0	Total Equity	0.00 %	φ-	0.0078	φ-
7	Total	0.00%	\$112,853	0.00%	\$ -
-			<u> </u>		Ţ
		Per Board	Decision		
		(%)	(\$)	(%)	(\$)
	Debt	(70)	(Φ)	(%)	(Φ)
8	Long-term Debt	0.00%	\$ -	4.59%	\$ -
9	Short-term Debt	0.00%	\$-	2.16%	\$ -
10	Total Debt	0.00%	\$ -	0.00%	\$ -
	Equity				
11	Common Equity	0.00%	\$ -	9.30%	\$ -
12	Preferred Shares	0.00%	\$ -	0.00%	\$ -
13	Total Equity	0.00%	\$ -	0.00%	\$ -
14	Total	0.00%	#440.050	0.000/	۴
14	Total	0.00%	\$112,853	0.00%	\$ -

Notes



Revenue Deficiency/Sufficiency

		Initial Appl	ication			Per Board Decision			
Line No.	Particulars	At Current At Proposed Approved Rates Rates		At Current Approved Rates	At Proposed Rates	At Current Approved Rates	At Proposed Rates		
1	Revenue Deficiency from Below		\$1,663		(\$5,338)		\$17,462		
2	Distribution Revenue	\$21,885	\$21,885	\$21,885	\$28,886	\$ -	(\$17,462)		
3	Other Operating Revenue Offsets - net	\$1,507	\$1,507	\$ -	\$ -	\$ -	\$ -		
4	Total Revenue	\$23,391	\$25,055	\$21,885	\$23,548	\$ -	\$ -		
5	Operating Expenses	\$17,462	\$17,462	\$17,462	\$17,462	\$17,462	\$17,462		
6	Deemed Interest Expense	\$2,996	\$2,996	\$ -	\$ -	\$ -	\$ -		
8	Total Cost and Expenses	\$20,458	\$20,458	\$17,462	\$17,462	\$17,462	\$17,462		
9	Utility Income Before Income Taxes	\$2,934	\$4,597	\$4,423	\$6,086	(\$17,462)	(\$17,462)		
10	Tax Adjustments to Accounting Income per 2013 PILs model	(\$2,882)	(\$2,882)	(\$2,882)	(\$2,882)	\$ -	\$ -		
11	Taxable Income	\$52	\$1,715	\$1,541	\$3,204	(\$17,462)	(\$17,462)		
12 13	Income Tax Rate Income Tax on Taxable Income	23.84% \$12	23.84% \$409	23.84% \$367	23.84% \$764	23.84% (\$4,163)	23.84% (\$4,163)		
14	Income Tax Credits	(\$10)	(\$10)	(\$10)	(\$10)	\$ -	\$ -		
15	Utility Net Income	\$2,932	\$4,198	\$4,066	(\$17,860)	(\$13,299)	(\$17,860)		
16	Utility Rate Base	\$112,853	\$112,853	\$112,853	\$112,853	\$112,853	\$112,853		
17	Deemed Equity Portion of Rate Base	\$45,141	\$45,141	\$ -	\$ -	\$ -	\$ -		
18	Income/(Equity Portion of Rate Base)	6.49%	9.30%	0.00%	0.00%	0.00%	0.00%		
19	Target Return - Equity on Rate Base	9.30%	9.30%	0.00%	0.00%	0.00%	0.00%		
20	Deficiency/Sufficiency in Return on Equity	-2.81%	0.00%	0.00%	0.00%	0.00%	0.00%		
21	Indicated Rate of Return	5.25%	6.37%	3.60%	0.00%	-11.78%	0.00%		
22	Requested Rate of Return on Rate Base	6.37%	6.37%	0.00%	0.00%	0.00%	0.00%		
23	Deficiency/Sufficiency in Rate of Return	-1.12%	0.00%	3.60%	0.00%	-11.78%	0.00%		
24	Target Return on Equity	\$4,198	\$4,198	\$ -	\$ -	\$ -	\$ -		
25	Revenue Deficiency/(Sufficiency)	\$1,267	\$ -	(\$4,066)	\$ -	\$13,299	\$ -		
26	Gross Revenue Deficiency/(Sufficiency)	\$1,663 (1)		(\$5,338) (1)		\$17,462 (1)			

Notes: (1)

(1) Revenue Deficiency/Sufficiency divided by (1 - Tax Rate)



Revenue Requirement

Line No.	Particulars	Application				Per Board Decision
1	OM&A Expenses	\$12,423		\$12,423		\$12,423
2	Amortization/Depreciation	\$4.847		\$4.847		\$4.847
3	Property Taxes	\$162		\$162		\$162
5	Income Taxes (Grossed up)	\$399		\$399		\$399
6	Other Expenses	\$30		\$30		\$30
7	Return					
	Deemed Interest Expense	\$2,996		\$ -		\$ -
	Return on Deemed Equity	\$4,198		\$ -		\$ -
8	Service Revenue Requirement					
	(before Revenues)	\$25,055		\$17,860		\$17,860
9	Revenue Offsets	\$1,507		\$ -		\$ -
10	Base Revenue Requirement	\$23,548		\$17,860		\$17,860
	(excluding Tranformer Owership Allowance credit adjustment)					
11	Distribution revenue	\$23,548		\$ -		\$ -
12	Other revenue	\$1,507		\$		\$ -
13	Total revenue	\$25,055		\$ -		\$ -
14	Difference (Total Revenue Less Distribution Revenue					
	Requirement before Revenues)	<u> </u>	(1)	(\$17,860)	(1)	<u>(\$17,860)</u> (1)
<u>Notes</u> (1)	Line 11 - Line 8					

APPENDIX 6-3: BOARD REVENUE REQUIREMENT MODEL 2017



Utility Name	Oshawa PUC Networks Inc.	
Service Territory	Oshava	
Assigned EB Number	EB-2014-0101	
Name and Title	David Savage, Corporate Controller	
Phone Number	905-743 5219	
Email Address	dsavage@opuc.on.ca	

This Workbook Model is protected by copyright and is being made available to you solely for the purpose of filing your application. You may use and copy this model for that purpose, and provide a copy of this model to any person that is advising or assisting you in that regard. Except as indicated above, any copying, reproduction, publication, sale, adaptation, translation, modification, reverse engineering or other use or dissemination of this model without the express written consent of the Ontario Energy Board is prohibited. If you provide a copy of this model to a person that is advising or assisting you in preparing the application or reviewing your draft rate order, you must ensure that the person understands and agrees to the restrictions noted above.

While this model has been provided in Excel format and is required to be filed with the applications, the onus remains on the applicant to ensure the accuracy of the data and the results.



<u>1. Info</u>

2. Table of Contents

3. Data_Input_Sheet

6. Taxes_PILs 7. Cost_of_Capital

8. Rev_Def_Suff

4. Rate_Base

5. Utility Income

9. Rev_Reqt

Notes:

- (1) Pale green cells represent inputs
- (2) Pale green boxes at the bottom of each page are for additional notes
- Pale yellow cells represent drop-down lists
- Please note that this model uses MACROS. Before starting, please ensure that macros have been enabled.
- (3) (4) (5) Completed versions of the Revenue Requirement Work Form are required to be filed in working Microsoft Excel



Data Input (1)

		Initial Application	(2)			(6)	Per Board Decision
1	Rate Base						
	Gross Fixed Assets (average) Accumulated Depreciation (average)	\$193,295 (\$91,146)	(5)	\$	193,295 (\$91,146)		\$193,295 (\$91,146)
	Allowance for Working Capital: Controllable Expenses	\$12,887		\$	12,887		\$12,887
	Cost of Power	\$123,587		\$	123,587		\$123,587
	Working Capital Rate (%)	13.00%	(9)		13.00%	(9)	13.00%
2	Utility Income						
	Operating Revenues:						
	Distribution Revenue at Current Rates	\$23,951					
	Distribution Revenue at Proposed Rates	\$24,391					
	Other Revenue: Specific Service Charges	\$1,020					
	Late Payment Charges	\$310					
	Other Distribution Revenue	\$174					
	Other Income and Deductions	\$128					
	Total Revenue Offsets	\$1,631	(7)				
	Operating Expenses:	A 10,000			40.000		0 40.000
	OM+A Expenses Depreciation/Amortization	\$12,690 \$5,001		\$ \$	12,690 5,001		\$12,690 \$5,001
	Property taxes	\$165		3 S	165		\$165
		φ105		ψ	100		\$100
	Other expenses	\$31			31.29273358		\$31
3	Taxes/PILs						
	Taxable Income:						
	Adjustments required to arrive at taxable income	(\$2,912)	(3)				
	Utility Income Taxes and Rates:						
	Income taxes (not grossed up)	\$365					
	Income taxes (grossed up)	\$482					
	Federal tax (%) Provincial tax (%)	15.00% 9.24%					
	Income Tax Credits	(\$10)					
	Capitalization/Cost of Capital						
	Capital Structure:						
	Long-term debt Capitalization Ratio (%)	56.0%					
	Short-term debt Capitalization Ratio (%)	4.0%	(8)			(8)	
	Common Equity Capitalization Ratio (%)	40.0%					
	Prefered Shares Capitalization Ratio (%)	0.0%					
	Cost of Capital						
	Long-term debt Cost Rate (%)	4.60%					
	Short-term debt Cost Rate (%)	2.16%					
	Common Equity Cost Rate (%)	9.30%					
	Prefered Shares Cost Rate (%)	0.00%					

Notes:

General Data inputs are required on Sheets 3. Data from Sheet 3 will automatically complete calculations on sheets 4 through 9 (Rate Base through Revenue Requirement). Sheets 4 through 9 do not require any inputs except for notes that the Applicant may wish to enter to support the results. Pale green cells are available on sheets 4 through 9 to enter both footnotes beside key cells and the related text for the notes at the bottom of each sheet.
 All inputs are in dollars (\$) except where inputs are individually identified as percentages (%) Data in column E is for Application as originally filed. For updated revenue requirement as a result of interrogatory responses, technical or settlement conferences, etc., use colimn M and Adjustments in column I

- (2) (3) (4) (5) (6)

etc., use count in and Adjustments in countin 1 Net of addbacks and deductions to arrive at taxable income. Average of Gross Fixed Assets at beginning and end of the Test Year Average of Accumulated Depreciation at the beginning and end of the Test Year. Enter as a negative amount. Select option from drop-down list by clicking on cell M10. This column allows for the application update reflecting the end of discovery or Argument-in-Chief. Also, the outcome of any Settlement Process can be reflected. Input total revenue offsets for deriving the base revenue requirement from the service revenue requirement

- (7) (8) (9) 4.0% unless an Applicant has proposed or been approved for another amount. Starting with 2013, default Working Capital Allowance factor is 13% (of Cost of Power plus controllable expenses). Alternatively, WCA factor based on lead-lag study or approved WCA factor for another distributor, with supporting rationale.



Rate Base and Working Capital

	Rate Base						
Line No.	Particulars	_	Initial Application				Per Board Decision
1	Gross Fixed Assets (average)	(3)	\$193,295	\$ -	\$193,295	\$ -	\$193,295
2	Accumulated Depreciation (average)	(3)	(\$91,146)	\$ -	(\$91,146)	\$ -	(\$91,146)
3	Net Fixed Assets (average)	(3)	\$102,149	\$ -	\$102,149	\$ -	\$102,149
4	Allowance for Working Capital	(1)	\$17,742	<u> </u>	\$17,742	<u> </u>	\$17,742
5	Total Rate Base	-	\$119,891	<u> </u>	\$119,891	<u> </u>	\$119,891

(1) Allowance for Working Capital - Derivation

6	Controllable Expenses		\$12,887	\$ -		\$12,887	\$ -	\$12,887
7	Cost of Power		\$123,587	\$ -		\$123,587	\$ -	\$123,587
8	Working Capital Base		\$136,473	\$ -		\$136,473	\$ -	\$136,473
9	Working Capital Rate %	(2)	13.00%	0.00%		13.00%	0.00%	13.00%
10	Working Capital Allowance		\$17,742	\$ -	-	\$17,742	\$ -	\$17,742

<u>Notes</u>

(2) Some Applicants may have a unique rate as a result of a lead-lag study. The default rate for 2014 cost of service applications is 13%.

(2) Some Applicants may have a unique rate as a result of a
 (3) Average of opening and closing balances for the year.



Utility Income

Line No.	Particulars	Initial Application				Per Board Decision
	Operating Revenues:					
1	Distribution Revenue (at Proposed Rates)	\$24,391	(\$24,391)	\$ -	\$ -	\$ -
2		(1)\$1,631	(\$1,631)	\$ -	\$ -	\$ -
3	Total Operating Revenues	\$26,022	(\$26,022)	\$	<u> </u>	\$ -
	Operating Expenses:					
4	OM+A Expenses	\$12,690	\$ -	\$12,690	\$ -	\$12,690
5	Depreciation/Amortization	\$5,001	\$ -	\$5,001	\$ -	\$5,001
6	Property taxes	\$165	\$ -	\$165	\$ -	\$165
7	Capital taxes	\$ -	\$ -	\$ -	\$ -	\$ -
8	Other expense	\$31	\$ -	\$31	\$ -	\$31
9	Subtotal (lines 4 to 8)	\$17,888	\$ -	\$17,888	\$ -	\$17,888
10	Deemed Interest Expense	\$3,193	(\$3,193)	<u> </u>	<u> </u>	<u> </u>
11	Total Expenses (lines 9 to 10)	\$21,080	(\$3,193)	\$17,888	<u> </u>	\$17,888
12	Utility income before					
	income taxes	\$4,942	(\$22,830)	(\$17,888)	\$ -	(\$17,888)
13	Income taxes (grossed-up)	\$482	\$ -	\$482	<u> </u>	\$482
14	Utility net income	\$4,460	(\$22,830)	(\$18,370)	\$	(\$18,370)
	0/ D / D					
Notes	Other Revenues / Reven	nue Offsets				
(1)	Specific Service Charges	\$1,020		\$ -		\$ -
.,	Late Payment Charges	\$310		\$ -		\$ -
	Other Distribution Revenue	\$174		\$ -		\$ -
	Other Income and Deductions	\$128		<u> </u>		<u> </u>
	Total Revenue Offsets	\$1,631	\$	<u> </u>	<u> </u>	<u> </u>



Taxes/PILs

Line No.	Particulars	Application		Per Board Decision
	Determination of Taxable Income			
1	Utility net income before taxes	\$4,460	\$ -	\$ -
2	Adjustments required to arrive at taxable utility income	(\$2,912)	\$ -	(\$2,912)
3	Taxable income	\$1,548	<u> </u>	(\$2,912)
	Calculation of Utility income Taxes			
4	Income taxes	\$365	\$365	\$365
6	Total taxes	\$365	\$365	\$365
7	Gross-up of Income Taxes	\$117	\$117	\$117
8	Grossed-up Income Taxes	\$482	\$482	\$482
9	PILs / tax Allowance (Grossed-up Income taxes + Capital taxes)	\$482	\$482	\$482
10	Other tax Credits	(\$10)	(\$10)	(\$10)
	<u>Tax Rates</u>			
11 12 13	Federal tax (%) Provincial tax (%) Total tax rate (%)	15.00% 9.24% 24.24%	15.00% 9.24% 24.24%	15.00% 9.24% 24.24%



Capitalization/Cost of Capital

Line No.	Particulars	Capitalization Ratio		Cost Rate	Return
		Initial App	olication		
		(%)	(\$)	(%)	(\$)
	Debt				
1	Long-term Debt	56.00%	\$67,139	4.60%	\$3,089
2	Short-term Debt	4.00%	\$4,796	2.16%	\$104
3	Total Debt	60.00%	\$71,934	4.44%	\$3,193
	Equity				
4	Common Equity	40.00%	\$47,956	9.30%	\$4,460
5	Preferred Shares	0.00%	\$ -	0.00%	\$ -
6	Total Equity	40.00%	\$47,956	9.30%	\$4,460
7	Total	100.00%	\$119,891	6.38%	\$7,653
		(%)	(\$)	(%)	(\$)
	Debt	(70)	(Φ)	(78)	(Φ)
1	Long-term Debt	0.00%	\$ -	0.00%	\$ -
2	Short-term Debt	0.00%	\$ -	0.00%	\$ -
3	Total Debt	0.00%	\$ -	0.00%	\$ -
	Equity				
4	Common Equity	0.00%	\$ -	0.00%	\$ -
5	Preferred Shares	0.00%	\$ -	0.00%	\$ -
6	Total Equity	0.00%	\$ -	0.00%	\$ -
7	Total	0.00%	\$119,891	0.00%	\$ -
		Per Board	Decision		
		(%)	(\$)	(%)	(\$)
	Debt				
8	Long-term Debt	0.00%	\$ -	4.60%	\$ -
9	Short-term Debt	0.00%	\$ -	2.16%	\$ -
10	Total Debt	0.00%	\$ -	0.00%	\$ -
	Equity				
11	Common Equity	0.00%	\$ -	9.30%	\$ -
12	Preferred Shares	0.00%	\$ -	0.00%	<u> </u>
13	Total Equity	0.00%	\$ -	0.00%	\$ -
14	Total	0.00%	\$119,891	0.00%	\$ -

<u>Notes</u>



Revenue Deficiency/Sufficiency

		Initial Appl	Ication			Per Board D	Decision
Line No.	Particulars	At Current Approved Rates	At Proposed Rates	At Current Approved Rates	At Proposed Rates	At Current Approved Rates	At Proposed Rates
1	Revenue Deficiency from Below		\$441		(\$7,008)		\$17,888
2	Distribution Revenue	\$23,951	\$23,951	\$23,951	\$31,399	\$ -	(\$17,888)
3	Other Operating Revenue Offsets - net	\$1,631	\$1,631	\$ -	\$ -	\$ -	\$
4	Total Revenue	\$25,582	\$26,022	\$23,951	\$24,391	\$ -	\$
5	Operating Expenses	\$17,888	\$17,888	\$17,888	\$17,888	\$17,888	\$17,888
6	Deemed Interest Expense	\$3,193	\$3,193	\$ -	\$ -	\$ -	\$-
8	Total Cost and Expenses	\$21,080	\$21,080	\$17,888	\$17,888	\$17,888	\$17,888
9	Utility Income Before Income Taxes	\$4,501	\$4,942	\$6,063	\$6,504	(\$17,888)	(\$17,888)
10	Tax Adjustments to Accounting Income per 2013 PILs model	(\$2,912)	(\$2,912)	(\$2,912)	(\$2,912)	\$ -	\$ -
11	Taxable Income	\$1,589	\$2,030	\$3,151	\$3,592	(\$17,888)	(\$17,888)
12	Income Tax Rate	24.24%	24.24%	24.24%	24.24%	24.24%	24.24%
13	Income Tax on Taxable Income	\$385	\$492	\$764	\$871	(\$4,336)	(\$4,336)
14	Income Tax Credits	(\$10)	(\$10)	(\$10)	(\$10)	\$ -	\$ -
15	Utility Net Income	\$4,126	\$4,460	\$5,309	(\$18,370)	(\$13,552)	(\$18,370)
16	Utility Rate Base	\$119,891	\$119,891	\$119,891	\$119,891	\$119,891	\$119,891
17	Deemed Equity Portion of Rate Base	\$47,956	\$47,956	\$ -	\$ -	\$ -	\$
18	Income/(Equity Portion of Rate Base)	8.60%	9.30%	0.00%	0.00%	0.00%	0.00%
19	Target Return - Equity on Rate Base	9.30%	9.30%	0.00%	0.00%	0.00%	0.00%
20	Deficiency/Sufficiency in Return on Equity	-0.70%	0.00%	0.00%	0.00%	0.00%	0.00%
21	Indicated Rate of Return	6.10%	6.38%	4.43%	0.00%	-11.30%	0.00%
22	Requested Rate of Return on Rate Base	6.38%	6.38%	0.00%	0.00%	0.00%	0.00%
23	Deficiency/Sufficiency in Rate of Return	-0.28%	0.00%	4.43%	0.00%	-11.30%	0.00%
24	Target Return on Equity	\$4,460	\$4,460	\$ -	\$ -	\$ -	\$
25 26	Revenue Deficiency/(Sufficiency) Gross Revenue Deficiency/(Sufficiency)	\$334 \$441 (1)	\$ -	(\$5,309) (\$7,008) (1)	\$ -	\$13,552 \$17,888 (1)	\$ -

Notes:

(1) Revenue Deficiency/Sufficiency divided by (1 - Tax Rate)



Revenue Requirement

Line No.	Particulars	Application				Per Board Decision	
1	OM&A Expenses	\$12,690		\$12,690		\$12,690	
2	Amortization/Depreciation	\$5,001		\$5,001		\$5,001	
3	Property Taxes	\$165		\$165		\$165	
5	Income Taxes (Grossed up)	\$482		\$482		\$482	
6	Other Expenses	\$31		\$31		\$31	
7	Return						
	Deemed Interest Expense	\$3,193		\$ -		\$ -	
	Return on Deemed Equity	\$4,460		\$ -		\$ -	
8	Service Revenue Requirement						
	(before Revenues)	\$26,022		\$18,370		\$18,370	
9	Revenue Offsets	\$1,631		\$ -		\$ -	
10	Base Revenue Requirement	\$24,391		\$18,370		\$18,370	
	(excluding Tranformer Owership Allowance credit adjustment)						
11	Distribution revenue	\$24,391		\$ -		\$ -	
12	Other revenue	\$1,631		<u> </u>		\$ -	
13	Total revenue	\$26,022		\$ -		\$ -	
14	Difference (Total Revenue Less Distribution Revenue						
	Requirement before Revenues)	<u> </u>	(1)	(\$18,370)	(1)	(\$18,370)	(1)
<u>Notes</u> (1)	Line 11 - Line 8						

APPENDIX 6-3: BOARD REVENUE REQUIREMENT MODEL 2018



Utility Name	Oshawa PUC Networks Inc.	
Service Territory	Oshawa	
Assigned EB Number	EB-2014-0101	
Name and Title	David Savage, Corporate Controller	
Phone Number	905-743 5219	
Email Address	dsavage@opuc.on.ca	

This Workbook Model is protected by copyright and is being made available to you solely for the purpose of filing your application. You may use and copy this model for that purpose, and provide a copy of this model to any person that is advising or assisting you in that regard. Except as indicated above, any copying, reproduction, publication, sale, adaptation, translation, modification, reverse engineering or other use or dissemination of this model without the express written consent of the Ontario Energy Board is prohibited. If you provide a copy of this model to a person that is advising or assisting you in preparing the application or reviewing your draft rate order, you must ensure that the person understands and agrees to the restrictions noted above.

While this model has been provided in Excel format and is required to be filed with the applications, the onus remains on the applicant to ensure the accuracy of the data and the results.



<u>1. Info</u>

2. Table of Contents

3. Data_Input_Sheet

6. Taxes_PILs

7. Cost_of_Capital 8. Rev_Def_Suff

9. Rev_Reqt

4. Rate_Base

5. Utility Income

Notes:

- (1) Pale green cells represent inputs
- (2) Pale green boxes at the bottom of each page are for additional notes
- Pale yellow cells represent drop-down lists
- Please note that this model uses MACROS. Before starting, please ensure that macros have been enabled.
- (3) (4) (5) Completed versions of the Revenue Requirement Work Form are required to be filed in working Microsoft Excel



Data Input (1)

		Initial Application	(2)			(6)	Per Board Decision	_
1	Rate Base							
	Gross Fixed Assets (average) Accumulated Depreciation (average) Allowance for Working Capital:	\$203,939 (\$94,761)	(5)	\$	203,939 (\$94,761)		\$203,939 (\$94,761)	
	Controllable Expenses Cost of Power	\$13,110 \$124,965		\$ \$	13,110 124,965		\$13,110 \$124,965	
	Working Capital Rate (%)	13.00%	(9)		13.00%	(9)	13.00%	(9)
2	Utility Income Operating Revenues:							
	Distribution Revenue at Current Rates Distribution Revenue at Proposed Rates Other Revenue:	\$24,855 \$25,605						
	Specific Service Charges Late Payment Charges	\$824 \$320						
	Other Distribution Revenue Other Income and Deductions	\$181 \$128						
	Total Revenue Offsets	\$1,452	(7)					
	Operating Expenses:							
	OM+A Expenses	\$12,909		\$	12,909		\$12,909	
	Depreciation/Amortization	\$5,203		\$	5,203		\$5,203	
	Property taxes	\$168		\$	168		\$168	
	Other expenses	\$32		з	32.47875691		\$32	
3	Taxes/PILs							
	Taxable Income: Adjustments required to arrive at taxable income	(\$2,790)	(3)					
	Utility Income Taxes and Rates:							
	Income taxes (not grossed up)	\$469 \$622						
	Income taxes (grossed up) Federal tax (%)	\$622						
	Provincial tax (%)	9.69%						
	Income Tax Credits	(\$10)						
4	Capitalization/Cost of Capital Capital Structure:							
	Long-term debt Capitalization Ratio (%)	56.0%						
	Short-term debt Capitalization Ratio (%)	4.0% 40.0%	(8)			(8)		(8)
	Common Equity Capitalization Ratio (%) Prefered Shares Capitalization Ratio (%)	40.0%						
		100.0%						
	Cost of Capital							
	Long-term debt Cost Rate (%)	4.61%						
	Short-term debt Cost Rate (%)	2.16%						
	Common Equity Cost Rate (%) Prefered Shares Cost Rate (%)	9.30% 0.00%						
	Fieleleu Stiales Cost Rate (%)	0.00%						

Notes:

General Data inputs are required on Sheets 3. Data from Sheet 3 will automatically complete calculations on sheets 4 through 9 (Rate Base through Revenue Requirement). Sheets 4 through 9 do not require any inputs except for notes that the Applicant may wish to enter to support the results. Pale green cells are available on sheets 4 through 9 to enter both footnotes beside key cells and the related text for the notes at the bottom of each sheet.

(1)

All inputs are in dollars (\$) except where inputs are individually identified as percentages (%) Data in column E is for Application as originally filed. For updated revenue requirement as a result of interrogatory responses, technical or settlement conferences, etc., use colimn M and Adjustments in column I

Net of addbacks and deductions to arrive at taxable income.

(2) (3) (4) (5) (6)

Average of Gross Fixed Assets at beginning and end of the Test Year Average of Accumulated Depreciation at the beginning and end of the Test Year. Enter as a negative amount. Select option from drop-down list by clicking on cell M10. This column allows for the application update reflecting the end of discovery or Argument-in-Chief. Also, the outcome of any Settlement Process can be reflected. Input total revenue offsets for deriving the base revenue requirement from the service revenue requirement

(7)

4.0% unless an Applicant has proposed or been approved for another amount. Starting with 2013, default Working Capital Allowance factor is 13% (of Cost of Power plus controllable expenses). Alternatively, WCA factor based on lead-lag study or approved WCA factor for another distributor, with supporting rationale. (8) (9)



Rate Base and Working Capital

Rate Base

Line No.	Particulars	-	Initial Application				Per Board Decision
1 2 3	Gross Fixed Assets (average) Accumulated Depreciation (average) Net Fixed Assets (average)	(3) (3) (3)	\$203,939 (\$94,761) \$109,178	\$ - <u>\$ -</u> \$ -	\$203,939 (\$94,761) \$109,178	\$ - \$ - \$ -	\$203,939 (\$94,761) \$109,178
4	Allowance for Working Capital	(1)	\$17,950	<u> -</u>	\$17,950	\$ -	\$17,950
5	Total Rate Base	-	\$127,128	\$ -	\$127,128	<u> - </u>	\$127,128

Allowance for Working Capital - Derivation (1)

7	Controllable Expenses Cost of Power Working Capital Base		\$13,110 <u>\$124,965</u> \$138,075	\$ - <u>\$ -</u> \$ -	\$13,110 <u>\$124,965</u> \$138,075	\$ - \$ - \$ -	\$13,110 <u>\$124,965</u> \$138,075
9	Working Capital Rate %	(2)	13.00%	0.00%	13.00%	0.00%	13.00%
10	Working Capital Allowance		\$17,950	\$ -	\$17,950	\$ -	\$17,950

<u>Notes</u> (2) (3)

Some Applicants may have a unique rate as a result of a lead-lag study. The default rate for 2014 cost of service applications is 13%.

Average of opening and closing balances for the year.



Utility Income

Line No.	Particulars	Initial Application				Per Board Decision
	Operating Revenues:	* 05 005		\$ -	•	¢
1	Distribution Revenue (at Proposed Rates)	\$25,605	(\$25,605)	\$ -	\$ -	\$ -
2)\$1,452	(\$1,452)	\$ -	\$ -	\$ -
3	Total Operating Revenues	\$27,058	(\$27,058)	\$	<u> </u>	<u> </u>
	Operating Expenses:					
4	OM+A Expenses	\$12,909	\$ -	\$12,909	\$ -	\$12,909
5	Depreciation/Amortization	\$5,203	\$ -	\$5,203	\$ -	\$5,203
6	Property taxes	\$168	\$ -	\$168	\$ -	\$168
7	Capital taxes	\$ -	\$ -	\$ -	\$ -	\$ -
8	Other expense	\$32	\$ -	\$32	\$ -	\$32
9	Subtotal (lines 4 to 8)	\$18,313	\$ -	\$18,313	\$ -	\$18,313
10	Deemed Interest Expense	\$3,393	(\$3,393)	\$	<u> </u>	<u> </u>
11	Total Expenses (lines 9 to 10)	\$21,706	(\$3,393)	\$18,313	<u> </u>	\$18,313
12	Utility income before					
	income taxes	\$5,352	(\$23,665)	(\$18,313)	\$ -	(\$18,313)
13	Income taxes (grossed-up)	\$622	\$	\$622	\$ -	\$622
14	Utility net income	\$4,729	(\$23,665)	(\$18,935)	<u> </u>	(\$18,935)
<u>Notes</u>	Other Revenues / Reven	ue Offsets				
(1)	Specific Service Charges Late Payment Charges Other Distribution Revenue Other Income and Deductions	\$824 \$320 \$181 \$128		\$ - \$ - \$ - \$ - \$ -		\$ - \$ - \$ - \$ -
	Total Revenue Offsets	\$1,452	<u> </u>	<u> </u>	<u> </u>	<u> </u>



Taxes/PILs

Line No.	Particulars	Application		Per Board Decision
	Determination of Taxable Income			
1	Utility net income before taxes	\$4,729	\$ -	\$ -
2	Adjustments required to arrive at taxable utility income	(\$2,790)	\$ -	(\$2,790)
3	Taxable income	\$1,939	<u> </u>	(\$2,790)
	Calculation of Utility income Taxes			
4	Income taxes	\$469	\$469	\$469
6	Total taxes	\$469	\$469	\$469
7	Gross-up of Income Taxes	\$154	\$154	\$154
8	Grossed-up Income Taxes	\$622	\$622	\$622
9	PILs / tax Allowance (Grossed-up Income taxes + Capital taxes)	\$622	\$622	\$622
10	Other tax Credits	(\$10)	(\$10)	(\$10)
	Tax Rates			
11 12 13	Federal tax (%) Provincial tax (%) Total tax rate (%)	15.00% 9.69% 24.69%	15.00% 9.69% 24.69%	15.00% 9.69% 24.69%



Capitalization/Cost of Capital

Line No.	Particulars	Capitaliza	tion Ratio	Cost Rate	Return
		Initial Ap	plication		
		(%)	(\$)	(%)	(\$)
1	Debt Long-term Debt	56.00%	\$71,192	4.61%	\$3,283
2	Short-term Debt	4.00%	\$5,085	2.16%	\$3,283 \$110
3	Total Debt	60.00%	\$76,277	4.45%	\$3,393
	Equity				
4	Common Equity	40.00%	\$50,851	9.30%	\$4,729
5	Preferred Shares	0.00%	\$ -	0.00%	\$ -
6	Total Equity	40.00%	\$50,851	9.30%	\$4,729
7	Total	100.00%	\$127,128	6.39%	\$8,122
		(%)	(\$)	(%)	(\$)
	Debt			((1)
1	Long-term Debt	0.00%	\$ -	0.00%	\$ -
2	Short-term Debt	0.00%	\$ -	0.00%	<u> </u>
3	Total Debt	0.00%	\$ -	0.00%	\$ -
	Equity				
4	Common Equity	0.00%	\$ -	0.00%	\$ -
5 6	Preferred Shares Total Equity	0.00%	<u>\$ -</u> \$ -	0.00%	<u> </u>
U		0.0078	φ-	0.0078	<u> </u>
7	Total	0.00%	\$127,128	0.00%	\$ -
		Per Board	I Decision		
		(%)	(\$)	(%)	(\$)
	Debt		•		•
8 9	Long-term Debt Short-term Debt	0.00% 0.00%	\$ - \$ -	4.61% 2.16%	\$ - \$ -
10	Total Debt	0.00%	<u> </u>	0.00%	\$-
11	Equity Common Equity	0.00%	\$ -	9.30%	\$ -
12	Preferred Shares	0.00%	\$ -	0.00%	\$ -
13	Total Equity	0.00%	\$ -	0.00%	\$ -
14	Total	0.00%	\$127,128	0.00%	\$ -

<u>Notes</u> (1)

Data in column E is for Application as originally filed. For updated revenue requirement as a result of interrogatory responses, technical or settlement conferences, etc., use colimn M and Adjustments in column I



Revenue Deficiency/Sufficiency

		Initial App	lication			Per Board D	Decision	
Line No.	Particulars	At Current At Proposed Approved Rates Rates		At Current Approved Rates	At Proposed Rates	At Current Approved Rates	At Proposed Rates	
1	Revenue Deficiency from Below		\$750		(\$7,471)		\$18,313	
2	Distribution Revenue	\$24,855	\$24,855	\$24,855	\$33,076	\$ -	(\$18,313)	
3	Other Operating Revenue Offsets - net	\$1,452	\$1,452	\$ -	\$ -	\$ -	\$ -	
4	Total Revenue	\$26,308	\$27,058	\$24,855	\$25,605	\$ -	\$ -	
5 6	Operating Expenses	\$18,313	\$18,313 \$3,393	\$18,313	\$18,313	\$18,313	\$18,313	
	Deemed Interest Expense	\$3,393		\$ -	\$ - \$18,313	<u>\$-</u>	- \$	
8	Total Cost and Expenses	\$21,706	\$21,706	\$18,313	\$18,313	\$18,313	\$18,313	
9	Utility Income Before Income Taxes	\$4,602	\$5,352	\$6,543	\$7,292	(\$18,313)	(\$18,313)	
10	Tax Adjustments to Accounting Income per 2013 PILs model	(\$2,790)	(\$2,790)	(\$2,790)	(\$2,790)	\$ -	\$ -	
11	Taxable Income	\$1,811	\$2,561	\$3,752	\$4,502	(\$18,313)	(\$18,313)	
12 13	Income Tax Rate Income Tax on Taxable	24.69% \$447	24.69% \$632	24.69% \$927	24.69% \$1,112	24.69% (\$4,522)	24.69% (\$4,522)	
15	Income	\$ 44 7	\$03Z	\$9Z1	φ1,112	(\$4,322)	(\$4,522)	
14	Income Tax Credits	(\$10)	(\$10)	(\$10)	(\$10)	\$ -	\$ -	
15	Utility Net Income	\$4,164	\$4,729	\$5,626	(\$18,935)	(\$13,791)	(\$18,935)	
16	Utility Rate Base	\$127,128	\$127,128	\$127,128	\$127,128	\$127,128	\$127,128	
17	Deemed Equity Portion of Rate Base	\$50,851	\$50,851	\$ -	\$ -	\$ -	\$ -	
18	Income/(Equity Portion of Rate Base)	8.19%	9.30%	0.00%	0.00%	0.00%	0.00%	
19	Target Return - Equity on Rate Base	9.30%	9.30%	0.00%	0.00%	0.00%	0.00%	
20	Deficiency/Sufficiency in Return on Equity	-1.11%	0.00%	0.00%	0.00%	0.00%	0.00%	
21	Indicated Rate of Return	5.94%	6.39%	4.43%	0.00%	-10.85%	0.00%	
22	Requested Rate of Return on Rate Base	6.39%	6.39%	0.00%	0.00%	0.00%	0.00%	
23	Deficiency/Sufficiency in Rate of Return	-0.44%	0.00%	4.43%	0.00%	-10.85%	0.00%	
24	Target Return on Equity	\$4,729	\$4,729	\$ -	\$ -	\$-	\$ -	
25	Revenue Deficiency/(Sufficiency)	\$565	\$ -	(\$5,626)	\$ -	\$13,791	\$ -	
26	Gross Revenue	\$750 (1)		(\$ 7,471) (1)		\$18,313 (1)		
	Deficiency/(Sufficiency)							

Notes:

(1) Revenue Deficiency/Sufficiency divided by (1 - Tax Rate)



Revenue Requirement

Line No.	Particulars	Application			-	Per Board Decision
1	OM&A Expenses	\$12,909		\$12,909		\$12,909
2	Amortization/Depreciation	\$5,203		\$5,203		\$5,203
3	Property Taxes	\$168		\$168		\$168
5	Income Taxes (Grossed up)	\$622		\$622		\$622
6	Other Expenses	\$32		\$32		\$32
7	Return					
	Deemed Interest Expense	\$3,393		\$ -		\$ -
	Return on Deemed Equity	\$4,729		\$ -	-	\$ -
8	Service Revenue Requirement					
	(before Revenues)	\$27,058		\$18,935		\$18,935
9	Revenue Offsets	\$1,452		\$ -		\$ -
10	Base Revenue Requirement	\$25,605		\$18,935		\$18,935
	(excluding Tranformer Owership Allowance credit adjustment)				-	
11	Distribution revenue	\$25,605		\$ -		\$ -
12	Other revenue	\$1,452		\$ -	_	\$ -
13	Total revenue	\$27,058		\$ -	_	\$ -
14	Difference (Total Revenue Less Distribution Revenue					
	Requirement before Revenues)	\$	(1)	(\$18,935)	(1)	<u>(\$18,935)</u> (1)
<u>Notes</u> (1)	Line 11 - Line 8					

APPENDIX 6-5: BOARD REVENUE REQUIREMENT MODEL 2019



Utility Name	Oshawa PUC Networks Inc.	
Service Territory	Oshawa	
Assigned EB Number	EB-2014-0101	
Name and Title	David Savage, Corporate Controller	
Phone Number	905-743 5219	
Email Address	dsavage@opuc.on.ca	

This Workbook Model is protected by copyright and is being made available to you solely for the purpose of filing your application. You may use and copy this model for that purpose, and provide a copy of this model to any person that is advising or assisting you in that regard. Except as indicated above, any copying, reproduction, publication, sale, adaptation, translation, modification, reverse engineering or other use or dissemination of this model without the express written consent of the Ontario Energy Board is prohibited. If you provide a copy of this model to a person that is advising or assisting you in preparing the application or reviewing your draft rate order, you must ensure that the person understands and agrees to the restrictions noted above.

While this model has been provided in Excel format and is required to be filed with the applications, the onus remains on the applicant to ensure the accuracy of the data and the results.



<u>1. Info</u>

2. Table of Contents

3. Data_Input_Sheet

6. Taxes_PILs 7. Cost_of_Capital

8. Rev_Def_Suff

4. Rate_Base

5. Utility Income

9. Rev_Reqt

Notes:

- (1) Pale green cells represent inputs
- (2) Pale green boxes at the bottom of each page are for additional notes
- Pale yellow cells represent drop-down lists
 Please note that this model uses MACROS
 Completed versions of the Revenue Requirement
- (4) Please note that this model uses MACROS. Before starting, please ensure that macros have been enabled.
- (5) Completed versions of the Revenue Requirement Work Form are required to be filed in working Microsoft Excel



Data Input (1)

	Initial Application	(2)			(6)	Per Board Decision	_
Rate Base							
Gross Fixed Assets (average) Accumulated Depreciation (average) Allowance for Working Capital:	\$213,517 (\$98,399)	(5)	\$	213,517 (\$98,399)		\$213,517 (\$98,399)	
Controllable Expenses Cost of Power	\$13,183 \$125,922		\$ \$	13,183 125,922		\$13,183 \$125,922	
Working Capital Rate (%)	13.00%	(9)		13.00%	(9)	13.00%	5
Utility Income							
Operating Revenues:							
Distribution Revenue at Current Rates Distribution Revenue at Proposed Rates	\$26,089 \$26,194						
Other Revenue:							
Specific Service Charges	\$872						
Late Payment Charges	\$331						
Other Distribution Revenue	\$187						
Other Income and Deductions	\$128						
Total Revenue Offsets	\$1,518	(7)					
Operating Expenses:							
OM+A Expenses	\$12,978		\$	12,978		\$12,978	
Depreciation/Amortization	\$5,371		\$	5,371		\$5,371	
Property taxes	\$172		\$	172		\$172	
Other expenses	\$33			33.21907091		\$33	
Taxes/PILs Taxable Income:							
Adjustments required to arrive at taxable	(\$2,955)	(3)					
income Utility Income Taxes and Rates:	(ψ2,933)	(3)					
Income taxes (not grossed up)	\$485						
Income taxes (grossed up)	\$645						
Federal tax (%)	15.00%						
Provincial tax (%)	9.75%						
Income Tax Credits	(\$10)						
Capitalization/Cost of Capital Capital Structure:							
Long-term debt Capitalization Ratio (%)	56.0%						
Short-term debt Capitalization Ratio (%)	4.0%	(8)			(8)		
Common Equity Capitalization Ratio (%)	40.0%						
Prefered Shares Capitalization Ratio (%)	0.0%						
	100.0%						
Cost of Capital							
Long-term debt Cost Rate (%)	4.62%						
Short-term debt Cost Rate (%)	2.16%						
Common Equity Cost Rate (%)	9.30%						
Prefered Shares Cost Rate (%)	0.00%						

Notes:

General Data inputs are required on Sheets 3. Data from Sheet 3 will automatically complete calculations on sheets 4 through 9 (Rate Base through Revenue Requirement). Data in plus are required on Sneets 3. Data nom Sneet 3 win automatically complete calculations on sneets 4 infoogn 9 (rate base infoogn Revenue Requirement). Sheets 4 through 9 do not require any inputs except for notes that the Applicant may wish to enter to support the results. Pale green cells are available on sheets 4 through 9 to enter both footnotes beside key cells and the related text for the notes at the bottom of each sheet. All inputs are in dollars (\$) except where inputs are individually identified as percentages (%) Data in column E is for Application as originally filed. For updated revenue requirement as a result of interrogatory responses, technical or settlement conferences, etc., use colimn M and Adjustments in column I

(1)

- (2) (3)
- Net of addbacks and deductions to arrive at taxable income.

(4) (5)

The unaccusacks and beductions to annive at taxable income. Average of Gross Fixed Assets at beginning and end of the Test Year Average of Accumulated Depreciation at the beginning and end of the Test Year. Enter as a negative amount. Select option from drop-down list by clicking on cell M10. This column allows for the application update reflecting the end of discovery or Argument-in-Chief. Also, the outcome of any Settlement Process can be reflected. (6)

- (7) Input total revenue offsets for deriving the base revenue requirement from the service revenue requirement



Rate Base and Working Capital

Rate Base

Line No.	Particulars	_	Initial Application				Per Board Decision
1 2		(3) (3)	\$213,517 (\$98,399)	\$ - \$ -	\$213,517 (\$98,399)	\$ - \$ -	\$213,517 (\$98,399)
3	Net Fixed Assets (average) Allowance for Working Capital	(3)	\$115,118 \$18,084	\$ - \$ -	\$115,118 \$18,084	\$ - \$ -	\$115,118 \$18,084
5	Total Rate Base		\$133,201	\$	\$133,201	\$-	\$133,201

Allowance for Working Capital - Derivation (1)

6 7 8	Controllable Expenses Cost of Power Working Capital Base		\$13,183 \$125,922 \$139,105	\$ - <u>\$ -</u> \$ -	\$13,183 <u>\$125,922</u> \$139,105	\$ - <u>\$ -</u> \$ -	\$13,183 \$125,922 \$139,105
9	Working Capital Rate %	(2)	13.00%	0.00%	13.00%	0.00%	13.00%
10	Working Capital Allowance		\$18,084	\$ -	\$18,084	\$ -	\$18,084

<u>Notes</u> (2) (3)

Some Applicants may have a unique rate as a result of a lead-lag study. The default rate for 2014 cost of service applications is 13%.

Average of opening and closing balances for the year.



Utility Income

Line No.	Particulars	Initial Application				Per Board Decision
1	Operating Revenues: Distribution Revenue (at Proposed Rates)	\$26,194	(\$26,194)	\$ -	\$ -	\$ -
2		(1) \$1,518	(\$1,518)	<u> </u>	\$ -	\$ -
3	Total Operating Revenues	\$27,711	(\$27,711)	<u> </u>	<u> </u>	\$
4 5 6 7 8 9 10	Operating Expenses: OM+A Expenses Depreciation/Amortization Property taxes Capital taxes Other expense Subtotal (lines 4 to 8) Deemed Interest Expense Total Expenses (lines 9 to 10)	\$12,978 \$5,371 \$172 \$- \$33 \$18,554 \$3,558 \$22,112	\$ - \$ - \$ - \$ - \$ - \$ - (\$3,558) (\$3,558)	\$12,978 \$5,371 \$172 \$- \$33 \$18,554 \$- \$18,554	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$12,978 \$5,371 \$172 \$- \$33 \$18,554 \$- \$18,554
12	Utility income before income taxes	\$5,600	(\$24,154)	(\$18,554)	<u> </u>	(\$18,554)
13	Income taxes (grossed-up)	\$645	\$ -	\$645	\$ -	\$645
14	Utility net income	\$4,955	(\$24,154)	(\$19,199)	\$ -	(\$19,199)
<u>Notes</u>	Other Revenues / Reve	nue Offsets				
(1)	Specific Service Charges Late Payment Charges Other Distribution Revenue Other Income and Deductions Total Revenue Offsets	\$872 \$331 \$187 \$128 \$1,518	\$-	\$ - \$ - \$ - \$ - \$ - \$ -	<u> </u>	\$ - \$ - \$ - \$ - \$ -
		<u></u> \$1,318	φ-	φ -	φ-	<u> </u>



Taxes/PILs

Line No.	Particulars	Application		Per Board Decision
	Determination of Taxable Income			
1	Utility net income before taxes	\$4,955	\$ -	\$ -
2	Adjustments required to arrive at taxable utility income	(\$2,955)	\$ -	(\$2,955)
3	Taxable income	\$2,000	\$ -	(\$2,955)
	Calculation of Utility income Taxes			
4	Income taxes	\$485	\$485	\$485
6	Total taxes	\$485	\$485	\$485
7	Gross-up of Income Taxes	\$160	\$160	\$160
8	Grossed-up Income Taxes	\$645	\$645	\$645
9	PILs / tax Allowance (Grossed-up Income taxes + Capital taxes)	\$645	\$645	\$645
10	Other tax Credits	(\$10)	(\$10)	(\$10)
	Tax Rates			
11 12 13	Federal tax (%) Provincial tax (%) Total tax rate (%)	15.00% <u>9.75%</u> 24.75%	15.00% <u>9.75%</u> 24.75%	15.00% <u>9.75%</u> 24.75%



Capitalization/Cost of Capital

Line No.	Particulars	Capitaliza	ation Ratio	Cost Rate	Return	
		Initial Application				
	Debt	(%)	(\$)	(%)	(\$)	
1	Long-term Debt	56.00%	\$74,593	4.62%	\$3,443	
2	Short-term Debt	4.00%	\$5,328	2.16%	\$115	
3	Total Debt	60.00%	\$79,921	4.45%	\$3,558	
	Equity					
4	Common Equity	40.00%	\$53,281	9.30%	\$4,955	
5	Preferred Shares	0.00%	\$ -	0.00%	\$ -	
6	Total Equity	40.00%	\$53,281	9.30%	\$4,955	
7	Total	100.00%	\$133,201	6.39%	\$8,513	
		(%)	(\$)	(%)	(\$)	
	Debt					
1	Long-term Debt	0.00%	\$ -	0.00%	\$ -	
2	Short-term Debt	0.00%	\$ -	0.00%	\$ -	
3	Total Debt	0.00%	\$ -	0.00%	\$ -	
	Equity					
4	Common Equity	0.00%	\$ -	0.00%	\$ -	
5 6	Preferred Shares Total Equity	0.00%	<u> </u>	0.00%	<u> </u>	
0	Total Equity	0.00%	<u> </u>	0.00%	i	
7	Total	0.00%	\$133,201	0.00%	\$ -	
		Per Boar	d Decision			
	Debt	(%)	(\$)	(%)	(\$)	
8	Long-term Debt	0.00%	\$ -	4.62%	\$ -	
9	Short-term Debt	0.00%	\$ -	2.16%	\$-	
10	Total Debt	0.00%	\$ -	0.00%	\$ -	
	Equity					
11	Common Equity	0.00%	\$ -	9.30%	\$ -	
12	Preferred Shares	0.00%	<u> </u>	0.00%	<u> </u>	
13	Total Equity	0.00%	\$ -	0.00%	\$ -	
14	Total	0.00%	\$133,201	0.00%	\$ -	

<u>Notes</u>

(1)

Data in column E is for Application as originally filed. For updated revenue requirement as a result of interrogatory responses, technical or settlement conferences, etc., use colimn M and Adjustments in column I



Revenue Deficiency/Sufficiency

		Initial Application				Per Board Decision		
Line No.	Particulars	At Current Approved Rates	At Proposed Rates	At Current Approved Rates	At Proposed Rates	At Current Approved Rates	At Proposed Rates	
1	Revenue Deficiency from Below		\$105		(\$8,520)		\$18,554	
2	Distribution Revenue	\$26,089	\$26,089	\$26,089	\$34,713	\$ -	(\$18,554)	
3	Other Operating Revenue Offsets - net	\$1,518	\$1,518	\$ -	\$ -	\$ -	\$ -	
4	Total Revenue	\$27,606	\$27,711	\$26,089	\$26,194	\$ -	\$ -	
5	Operating Expenses	\$18,554	\$18,554	\$18,554	\$18,554	\$18,554	\$18,554	
6	Deemed Interest Expense	\$3,558	\$3,558	\$ -	\$ -	\$ -	\$ -	
8	Total Cost and Expenses	\$22,112	\$22,112	\$18,554	\$18,554	\$18,554	\$18,554	
9	Utility Income Before Income Taxes	\$5,494	\$5,600	\$7,534	\$7,640	(\$18,554)	(\$18,554)	
10	Tax Adjustments to Accounting Income per 2013 PILs model	(\$2,955)	(\$2,955)	(\$2,955)	(\$2,955)	\$ -	\$ -	
11	Taxable Income	\$2,539	\$2,645	\$4,579	\$4,685	(\$18,554)	(\$18,554)	
12	Income Tax Rate	24.75%	24.75%	24.75%	24.75%	24.75%	24.75%	
13	Income Tax on Taxable Income	\$628	\$655	\$1,133	\$1,159	(\$4,592)	(\$4,592)	
14	Income Tax Credits	(\$10)	(\$10)	(\$10)	(\$10)	\$ -	\$ -	
15	Utility Net Income	\$4,876	\$4,955	\$6,411	(\$19,199)	(\$13,962)	(\$19,199)	
16	Utility Rate Base	\$133,201	\$133,201	\$133,201	\$133,201	\$133,201	\$133,201	
17	Deemed Equity Portion of Rate Base	\$53,281	\$53,281	\$ -	\$ -	\$ -	\$ -	
18	Income/(Equity Portion of Rate Base)	9.15%	9.30%	0.00%	0.00%	0.00%	0.00%	
19	Target Return - Equity on Rate Base	9.30%	9.30%	0.00%	0.00%	0.00%	0.00%	
20	Deficiency/Sufficiency in Return on Equity	-0.15%	0.00%	0.00%	0.00%	0.00%	0.00%	
21	Indicated Rate of Return	6.33%	6.39%	4.81%	0.00%	-10.48%	0.00%	
22	Requested Rate of Return on Rate Base	6.39%	6.39%	0.00%	0.00%	0.00%	0.00%	
23	Deficiency/Sufficiency in Rate of Return	-0.06%	0.00%	4.81%	0.00%	-10.48%	0.00%	
24	Target Return on Equity	\$4,955	\$4,955	\$ -	\$ -	\$ -	\$ - ¢	
25 26	Revenue Deficiency/(Sufficiency) Gross Revenue	\$79	\$ -	(\$6,411)	\$ -	\$13,962 \$10,554 (1)	\$ -	
26		\$105 (1))	(\$8,520) (1)		\$18,554 (1)		
	Deficiency/(Sufficiency)							

Notes:

(1) Revenue Deficiency/Sufficiency divided by (1 - Tax Rate)



Revenue Requirement

Line No.	Particulars	Application			P	er Board Decision
1	OM&A Expenses	\$12,978		\$12,978		\$12,978
2	Amortization/Depreciation	\$5,371		\$5,371		\$5,371
3	Property Taxes	\$172		\$172		\$172
5	Income Taxes (Grossed up)	\$645		\$645		\$645
6	Other Expenses	\$33		\$33		\$33
7	Return	• • •		•••		
	Deemed Interest Expense	\$3,558		\$ -		\$ -
	Return on Deemed Equity	\$4,955		\$ -		\$ -
8	Service Revenue Requirement					
	(before Revenues)	\$27,711		\$19,199	_	\$19,199
9	Revenue Offsets	\$1,518		\$ -		\$ -
10	Base Revenue Requirement	\$26,194		\$19,199		\$19,199
	(excluding Tranformer Owership Allowance credit adjustment)				_	
11	Distribution revenue	\$26,194		\$ -		\$ -
12	Other revenue	\$1,518		\$		\$ -
13	Total revenue	\$27,711		<u> </u>	_	\$ -
14	Difference (Total Revenue Less Distribution Revenue					
	Requirement before Revenues)	\$ -	(1)	(\$19,199)	(1)	<mark>(\$19,199)</mark> (1)
Notes						
(1)	Line 11 - Line 8					