

EB-2014-0101

**ONTARIO ENERGY BOARD**

**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 to be effective January 1, 2015 and for each following year through to December 31, 2019

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**CROSS-EXAMINATION COMPENDIUM OF THE SCHOOL ENERGY COALITION  
(Panel 3)**

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	A	B	C	D	E	F	G	H	I	J	K
8	<p align="center"><b>Appendix 2-JA</b></p> <p align="center"><b>Summary of Recoverable OM&amp;A Expenses</b></p>										
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10											
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12											
13		2011 Actuals	Last Rebasing Year (2012 Board- Approved)	Last Rebasing Year (2012 Actuals)	2013 Actuals	2014 Bridge Year	2015 Test Year	2016 Test Year	2017 Test Year	2018 Test Year	2019 Test Year
14	Reporting Basis										
15	Operations	749,243	982,254	1,167,906	919,397	1,374,416	1,288,019	1,484,147	1,593,497	1,579,144	1,410,513
16	Maintenance	1,048,680	1,409,450	1,094,190	1,313,715	1,096,733	1,346,279	1,375,515	1,405,469	1,436,077	1,467,354
17	SubTotal	1,797,923	2,391,704	2,262,096	2,233,112	2,471,149	2,634,298	2,859,662	2,998,966	3,015,221	2,877,866
18	%Change (year over year)				-1.3%	10.7%	6.6%	8.6%	4.9%	0.5%	-4.6%
19	%Change (Test Year vs Last Rebasing Year - Actual)					16.5%	26.4%	32.6%	33.3%	27.2%	
20	Billing and Collecting	2,358,686	2,433,401	2,398,127	2,462,960	2,464,873	2,653,062	2,715,401	2,780,102	2,846,477	2,914,572
21	Community Relations	973,010	945,160	1,004,587	1,092,298	1,131,482	1,161,723	1,309,846	1,337,732	1,366,218	1,395,314
22	Administrative and General	5,022,130	5,560,605	5,402,280	5,245,121	5,002,232	5,604,762	5,647,747	5,707,425	5,804,965	5,914,459
23	SubTotal	8,353,826	8,939,166	8,804,993	8,800,379	8,598,586	9,419,547	9,672,993	9,825,260	10,017,660	10,224,346
24	%Change (year over year)			-1.5%	-0.1%	-2.3%	9.5%	2.7%	1.6%	2.0%	2.1%
25	%Change (Test Year vs Last Rebasing Year - Actual)					7.0%	9.9%	11.6%	13.8%	16.1%	
26	Total	10,151,749	11,330,870	11,067,089	11,033,491	11,069,735	12,053,844	12,532,655	12,824,225	13,032,881	13,102,212
27	%Change (year over year)			-2.3%	-0.3%	0.3%	8.9%	4.0%	2.3%	1.6%	0.5%
28											
29											
30		2011 Actuals	Last Rebasing Year (2012 Board- Approved)	Last Rebasing Year (2012 Actuals)	2013 Actuals	2014 Bridge Year	2015 Test Year	2016 Test Year	2017 Test Year	2018 Test Year	2019 Test Year
31	Operations	749,243	982,254	1,167,906	919,397	1,374,416	1,288,019	1,484,147	1,593,497	1,579,144	1,410,513
32	Maintenance	1,048,680	1,409,450	1,094,190	1,313,715	1,096,733	1,346,279	1,375,515	1,405,469	1,436,077	1,467,354
33	Billing and Collecting	2,358,686	2,433,401	2,398,127	2,462,960	2,464,873	2,653,062	2,715,401	2,780,102	2,846,477	2,914,572
34	Community Relations	973,010	945,160	1,004,587	1,092,298	1,131,482	1,161,723	1,309,846	1,337,732	1,366,218	1,395,314
35	Administrative and General	5,022,130	5,560,605	5,402,280	5,245,121	5,002,232	5,604,762	5,647,747	5,707,425	5,804,965	5,914,459
36	Total	10,151,749	11,330,870	11,067,089	11,033,491	11,069,735	12,053,844	12,532,655	12,824,225	13,032,881	13,102,212
37	%Change (year over year)			-2.3%	-0.3%	0.3%	8.9%	4.0%	2.3%	1.6%	0.5%
38											

## OVERVIEW

### 1 Operating Costs

2 The operations, maintenance and administrative costs ("OM&A") presented in this Exhibit  
3 represent the annual expenditures required to sustain OPUCN's distribution operations. OPUCN  
4 follows the OEB's Accounting Procedures Handbook (the "APH") in distinguishing work  
5 performed between operations, maintenance, billing and collections, community relations and  
6 administration and general expenses. A summary of OPUCN's operating costs for 2008 Board  
7 approved, 2008 Actual, 2009 Actual, 2010 Actual, 2011 Bridge Year and the 2012 Test Year in  
8 accordance with the Filing Requirements, is provided in Table 1 below. A summary of the  
9 variances as required by the Filing Requirements is provided in Tables 2 through 7.

10 **TABLE 1**  
11 **SUMMARY - OM&A EXPENSES**

Summary of OM&A Expenses	2008 Board Approved \$	2008 Actual \$	2009 Actual \$	2010 Actual \$	2011 Bridge \$	2012 Test \$
Operations	162,576	293,376	589,979	548,159	1,098,811	1,404,342
Maintenance	1,009,725	1,215,986	1,067,491	1,028,033	1,204,572	1,480,709
Billing & Collecting	2,263,907	2,143,541	2,300,172	2,279,448	2,302,950	2,659,399
Community Relations	1,054,004	1,079,971	648,758	760,663	852,097	945,160
Administrative & General	4,716,351	4,110,228	4,167,945	4,218,205	4,383,530	5,192,469
<b>Total OM&amp;A Expense</b>	<b>9,206,563</b>	<b>8,843,103</b>	<b>8,774,345</b>	<b>8,834,508</b>	<b>9,841,961</b>	<b>11,682,080</b>
Year over Year Increase		(3.9)%	(0.8)%	0.7%	11.4%	18.7%
CAGR from 2008 Approved			(4.7)%	(2.0)%	2.2%	6.1%
CAGR from 2008 Actual			(0.8)%	(0.0)%	3.6%	7.2%
Inflation Rate (Canada CPI)	2.3%	2.3%	0.3%	1.8%	1.8%	1.8%

12  
13 \*2011 and 2012 Inflation Rate of 1.8% based on actual 2010 Canada Consumer Price Index ("CPI") from  
14 [www.statcan.gc.ca](http://www.statcan.gc.ca)

15 **TABLE 2**  
16 **SUMMARY - OM&A EXPENSE VARIANCES 2008 APPROVED VS. 2008 ACTUAL**

	2008 (Board Approved)	2008 (Actuals)	Variance \$	Variance %
Operations	162,576	293,376	130,800	80.5%
Maintenance	1,009,725	1,215,986	206,262	20.4%
Billing and Collecting	2,263,907	2,143,541	(120,366)	(5.3)%
Community Relations	1,054,004	1,079,971	25,968	2.5%
Administrative and General	4,716,351	4,110,228	(606,124)	(12.9)%
<b>Total OM&amp;A Expenses</b>	<b>9,206,563</b>	<b>8,843,103</b>	<b>(363,460)</b>	<b>(3.9)%</b>
Inflation Rate	2.3%	2.3%		

**OM&A DETAILED COST TABLE**

	2006 Board Approved	2006 Actual	Variance form 2006 Board Appr	2006 Actual	2007 Bridge	Variance form 2006 Actual	2007 Bridge	2008 Test	Variance form 2007 Bridge
<b>Operation (Working Capital)</b>									
Operation Supervision and Engineering	48,321	273,773	225,452	273,773	372,516	98,744	372,516	384,274	11,757
Load Dispatching	-	-	-	-	-	-	-	-	-
Station Buildings and Fixtures Expense	-	-	-	-	-	-	-	-	-
Transformer Station Equipment - Operation Labour	-	-	-	-	-	-	-	-	-
Transformer Station Equipment - Operation Supplies and Expenses	-	-	-	-	-	-	-	-	-
Distribution Station Equipment - Operation Labour	26,660	-	(26,660)	-	-	-	-	-	-
Distribution Station Equipment - Operation Supplies and Expenses	-	-	-	-	-	-	-	-	-
Overhead Distribution Lines and Feeders - Operation Labour	702,518	225,952	(476,565)	225,952	(81,483)	(307,435)	(81,483)	109,267	190,750
Overhead Distribution Lines & Feeders - Operation Supplies and Expenses	54,478	(210,688)	(265,166)	(210,688)	(182,304)	28,384	(182,304)	(165,705)	16,599
Overhead Subtransmission Feeders - Operation	-	-	-	-	-	-	-	-	-
Overhead Distribution Transformers- Operation	-	-	-	-	-	-	-	-	-
Underground Distribution Lines and Feeders - Operation Labour	175,277	7,751	(167,526)	7,751	7,751	-	7,751	7,984	233
Underground Distribution Lines & Feeders - Operation Supplies & Expenses	4,708	1,047	(3,662)	1,047	193	(854)	193	199	6
Underground Subtransmission Feeders - Operation	-	-	-	-	-	-	-	-	-
Underground Distribution Transformers - Operation	-	-	-	-	-	-	-	-	-
Street Lighting and Signal System Expense	-	-	-	-	-	-	-	-	-
Meter Expense	597,169	83,869	(513,300)	83,869	52,211	(31,658)	52,211	127,559	75,348
Customer Premises - Operation Labour	-	-	-	-	-	-	-	-	-
Customer Premises - Materials and Expenses	-	-	-	-	-	-	-	-	-
Miscellaneous Distribution Expense	-	(440,282)	(440,282)	(440,282)	(127,912)	312,370	(127,912)	(20,840)	107,072
Underground Distribution Lines and Feeders - Rental Paid	-	-	-	-	-	-	-	-	-
Overhead Distribution Lines and Feeders - Rental Paid	-	-	-	-	-	-	-	-	-
Other Rent	-	-	-	-	-	-	-	-	-
Sub-Total	1,609,132	(58,578)	(1,667,710)	(58,578)	40,972	99,550	40,972	442,737	401,765
<b>Maintenance (Working Capital)</b>									
Maintenance Supervision and Engineering	-	246,245	246,245	246,245	218,220	(28,025)	218,220	225,076	6,856
Maintenance of Buildings and Fixtures - Distribution Stations	-	6,773	6,773	6,773	19,891	13,117	19,891	20,487	597
Maintenance of Transformer Station Equipment	-	-	-	-	-	-	-	-	-
Maintenance of Distribution Station Equipment	25,761	127,372	101,611	127,372	129,470	2,098	129,470	133,354	3,884
Maintenance of Poles, Towers and Fixtures	135,136	503,320	368,184	503,320	477,847	(25,473)	477,847	492,183	14,336
Maintenance of Overhead Conductors and Devices	-	-	-	-	-	-	-	-	-
Maintenance of Overhead Services	-	-	-	-	-	-	-	-	-
Overhead Distribution Lines and Feeders - Right of Way	-	-	-	-	-	-	-	-	-

Oshawa PUC Networks Inc.  
EB-2007-0710  
Exhibit 4  
Tab 2  
Schedule 1  
Page 2 of 5

Maintenance of Underground Conduit	21,284	150,052	128,768	150,052	122,982	(27,070)	122,982	126,671	3,689
Maintenance of Underground Conductors and Devices	-	-	-	-	-	-	-	-	-
Maintenance of Underground Services	-	33,874	33,874	33,874	30,000	(3,874)	30,000	30,900	900
Maintenance of Line Transformers	-	-	-	-	-	-	-	-	-
Maintenance of Street Lighting and Signal Systems	-	-	-	-	-	-	-	-	-
Sentinel Lights - Labour	-	-	-	-	-	-	-	-	-
Sentinel Lights - Materials and Expenses	-	-	-	-	-	-	-	-	-
Maintenance of Meters	30,540	-	(30,540)	-	-	-	-	-	-
Customer Installations Expenses- Leased Property	-	-	-	-	-	-	-	-	-
Water Heater Rentals - Labour	-	-	-	-	-	-	-	-	-
Water Heater Rentals - Materials and Expenses	-	-	-	-	-	-	-	-	-
Water Heater Controls - Labour	-	-	-	-	-	-	-	-	-
Water Heater Controls - Materials and Expenses	-	-	-	-	-	-	-	-	-
Maintenance of Other Installations on Customer Premises	-	-	-	-	-	-	-	-	-
Sub-Total	212,721	1,067,636	854,915	1,067,636	998,410	(69,226)	998,410	1,028,671	30,262
<b>Billing and Collections</b>									
Supervision	-	222,974	222,974	222,974	212,111	(10,863)	212,111	218,582	6,471
Meter Reading Expense	160,098	386,024	225,926	386,024	406,158	20,134	406,158	417,950	11,792
Customer Billing	723,052	856,571	133,519	856,571	886,869	30,298	886,869	913,569	26,700
Collecting	-	376,008	376,008	376,008	395,466	19,458	395,466	407,783	12,318
Collecting- Cash Over and Short	-	-	-	-	-	-	-	-	-
Collection Charges	-	-	-	-	-	-	-	-	-
Bad Debt Expense	335,383	211,765	(123,617)	211,765	282,000	70,235	282,000	290,460	8,460
Miscellaneous Customer Accounts Expenses	-	-	-	-	-	-	-	-	-
Sub-Total	1,218,533	2,053,343	834,810	2,053,343	2,182,604	129,261	2,182,604	2,248,345	65,740
<b>Community Relations</b>									
Supervision	-	109,253	109,253	109,253	105,594	(3,659)	105,594	169,589	63,995
Community Relations - Sundry	32,634	14,861	(17,772)	14,861	23,200	8,339	23,200	23,896	696
Energy Conservation	-	222,319	222,319	222,319	-	(222,319)	-	-	-
Community Safety Program	194,587	208,165	13,578	208,165	276,902	68,737	276,902	285,376	8,474
Miscellaneous Customer Service and Informational Expenses	1,299,102	455,509	(843,593)	455,509	478,470	22,961	478,470	521,354	42,884
Supervision	-	-	-	-	-	-	-	-	-
Demonstrating and Selling Expense	-	-	-	-	-	-	-	-	-
Advertising Expense	(595)	-	595	-	-	-	-	-	-
Miscellaneous Sales Expense	-	-	-	-	-	-	-	-	-
Sub-Total	1,525,728	1,010,108	(515,620)	1,010,108	884,166	(125,942)	884,166	1,000,216	116,049
<b>Administrative and General Expenses</b>									
Executive Salaries and Expenses	470,000	480,000	10,000	480,000	480,000	-	480,000	480,000	-
Management Salaries and Expenses	809,979	637,673	(172,306)	637,673	726,591	88,918	726,591	1,002,599	276,008
General Administrative Salaries and Expenses	833,217	1,636,610	803,393	1,636,610	2,009,560	372,950	2,009,560	2,127,341	117,781
Office Supplies and Expenses	186,300	167,356	(18,944)	167,356	165,149	(2,207)	165,149	170,103	4,954

**Oshawa PUC Networks Inc.**  
**EB-2007-0710**  
**Exhibit 4**  
**Tab 2**  
**Schedule 1**  
**Page 3 of 5**

Administrative Expense Transferred Credit	(380,562)	(722,844)	(342,282)	(722,844)	(638,000)	84,844	(638,000)	(638,000)	-
Outside Services Employed	532,925	412,248	(120,677)	412,248	373,008	(39,240)	373,008	530,198	157,190
Property Insurance	37,680	62,251	24,571	62,251	104,669	42,418	104,669	116,766	12,097
Injuries and Damages	108,423	100,859	(7,564)	100,859	153,531	52,672	153,531	175,190	21,659
Employee Pensions and Benefits	452,328	439,811	(12,518)	439,811	455,253	15,442	455,253	476,312	21,059
Franchise Requirements	-	-	-	-	-	-	-	-	-
Regulatory Expenses	138,944	130,298	(8,646)	130,298	429,818	299,520	429,818	442,713	12,895
General Advertising Expenses	13,815	1,300	(12,514)	1,300	1,579	279	1,579	1,626	47
Miscellaneous General Expenses	53,198	63,026	9,828	63,026	64,325	1,299	64,325	66,255	1,930
Rent	264,000	264,000	-	264,000	264,000	-	264,000	264,000	-
Maintenance of General Plant	621,904	491,918	(129,985)	491,918	496,560	4,641	496,560	511,542	14,982
Electrical Safety Authority Fees	-	-	-	-	-	-	-	-	-
Independent Market Operator Fees and Penalties	-	-	-	-	-	-	-	-	-
Taxes Other Than Income Taxes	145,719	387,704	241,985	387,704	393,000	5,296	393,000	345,450	(47,550)
Sub-Total	4,287,870	4,552,211	264,341	4,552,211	5,479,043	960,476	5,479,043	6,072,094	593,052
Total OMA and Tax Other Than Income Tax	8,853,984	8,624,720	(229,265)	8,624,720	9,585,195	960,476	9,585,195	10,792,063	1,206,867

	A	B	C	D	E	F	G	H	I	J	K
1	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> <b>Appendix 2-K</b>  <b>Employee Costs</b> </div> <div> <b>File Number:</b> EB-2014-0101  <b>Exhibit:</b>  <b>Tab:</b>  <b>Schedule:</b>  <b>Page:</b>  <b>Date:</b> </div> </div>										
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9		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
10	<b>Number of Employees (FTEs including Part-Time)<sup>1</sup></b>										
11	Management (including executive)	17	18	18	18	18	19	20	20	20	20
12	Non-Management (union and non-union)	52	57	56	56	56	61	65	64	63	61
13	Total	69	75	74	74	74	80	85	84	83	81
14	<b>Total Salary and Wages including overtime and incentive pay</b>										
15	Management (including executive)	\$1,542,532	\$1,898,630	\$1,759,436	\$1,934,766	\$1,930,328	\$2,110,094	\$2,222,329	\$2,272,332	\$2,323,459	\$2,375,737
16	Non-Management (union and non-union)	\$4,324,063	\$4,675,706	\$4,711,467	\$5,016,846	\$4,896,958	\$5,397,548	\$5,731,267	\$5,882,977	\$5,978,262	\$5,937,981
17	Total	\$5,866,595	\$6,574,336	\$6,470,903	\$6,951,612	\$6,827,286	\$7,507,642	\$7,953,596	\$8,155,308	\$8,301,721	\$8,313,718
18											
19	<b>Total Benefits (Current + Accrued)</b>										
20	Management (including executive)	\$601,418	\$717,568	\$709,696	\$640,762	\$630,917	\$667,826	\$703,446	\$723,546	\$735,218	\$749,716
21	Non-Management (union and non-union)	\$1,709,416	\$1,884,708	\$1,898,889	\$1,662,888	\$1,667,304	\$1,665,791	\$1,717,504	\$1,756,354	\$1,775,362	\$1,785,963
22	Total	\$2,310,835	\$2,602,276	\$2,608,585	\$2,303,649	\$2,298,221	\$2,333,617	\$2,420,950	\$2,479,900	\$2,510,580	\$2,535,679
23	<b>Total Compensation (Salary, Wages, &amp; Benefits)</b>										
24	Management (including executive)	\$2,143,950	\$2,616,198	\$2,469,131	\$2,575,528	\$2,561,245	\$2,777,920	\$2,925,776	\$2,995,877	\$3,058,677	\$3,125,453
25	Non-Management (union and non-union)	\$6,033,479	\$6,560,414	\$6,610,356	\$6,679,734	\$6,564,262	\$7,063,339	\$7,448,771	\$7,639,331	\$7,753,624	\$7,723,944
26	Total	\$8,177,430	\$9,176,612	\$9,079,488	\$9,255,262	\$9,125,507	\$9,841,259	\$10,374,546	\$10,635,208	\$10,812,301	\$10,849,397

**OSHAWA PUC NETWORKS INC.**

**Response to School Energy Coalition (SEC)  
Interrogatory 4.0-SEC-30**

**[Ex.4, p.43]**

Over the past 10 years, what is the average time when an employee becomes eligible for retirement, and their actual retirement? Does this differ from what the Applicant is projecting for the test period? If so, please explain.

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**Response:**

At end 2014, there were 10 retirements in the preceding 10 year period. 8 of those were 'early' retirements as part of a restructuring initiative in 2008 and 2 were normal retirements on date of eligibility.

The expectation in this application is that most retirements will occur on eligibility.

**OSHAWA PUC NETWORKS INC.**

**Response to The Consumers Council of Canada (CCC)  
Interrogatory 4.0-CCC-33**

**(Ex.4/p.24)**

OPUCN has estimated 20 employees will be eligible to retire in the years 2014 to 2019. What is the basis of this estimation? From 2010 to 2014 how many employees were eligible to retire? Out of that number, how many actually retired?

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**Response:**

This is based on a report from OMERS listing OPUCN employees with dates at which they become eligible for an unreduced pension. Please see report attached to response to interrogatory 4.0-VECC-35.

In 2011, 1 employee was eligible to retire in 2011 and did so. In 2014, 6 employees became eligible to retire; none have retired.

**OSHAWA PUC NETWORKS INC.**

**Response to School Energy Coalition (SEC)  
Interrogatory 4.0-SEC-31**

**[Ex.4, p.43]**

For each new position the Applicant is forecasting adding during the test period, please provide a description and rationale.

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**Response:**

The principal driver behind all the new positions proposed is the projected customer growth of approximately 15% from 2014 to the end of the rate period (2019). The comparable proposed growth in FTE's over the period is 8%.

Customer Service – 1 FTE

Additional CSR required to accommodate customer growth forecast at 3% per annum.

IT – 1 FTE

Additional resource required to accommodate increased requirements in IT to manage increasing use of advanced technologies and to support increased use of technology in the maintenance and support of the distribution system.

Grid Construction & Maintenance – 1 FTE

New Lineman to accommodate projected growth.

Technical Design – 2 FTE

One Design Technician required to accommodate projected growth. One Design Supervisor (added 2014) to manage increasing workload.

Metering – 1 FTE

New Meter Technician required to accommodate projected growth.

**OSHAWA PUC NETWORKS INC.**

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

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

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

**Response:**

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

The Board finds that a separate rate rider should be established for the Bremner station.

The Board will provide further direction relating to implementation issues, such as those discussed above, and appropriate accounting treatment under Issue 4.2 which deals with rate implementation matters.

## B18 Hydro One Capital Contributions

### Background

THESL is required to provide capital contributions to Hydro One Networks Inc. (HONI) for non-contestable work on the transmission system to install new transmission assets and to replace existing assets to support THESL work on the distribution system. The main driver for THESL work is the need to increase supply capacity to connect new customers and to meet current and future load growth.

The two major jobs with large capital contributions required over the next few years are the Bremner Transformer Station and the Leaside-Birch transmission reinforcement job. Capital contributions are also required to support THESL switchgear replacements and engineering studies at five transformer stations and for engineering feasibility studies to be performed by HONI to expand capacity at six transformer stations.

THESL's proposed spending in this segment is summarized below:

\$ millions					
2012 Capital Spending	2012 In-Service Additions	2013 Capital Spending	2013 In-Service Additions	2014 Capital Spending*	2014 In-Service Additions*
22.98	3.69	48.12	10.70	37.0	60.0

\*Bremner only

Board staff noted that the updated evidence showed that \$23 million of the 2013 capital contributions are related to the Bremner TS. Board staff further noted that only two of the listed projects, those related to Malvern TS and Leslie MS respectively, had 2013 as expected completion dates and submitted that only the amounts related to these two projects of \$1.48 million should be approved resulting in a total 2013 reduction of \$9.2 million from the in-service amount requested by THESL.

BOMA submitted that THESL should make contributions when the assets are placed in-service and payments should be reduced by \$15.25 million to reflect that contributions will be due in 2014 when transmission facilities are in-service.

Energy Probe VECC and SEC agreed with Board staff.

THESL argued that the Board should reject the arguments made by Board staff and intervenors. THESL submitted that its capital contributions to HONI are necessary investments and should be recovered on the same basis as any other category of ICM-eligible work in this application. THESL noted that it had filed the present application on a capital expenditure basis and accordingly recovery for its capital contributions to HONI should be on that basis and not be tied to the date on which associated capital work comes into service.

### **Board Findings**

Capital contributions are an intangible asset recognized when the assets are in-service. Therefore, contributions related to the Bremner Station will not be recognized until 2014, if the station is indeed in service at that time. The Board finds that the remaining \$1.48 M is not a significant enough amount to be considered an incremental capital module, and can be absorbed within the existing budget during the IRM term..

### **B19 Feeder Automation ("FA")**

#### **Background**

THESL's Feeder Automation ("FA") project installs automated switches, software and communications devices on selected trunk feeders, which improve reliability by reducing the impact of trunk-related outages. THESL states that FA is an effective solution to mitigate the impact of outages on the main portions of the feeder (i.e. the trunk) as FA technology can assess the outage and automatically restore power to any non-affected feeders and the customers they serve in less than one minute, which contrasts with the quickest alternative restoration method, remote operation of SCADA switches by a system controller, which takes approximately 30 minutes.

Regional Planning discussions are in progress including Local Planning meetings to address both Station and feeder capacity constraints. Original discussions with Hydro One Transmission suggested a preliminary Contribution from OPUCN to HONI of approximately \$6.5 million to cover the provision of two 44KV feeder positions at both Wilson TS and Thornton TS. This amount is included in OPUCN 5 year plan and smooth out to minimize rate impact. Recent regional meetings with HONI Tx and Dx, and impacted LDCs suggest the construction of a new 230kV/44kV transmission station (Enfield TS) to be the permanent solution to address the station capacity issues at Wilson and Thornton TS. This option is still under discussion and if implemented will increase OPUCN's contribution from \$6.5 million to potentially \$10 million to \$12 million.

Furthermore, Local Planning meetings are now being conducted separately from the Regional Planning process to resolve feeder capacity issues at Thornton TS. Options are still being reviewed and are not yet finalized but will now have an additional cost that will now be covered through the initial \$3 million included in the 5 year plan to address Thornton Capacity issues.

As a result of the accelerated development activity and customer connections over 2015- 2019, OPUCN has identified the need to construct a new municipal substation (MS9) with appropriate associated distribution feeders to service these new homes and retail or commercial premises. The approximate total cost for this 4 year project is \$9 million.

*Grid Modernization* - OPUCN is continuing to move forward with its plan to increase the installation of automated and self-healing devices and equipment to allow remote automated switching and fault isolation to reduce restoration time and outage impact to customers.

Advanced technology with intelligent devices and management systems will enable OPUCN to operate a "smarter grid" that will have better visibility and operational flexibility to not only minimize outage impacts, but will also identify areas to achieve grid

- year. Based on initial discussions, Hydro One has scheduled the replacement of both transformers at Thornton TS, which have reached their end of life, by the end of 2015, including the installation of a grounding neutral reactor to resolve short circuit capacity constraints for FIT installations. The intent was to provide OPUCN with two new feeder positions and upgrade the bus tie to provide feeder and station capacity. The estimate provided by Hydro One is approximately \$3.0 million which is included in OPUCN DS plan, with \$1.5 million included annually in 2015 and 2016 to smooth out the level of investments. Outcomes of recent Local Planning meeting indicates that this original proposal is now being deemed not viable as a long term solution to meet the load growth in the Region. Level of contributions to HONI for a new transmission station are still preliminary and subject to change, and may increase to \$10 to \$12 million.
- New Distribution Station (MS9) and associated primary overhead feeders (2015 to 2019 project) \$750 thousand - Construct new distribution 44kV-13.8kV station (MS 9) and required 13.8kV distribution feeders to service new developments in North Oshawa. Estimated total expenditure \$7.0 million (station) and \$2.0 million (13.8KV feeder extensions). In 2008, OPUCN proposed the construction of the new substation MS9. With the decline in the economy and the uncertainty and delays in the opening of the highway 407 extension, the load growth in Oshawa did not materialize as originally forecasted and this project was placed on hold. With the opening of the 407 extension in 2015 along with the aggressive promotional efforts from the City of Oshawa to encourage new development, the load growth has started to materialize. On-going collaboration with the City, have confirmed the projected load forecast and given the timeline to construct a new substation (on average 3-4 years) OPUCN, with the support of the City, is resuming work on design and construction of this new substation in order to meet the now forecast load growth timing. OPUCN plans on utilizing the land previously purchased for this

station. Existing substations do not have the capacity nor the feeder capabilities to extend to the north sections of Oshawa where the future load growth will surely occur. OPUCN will need to proceed in 2015 to issue an RFP/RFQ for a turn-key design, construction and commissioning to ensure additional distribution capacity is made ready in 2019. The following table summarizes the level of expenditures forecast annually from 2015 to 2019.

**TABLE 2-39 - 2015 - 2019 SYSTEM SERVICES (\$000s)**

<b>Projects</b>	<b>2015 Test Year</b>	<b>2016 Test Year</b>	<b>2017 Test Year</b>	<b>2018 Test Year</b>	<b>2019 Test Year</b>
<b>Reporting Basis</b>	<b>MIFRS</b>	<b>MIFRS</b>	<b>MIFRS</b>	<b>MIFRS</b>	<b>MIFRS</b>
<b>System Services</b>					
Thorton TS Capacity - HONI Contributions	1,500	1,500			
Wilson TS Capacity - HONI Contributions			1,000	1,000	1,500
MS9 - 44kV/13.8kV Substation	750	1,000	3,250	2,000	
MS9 Proposed OH distribution feeders				1,000	1,000

- Grid Modernization - UG Distribution Automation Project (2014–2015) - Downtown Vaults Automation. Estimated forecast total expenditure over 2 years \$1.43 million. This project will improve system reliability and provide visibility in UG downtown area through grid automation and smart technology. It will also provide communication infrastructure that can be linked to the planned Outage Management System (OMS). It involves automating the downtown underground system by installing relays on existing automation-ready switches and replacing existing switches with fully automated switches in 15 vault rooms. Communication infrastructure will be implemented through installation of a fiber optic network connecting the vault rooms to SCADA. The installation of ICCP system will complete the communication network that will provide visibility to our system to increase productivity and to better manage/operate the downtown distribution grid. Transformer primary and secondary monitors will also be introduced to existing transformers in 6 vault

1 that, and I am pleased to propose that, first of all, we  
2 will of course commit to performance throughout the plan  
3 period in accordance with the OEB's scorecard.

4 And that would be, number one, to at least maintain  
5 current performance levels for the scorecard metrics. And  
6 even though I believe the scorecard doesn't expect you to  
7 maintain it, but just to report those metrics, we are  
8 proposing that we maintain our current performance levels  
9 for those metrics that we report on. And for those service  
10 quality indicators for which the Board has a minimum, to  
11 achieve at least that minimum.

12 Secondly, we want to suggest another metric that will  
13 help us address two key types of outages that we experience  
14 on our system. And I would say that our system is not  
15 unique; it's probably across the province. But we hope  
16 that you would accept this metric that we want to propose,  
17 and that is to reduce the number of outages because of  
18 animal contact and failed porcelain insulators and  
19 switches.

20 Why the emphasis on that? Because these two outages  
21 are roughly, Madam Chair, roughly around 35 to 40 percent  
22 of our annual outages.

23 So what are we proposing? We are proposing that by  
24 the end of the plan period, we will reduce that by at least  
25 20 percent. And the metric we propose to use will be based  
26 on a 36-month rolling average with 2014 as the base line.  
27 This will result in an overall reduction in outages from 78  
28 to less than 62 events by the end of the plan. We can

1 certainly give you more details later on.

2 So I would like to submit to the Panel that the team  
3 at OPUCN has put in a tremendous effort to provide you a  
4 comprehensive application that addresses all of the  
5 expectations from an applicant under the RRFE.

6 Now, we were not able to present in application well  
7 in advance of the requested January 1st, 2015, rate order;  
8 we recognize that. We currently have interim rates in  
9 anticipation of rates being finalized in this process.

10 What I am requesting of the Board is to award us the  
11 requested rate order effective January 1, 2015, as doing  
12 anything else would result in our shareholder not receiving  
13 just and reasonable returns.

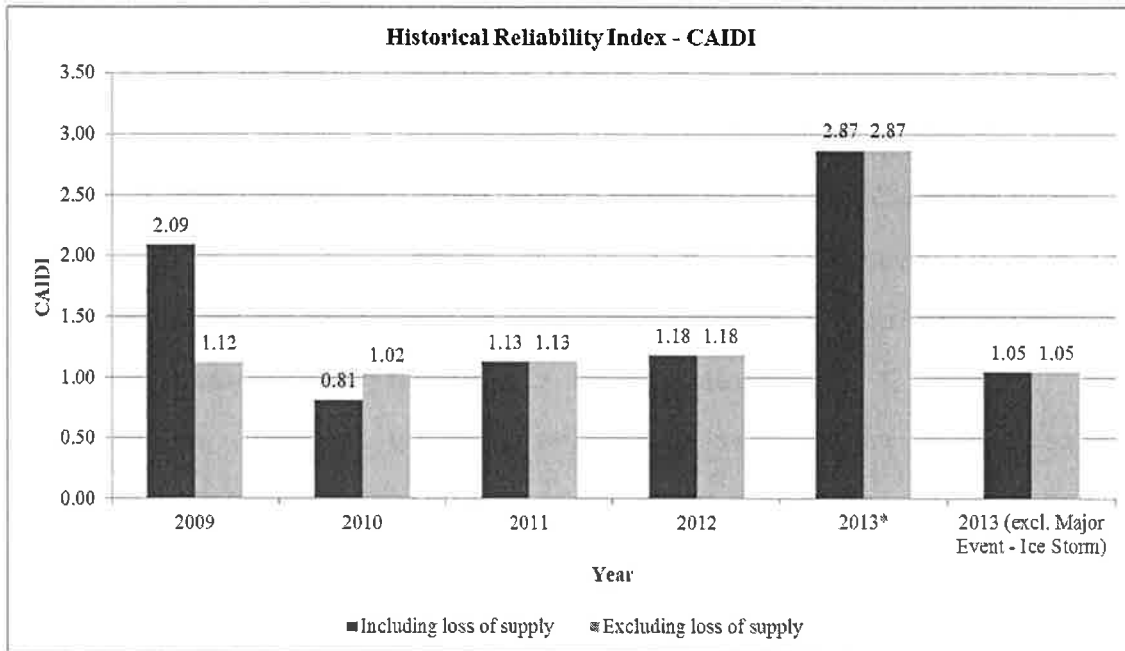
14 In conclusion, I appreciate the opportunity to present  
15 the work done by OPUCN team, to respond to the RRFE  
16 expectations set by the Board, and Phil and I are available  
17 to answer any questions that the Board and intervenors may  
18 have on Exhibits 1 and 10, and the rest of our panel on the  
19 rest of the application.

20 Thank you very much.

21 MS. DUFF: Thank you. Before we begin with cross-  
22 examination, counsel can assume that the Panel has reviewed  
23 the evidence, the interrogatory responses, read the  
24 technical conference transcripts, as well as the  
25 undertakings that were provided and the updated evidence  
26 that was marked today.

27 So with that background, hopefully we can expedite the  
28 questioning during the oral phase.

**Figure 4: Historic CAIDI Performance**



\*Includes power outages due to the ice storm in December 2013 (an extreme weather event)

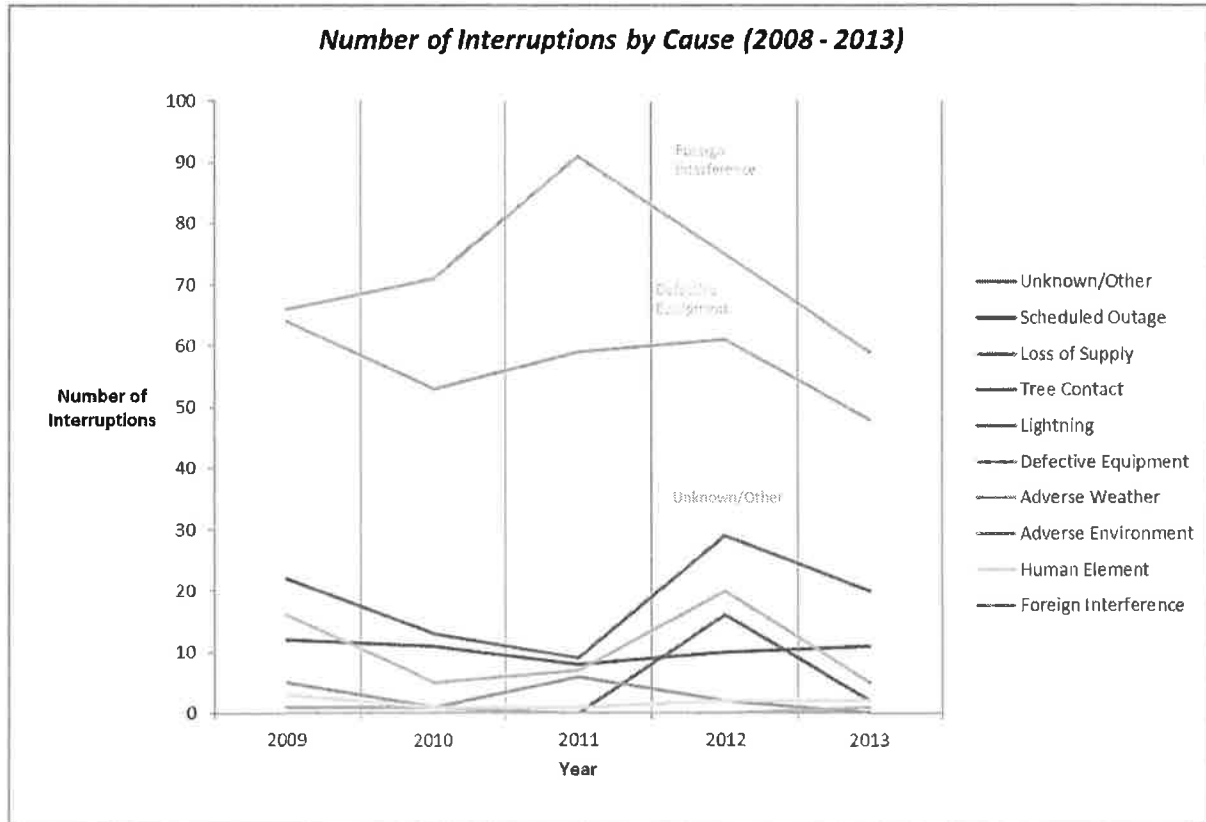
**b. Reliability Performance Impact on DS Plan**

**System Renewal**

Overall, not including the impact of the December 2013 ice storm, the foregoing reliability performance indicators show a positive trend in OPUCN's reliability performance. During the examined period capital investments have been completed to address significant identified root causes of outages, and outages have been reduced.

As illustrated in the Figure 4 below, OPUCN monitors and tracks on an annual basis, the number of outages by root causes.

**Figure 5: Total number of Outages by Root Cause (2008–2013)**



In recent years outages were primarily due to defective equipment (identified as defective porcelain insulators and switches) or foreign interference (squirrel contact). Consequently in 2013, OPUCN completed installation of animal guards. OPUCN also implemented a two year program to replace all porcelain insulators and switches with polymer type units. This has resulted in major reductions in outages specific to these causes and hence to overall number of outages.

In 2012, OPUCN had a total of 215 outages and in 2013, it experienced a total of 148 outages, a reduction of 31%. Out of the 148 total number of outages in 2013:

- 40% were due to animal (squirrel) contact (59 out of 148). By comparison, in 2012 there were 75 outages caused by animal contact. 2013 saw a reduction of 21% in this category.

- 32% were due to defective equipment (48 out of 148). Again by comparison, in 2012 there were 61 outages caused by defective equipment, 2013 saw a reduction of 21% in this category.

OPUCN also identifies projects in the System Renewal category to improve system reliability by mitigating the risk of in service failure of assets, significant outage duration and associated negative outage impact to its customers. With the guidance of the Asset Condition Assessment (ACA) report, along with its maintenance and inspection reports and underground primary cable fault analyses, OPUCN identifies assets in need of replacement. OPUCN then schedules these projects based on criticality and level of priority as indicated by its Asset Investment Prioritization Tool (see Part V, Section 2). OPUCN's Capital Investment Plan includes between \$4 million and \$5 million for these renewal projects in each year of the plan period.

#### ***Grid Modernization and Business Operation system improvements***

While OPUCN's reliability trend is positive and outages continue to decline, OPUCN is listening to its customers on outage issues and intends to provide its customers with better visibility and more timely information related to outages.

OPUCN will implement distribution automation, including intelligent devices, equipment and systems, to reduce restoration time and minimize the number of customers being impacted by outages. OPUCN plans to complete the installation of an Outage Management System (OMS) by December 2015. The OMS will be fully integrated with OPUCN's SCADA, GIS, AMI, CIS and IVR, so that OPUCN will be able to proactively identify customers without electrical power, without waiting for customers to call in and report the outage. This OMS will help OPUCN:

- Proactively provide more frequent and more timely updates to customers during an outage (e.g. the area affected by the outage, number of customers affected, possible cause and when power may be restored).
- Reduce the duration, frequency and impact of interruptions.

<b>Cause</b>	<b>Number of Interruptions</b>				
	<b>2009</b>	<b>2010</b>			
<b>Foreign Interference:</b> Customer interruptions beyond the control of the utility such as birds, animals, vehicles, dig-ins, vandalism, sabotage and foreign objects.	66	71	91	75	59
	<b>189</b>	<b>156</b>	<b>181</b>	<b>215</b>	<b>148</b>

Starting in 2011 outages due to defective equipment were increasing primarily due to defective porcelain insulators and switches. As noted above [Section 2, subsection a., item (vi)], test reports indicated that the poorly manufactured porcelain units were failing much faster than the expected life span. A two year program to replace most of the porcelain insulators and switches with polymer type units has been completed.

The most recent root cause analysis also confirmed that interruptions due to faulty or defective equipment are correlated to asset age. The interruptions related to cable faults were analyzed to determine the worst performing feeders. The results of this analysis are summarized in Figure 8, and this information has been used to prioritize the system renewal investments related to the underground primary cable replacements.

