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August 1, 2013

via RESS e-filing – signed original to follow by mail

Ms. Kirsten Walli, Board Secretary

Ontario Energy Board

PO Box 2319

2300 Yonge St, 27th floor

Toronto, ON M4P 1E4

Dear Ms. Walli:

**Re: Application by Toronto Hydro-Electric System Limited (“THESL”) for the Disposition and Recovery of Amounts Related to Smart Meter Activities from 2008 to 2010
OEB File No. EB-2013-XXXX**

Enclosed is THESL’s Application for the Disposition and Recovery of Amounts Related to Smart Meter Activities from 2008 to 2010. THESL requests that this application be processed through a written hearing.

Please address all inquiries related to this matter to the following THESL representatives:

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Sincerely,

[original signed by]

Rob Barrass
Lead Regulatory Counsel

:RB/acc

cc: Michael Buonaguro

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

AND IN THE MATTER OF an application for disposition
and recovery of amounts related to Smart Meter activities.

TORONTO HYDRO-ELECTRIC SYSTEM LIMITED

APPLICATION FOR DISPOSITION AND
RECOVERY OF AMOUNTS RELATED TO SMART
METER ACTIVITIES IN 2008-2010

OEB File No. EB-2013-XXXX

Filed: August 1, 2013

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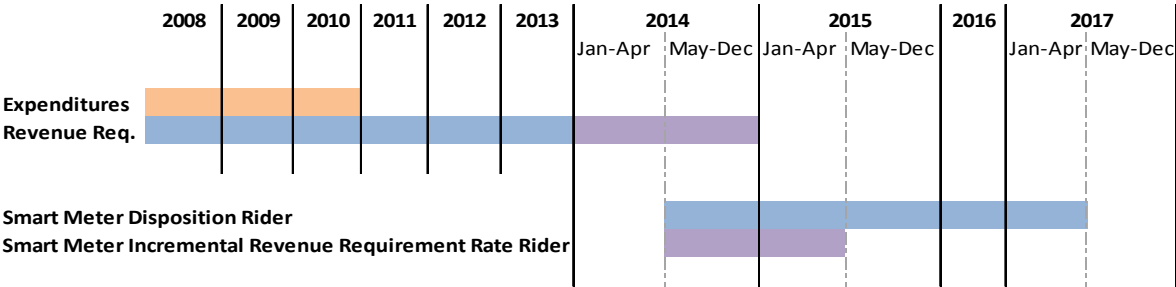
1 **APPLICATION FOR DISPOSITION OF SMART METER**
 2 **DEFERRAL ACCOUNT BALANCES**

4 **INTRODUCTION**

5 In accordance with Ontario Energy Board (“Board”) guidelines and directives, THESL
 6 requests Board approval for the disposition of its remaining smart meter deferral account
 7 amounts using a Smart Meter Disposition Rider (“SMDR”), the discontinuation of the
 8 Smart Meter Funding Adder, and the implementation of a Smart Meter Incremental
 9 Revenue Requirement Rate Rider (“SMIRR”) to account for the incremental revenue
 10 requirement consequences of its smart meter capital until THESL’s next rebasing.
 11 THESL applies for both the SMDR and the SMIRR to be implemented on May 1, 2014.

13 THESL hereby applies for the following:

- 14 1) Disposition of the separate 2008, 2009, and 2010 year-end balances and
 15 corresponding revenue requirements up to December 31, 2013 in the Smart Meter
 16 Deferral Account, by way of the SMDR, effective for 36 months from May 1,
 17 2014 until April 30, 2017;
- 18 2) Implementation of the SMIRR to recognize assets that remain outside of ratebase,
 19 effective from May 1, 2014 until THESL’s next rebasing; and
- 20 3) Discontinuation of the Smart Meter Rate Adder effective April 30, 2014.



21 **Figure 1: Timeline of Expenditures and Proposed Recovery**

1 On a combined basis, the proposed implementation of the SMDR and the SMIRR, and
2 the simultaneous discontinuation of the Smart Meter Rate Adder would result in a \$0.08
3 monthly bill increase for a typical residential customer.

4
5 THESL's first application for disposition of smart meter balances (for 2006 amounts) was
6 filed on March 16, 2007 (EB-2007-0582), and was later joined to the Combined Smart
7 Meter Proceeding (EB-2007-0063) in which clearance was approved. On March 2, 2009,
8 THESL filed a second application (EB-2009-0069) seeking approval for the disposition
9 of the 2007 year-end balance in the smart meter deferral account. At an Oral Hearing
10 held on April 3, 2009, the Board accepted and approved THESL's requested disposition.

11
12 As of the end of 2010, THESL's smart meter deployment was substantially complete. As
13 part of the Board's decision in its 2011 rate application (EB-2010-0142), THESL was
14 authorized to incorporate all future smart meter costs into its ratebase and revenue
15 requirement as a regular distribution activity. As a result, all outstanding balances in
16 THESL's smart meter deferral accounts relate strictly to the revenue requirement
17 consequences of smart metering activities performed in 2008, 2009 and 2010.

18
19 **AUTHORIZATION FOR RECOVERY OF SMART METER COSTS**

20 In preparing this application, THESL has relied upon and conformed to the requirements
21 of the Smart Meter Funding and Cost Recovery – Final Disposition Guideline
22 G-2011-0001 (“Smart Meter Guideline”), which supersedes the earlier Smart Meter
23 Funding and Cost Recovery Guideline G-2008-0002.

1 THESL confirms that this application does not include any costs related to functions
2 carried out by the SME or MDMR, that all cost information provided in this application
3 has been audited, and that all expenditures included are incremental to those recovered
4 through distribution rates. THESL further confirms that all Smart Meter Deferral
5 Account amounts and smart meter installation numbers are exclusive of any costs or
6 numbers related to unit sub-meters. In accordance with the Smart Meter Guidelines, the
7 disposition of stranded meter amounts will be addressed in THESL's next rebasing
8 application.

9

10 **SMART METER IMPLEMENTATION STATUS**

11 THESL's smart meter rollout was largely complete by the end of 2010, and has been
12 substantially finalized as of the end of 2012. The breakdown of the number of smart
13 meter installations by year, along with conversion status as of December 31, 2012, is
14 shown in Table 1 below. The discrepancy between the cumulative number of installed
15 meters over the seven year time span and the current number of metered customers is a
16 result of re-installations due to demolition, re-construction, or electrical reconfiguration,
17 the replacement and reinstallation of defective or failing smart meters, and the existence
18 of "contributing meters" (in which multiple meters, particularly in the GS>50kW class,
19 are used to serve one customer property). In addition, customer numbers exclude
20 inactive properties (with disconnected services) for which smart meters may have been
21 previously installed.

1 **Table 1: Smart Meter Installations Summary by Year**

Year	Smart Meter Installs per Year				Smart Meter Installs Cumulative			
	Residential	GS<50	GS>50	Total	Residential	GS<50	GS>50	Total
2006	191,370	2,070	560	194,000	191,370	2,070	560	194,000
2007	202,882	7,564	4,206	214,652	394,252	9,634	4,766	408,652
2008	144,460	10,466	2,505	157,431	538,712	20,100	7,271	566,083
2009	41,834	13,166	2,666	57,666	580,546	33,266	9,937	623,749
2010	24,500	15,693	3,200	43,393	605,046	48,959	13,137	667,142
2011	11,673	15,991	400	28,064	616,719	64,950	13,537	695,206
2012	1,293	3,056	201	4,550	618,012	68,006	13,738	699,756
As of December 31, 2012:								
Total Customers (2012 RRR Data)					602,375	67,970	12,225	682,570
Total Smart Metered Customers					600,645	66,733	12,013	679,391
Smart Meter Conversion Completion %					99.7%	98.2%	98.3%	99.5%
Note (1) : All Figures exclude suite meters								
Note (2) : Smart Meter Installation values include Collector Meters								

2 **THESL'S 2008-2010 SMART METER EXPENDITURES**

3 The actual 2008 to 2010 smart meter expenditures are summarized in Table 2 below.

4 OM&A costs include costs for meter communications, non-capitalized labour associated
 5 with the smart meter implementation, and customer communication costs for Time-of-
 6 Use ("TOU") pricing.

7
 8 THESL has broken down its smart meter expenses into minimum and beyond minimum
 9 functionality, in accordance with the Board's accepted classification of smart meter
 10 functions, as established in Appendix A of the Decision from the Combined Smart Meter
 11 Proceeding (EB-2007-0063) and more recently summarized in section 3.4 of the Smart
 12 Meter Guidelines.

1 **Table 2: Smart Meter Expenditures (\$)**

	2008		2009		2010	
	Minimum	Beyond Minimum	Minimum	Beyond Minimum	Minimum	Beyond Minimum
Metering Devices	24,003.0	3,585.8	14,280.0	3,841.9	12,313.4	4,087.8
Metering Collectors	241.8	0.0	361.3	0.0	41.4	0.0
Metering Control Computer	781.7	0.0	234.4	0.9	161.8	567.9
Other AMI Capital Costs	1,185.2	240.7	1,212.3	0.0	1,203.0	0.0
Other Capital Costs	0.0	4,774.3		2,902.3		1,424.0
Total Capital Costs	26,211.7	8,600.8	16,088.0	6,745.2	13,719.7	6,079.7
Total Operating Expenses	751.5	111.2	2,521.4	610.7	2,391.7	718.7
Total	26,963.2	8,712.0	18,609.4	7,355.9	16,111.4	6,798.3

2 The majority of costs classified as beyond minimum functionality consist of the
 3 installation of smart meters for the GS>50kW customer class (Metering Devices), and the
 4 construction of infrastructure components related to the implementation of TOU rates
 5 (Other Capital Costs). In both of THESL's previous smart meter clearance applications¹,
 6 and in subsequent Cost of Service applications², the Board has found THESL's
 7 conversion of GS>50kW meters to be prudent. The Other Capital Costs category
 8 includes cost items such as TOU preparation, MDMR integration, and web presentment,
 9 which were necessary for the successful implementation and integration of smart meters
 10 and TOU rates. A complete breakdown of costs, categorized into minimum and beyond
 11 minimum functionality, is contained in Appendix B.

¹ Combined Proceeding, Decision with Reasons, August 8, 2007, Page 20.

² Smart Meter Guidelines, Page 16.

1 **COST VARIANCE ANALYSIS**

2 In accordance with the Smart Meter Guidelines, THESL has conducted a variance
 3 analysis comparing actual costs to previously filed costs, as summarized in Table 3
 4 below. Appendix C contains a complete cost breakdown and variance analysis.

5
 6 **Table 3: Smart Meter Costs (\$/Unit Installed)**

	2006	2007	2008	2009	2010	Average
Installed Meter Capital Costs						
Residential & GS<50 ⁽¹⁾	158.57	127.78	156.49	266.21	307.39	166.37
GS>50	948.62	546.38	1431.47	1441.08	1277.42	1091.94
Total Average Capital Costs	160.85	135.98	221.13	395.96	456.28	206.61
Total Average Cost (including OPEX)	163.56	144.19	226.61	450.27	527.96	220.69
% Change vs average 2006 cost		-12%	39%	175%	223%	34%
Note 1: Includes Collectors						

7 The analysis shows that the average per unit cost (capital and operating) for an installed
 8 smart meter (residential and commercial) has increased 223% from \$163.56 per smart
 9 meter in 2006 to \$527.96 per smart meter in 2010. As first addressed in THESL's 2011
 10 rate application, the increase in the per unit smart meter installed costs in the years 2008
 11 through 2010 can be partly attributed to a greater number of smart meter installations in
 12 difficult and/or costly locations:

13 *“While the number of Smart Meters installed will decrease from 2008*
 14 *through 2010, the 2010 installations involve more travel for scattered*
 15 *inside and difficult to access premises and special arrangements for*
 16 *access (power interruptions for small Commercial customers). These*
 17 *installations also involve premises with asbestos backer boards which*
 18 *require special procedures in order to comply with the Occupational*
 19 *Health and Safety Act and to satisfy customer safety concerns.”³*

³ EB-2010-0142, Exhibit F1, Tab 6, Schedule 6, Page 1.

1 In addition, as fewer of the common and less expensive single-phase 120/240V 200A
 2 residential smart meters were installed in the latter years of the deployment (2008
 3 through 2010), a greater proportion of more expensive three-phase 120/208V, 347/600V,
 4 and 208V network transformer-type smart meters were installed in commercial settings
 5 (and some residential settings) throughout that same time frame. The net result is a
 6 higher average per unit capital and labour cost for all smart meters installed throughout
 7 the latter years of the smart meter program.

8
 9 Table 4 below illustrates, using relative values for reasons of unit price confidentiality,
 10 that smart meter capital costs have remained relatively unchanged over 2008 through
 11 2010. Labour costs for the installation of the standard residential smart meter increased
 12 in 2009 and 2010 owing to the scattered and difficult to access nature of those meters.
 13 All cost factors are shown relative to standard residential smart meters.

14
 15 **Table 4: Relative Cost Factors of Smart Meter Installations**

Meter Capital Cost (relative to Standard 2008)	2008	2009	2010
Residential Smart Meters (all Residential meter types)	1.0	1.2	1.1
Collector (all Collector meter types)	8.9	9.3	8.7
GS<50 Smart Meters (all GS<50 meter types)	4.7	4.4	3.5
GS>50 Smart Meters (all GS>50 meter types)	8.2	8.0	4.7
Meter Installation Labour Cost (relative to Standard 2008)	2008	2009	2010
Residential Smart Meters (all Residential meter types)	1.0	2.4	3.0
Collector (all Collector meter types)	13.3	11.1	15.6
GS<50 Smart Meters (all GS<50 meter types)	8.3	8.0	8.3
GS>50 Smart Meters (all GS>50 meter types)	20.3	21.7	22.9

Note: For relative cost analysis, labour cost ratios include only direct labour costs; vehicle, administration costs and other like costs are not included.

16 The smart meter OM&A expenses have also increased throughout the course of the smart
 17 meter deployment (refer to Appendix C). THESL notes that the increase in OM&A costs

1 in 2009 is a direct result of increased customer communication costs and meter
2 communication costs. This, however, is a consequence of the timing of TOU
3 implementation, rather than a result of an increase in actual smart meter installation costs.

4
5 To prepare customers for mandatory TOU implementation, THESL mailed three sets of
6 direct-to-customer communications (reaching 395,000 customers) in defined groupings
7 throughout 2009. In 2010, THESL customer communications changed from a direct-to-
8 customer approach to a mass media approach, resulting in 2010 smart meter OM&A
9 costs for customer communications increasing slightly from 2009. While customer
10 communication costs are properly classified as a smart meter costs (in that they are
11 needed to inform the customer of the change to TOU rates), they are not a cost directly
12 attributable to the installation of smart meters, nor to any annual per unit cost variance
13 analysis.

14
15 Similarly, as more and more conventional manually-read meters were replaced by smart
16 meters, OM&A costs for smart meter telecommunications increased from \$0.1 million in
17 2008 to \$0.7 million in 2009. THESL notes that offsetting savings (in reduced manual
18 meter reading costs, for example) have already been incorporated in rates as of THESL's
19 last cost-of-service application.⁴

20
21 Overall, THESL's average per unit cost (capital and OM&A) of \$220.69 for all
22 residential and commercial smart meters installed from 2006 through 2010 is within 6%
23 of the average per unit cost for all distributors in the Province of Ontario (the "Smart
24 Meter Audit Review Report" of March 31, 2010 details an average costs of \$207.37
25 based on 3,053,931 smart meters installed at a total capital and OM&A cost of
26 \$633,294,140). Excluding the GS>50kW class, THESL's average per unit costs are
27 actually 10.5% below the average, at \$185.58.

⁴ EB-2010-0142, Exhibit F1, Tab 6, Schedule 3, Page 4 and Page 8.

1 **SMART METER DEFERRAL ACCOUNT DISPOSITION CALCULATION**

2 For purposes of disposing the smart meter deferral accounts from 2008, 2009, and 2010
3 by way of the SMDR, THESL accounts for the revenues received from customers
4 through the Smart Meter Rate Adder. These revenues are used to offset the revenue
5 requirement that would have flowed from the actual smart meter activity had it been
6 included as a distribution activity when setting rates for those years. Specifically, the
7 methodology applied in this case consists of two elements:

8

9 1) The revenue requirement consequences (OM&A, depreciation expenses, return on
10 rate base, and PILs) arising from smart meter activities in each of 2008, 2009 and
11 2010, and the incremental revenue requirement (depreciation expenses, return on
12 rate base, PILs, and carrying charges) for each year subsequent until December
13 31, 2013.

14

15 2) The revenue collected through the Smart Meter Funding Adder from 2008
16 through 2013.

17

18 The sum of the net balance of these two calculations, with carrying charges applied,
19 forms THESL proposed smart meter disposition amounts. A summary of these
20 calculations is shown in Table 5 below.

1 **Table 5: 2008-2010 Smart Meter Revenue Requirement (\$000s)**

	2008	2009	2010	2011	2012	2013
2008 Smart Meter Installs						
Rate Base	13,887.5	29,056.9	29,035.7	25,958.1	22,840.2	19,823.5
Return on Rate Base	916.8	1,841.0	2,044.7	1,801.5	1,585.1	1,375.8
Operating Expenses ¹	862.7	0.0	0.0	0.0	0.0	0.0
Depreciation	1,128.3	2,616.8	3,037.4	3,117.9	3,117.9	2,915.5
Revenue Requirement (before PILS)	2,907.7	4,457.9	5,082.1	4,919.4	4,703.0	4,291.2
Grossed up PILS	277.2	-649.2	-271.3	883.9	820.7	755.7
Revenue Requirement	3,184.9	3,808.7	4,810.8	5,803.3	5,523.7	5,047.0
2009 Smart Meter Installs						
Rate Base	-	10,866.6	20,111.5	18,428.4	16,731.7	15,106.7
Return on Rate Base	-	688.5	1,416.3	1,278.9	1,161.2	1,048.4
Operating Expenses ¹	-	3,132.1	0.0	0.0	0.0	0.0
Depreciation	-	846.3	1,669.6	1,696.7	1,696.7	1,553.2
Revenue Requirement (before PILS)	-	4,666.9	3,085.9	2,975.6	2,857.9	2,601.6
Grossed up PILS	-	-254.4	188.1	381.9	367.6	331.4
Revenue Requirement	-	4,412.5	3,274.0	3,357.6	3,225.5	2,933.0
2010 Smart Meter Installs						
Rate Base	-	-	9,790.0	18,020.9	16,474.1	14,953.3
Return on Rate Base	-	-	689.4	1,250.6	1,143.3	1,037.8
Operating Expenses ¹	-	-	3,110.3	0.0	0.0	0.0
Depreciation	-	-	649.5	1,546.8	1,546.8	1,494.7
Revenue Requirement (before PILS)	-	-	4,449.3	2,797.4	2,690.1	2,532.5
Grossed up PILS	-	-	-231.6	23.0	332.9	329.4
Revenue Requirement	-	-	4,217.7	2,820.4	3,023.0	2,861.8
Total Revenue Requirement	3,184.9	8,221.2	12,302.5	11,981.2	11,772.2	10,841.8
Smart Meter Rate Adder Revenue	-5,710.7	-5,711.9	-5,846.7	-5,822.9	-5,950.9	-5,980.3
	-2,525.7	2,509.3	6,455.8	6,158.4	5,821.4	4,861.5
Carrying Charges	-178.6	147.0	324.0	214.8	115.2	23.9
Net Revenue Requirement	-2,704.3	2,656.3	6,779.8	6,373.1	5,936.5	4,885.4
Total 2008-2013 Amount for Recovery:	23,926.9					

1. Represents operating expenses in the install year. As a result, there are no corresponding expenses in subsequent years.

2 Appendices C1-C3 provide the details of the revenue requirement calculations for 2008-
 3 2013 above. In accordance with Board-approved methodology, carrying costs were
 4 applied to the difference between the amounts recovered through the Smart Meter Rate
 5 Adders, and the corresponding revenue requirement amounts, calculated as of the
 6 beginning of each subsequent year. Details of the carrying charge calculations are
 7 provided in Appendix D.

1 **SMART METER INCREMENTAL REVENUE REQUIREMENT CALCULATION**

2 In accordance with the Smart Meter Guidelines (for utilities filing Smart Meter Clearance
 3 applications in a non-Cost of Service rate year), THESL has calculated an SMIRR
 4 amount as a proxy for the incremental change in distribution rates that would have
 5 occurred if the assets were incorporated into ratebase. The calculations are shown in
 6 Table 6 below.

7
 8 **Table 6: 2014 Smart Meter Incremental Revenue Requirement (\$000s)**

	2014	
	Start	End
2008-2010 Smart Meter Fixed Asset Cost	75,536.0	75,536.0
Less: Accumulated Depreciation	28,634.1	33,969.2
	46,901.9	41,566.8
Smart Meters in Rate Base (i.e. Average Fixed Assets)		44,234.4
Return on Rate Base		3,069.9
Depreciation		5,335.1
Revenue Requirement (before PILS)		8,404.9
Grossed up PILS		1,225.9
Revenue Requirement		9,630.8

9 Appendix E provides the details of the revenue requirement calculation above.

10
 11 **SMART METER MODEL**

12 The Board's Smart Meter Guidelines provide utilities with a Smart Meter Model to assist
 13 in providing its incremental revenue requirement relating to smart meter activities. While
 14 the values provided by THESL in this application have been calculated without direct use
 15 of the model, THESL has populated the model and provided the results for comparison
 16 purposes in Appendix F. Using THESL's data, the Board's Smart Meter Model produces
 17 an SMDR of \$23.9 million, virtually identical to THESL's calculation, and an SMIRR of
 18 \$9.8 million, approximately \$0.1 million higher than THESL's calculation. The values
 19 requested for clearance by THESL are in fact lower than those produced by the Board's

1 Model. This variance is caused by three main differences in approach between THESL's
2 calculations and those embedded within the Smart Meter Model:

3
4 **Capex vs. In-Service**

5 The Smart Meter Model calculates incremental revenue requirement using total
6 smart meter capital expenditures in the year, while THESL calculates incremental
7 revenue requirement using the fixed asset balance, which is the approach typically
8 used in the Board's rate setting models and which has guided THESL's
9 methodology in this application. THESL submits that using the fixed asset
10 balance is a more accurate calculation as it only provides for incremental revenue
11 requirement for assets that are used or useful in any given year. As a result,
12 THESL did not calculate incremental revenue requirement on its CWIP balances.
13 The net effect of this component results in an SMDR recovery of \$1.0 million less
14 than that produced by the Smart Meter Model.

15
16 **PILs**

17 Similarly, for PILs purposes, the Smart Meter Model calculates Capital Cost
18 Allowance (CCA) on total annual capital expenditures, while THESL calculated
19 its CCA based on the fixed asset balances, as above. THESL did not include
20 assets in its CCA calculations unless those assets were energized (or were
21 included in CWIP). The net effect of this component results in an SMDR
22 recovery of \$0.5 million more than that produced by the Smart Meter Model.

23
24 **Carrying Charges**

25 The Board's Smart Meter Model only calculates carrying charges on OM&A and
26 Depreciation expense, while THESL has calculated carrying charges on the net
27 revenue requirement consequences of all smart meter costs components. The net
28 effect of this component results in an SMDR recovery of \$0.6 million more than
29 that produced by the Smart Meter Model.

1 THESL submits that its calculations of the SMDR and the SMIRR produce more accurate
2 values than those generated by the Smart Meter Model. Given that the Smart Meter
3 Guidelines are not prescriptive in the use of the Smart Meter Model, and the fact that
4 THESL's final calculations are in fact slightly lower than those produced by the model,
5 THESL requests that the Board consider and approve the values derived from its
6 calculations for disposition.

7
8 **DISCONTINUATION OF THE SMART METER RATE ADDER**

9 In this application, THESL seeks discontinuation of the Smart Meter Rate Adder
10 effective April 30, 2014. With the implementation of the SMDR and SMIRR, the Smart
11 Meter Rate Adder will no longer be required.

12
13 **CALCULATION OF THE SMDR**

14 THESL requests disposition of the 2008, 2009, and 2010 year-end balances of the Smart
15 Meter Deferral Account by way of the SMDR effective for 36-months from May 1, 2014.

16
17 THESL proposes that the sum of the 2008-2010 smart meter balance amounts, and the
18 2009-2011 incremental revenue requirements for the 2008-2010 smart meter capital
19 amounts, with a total net debit amount of \$23,926,853 be disposed to only those rate
20 classes that had smart meters installed over the course of the smart meter program
21 (Residential, GS < 50kW, and GS 50 – 999kW) using class-specific calculations. In
22 accordance with the Board's Decision in THESL's EB-2010-0142 proceeding, the
23 residential class does not include any Competitive Sector Multi Unit Residential class
24 customers as these customers were not part of the smart meter program.

25
26 The amounts proposed to be disposed to each rate class follow as closely as possible the
27 costs incurred to install smart meters for each rate class, offset by amounts collected from
28 those same rate classes. THESL further proposes that these amounts be disposed by way
29 of fixed monthly charges, which is consistent with how the rate adder for smart meters

1 has been collected over 2008-2013. THESL submits that the actual 2012 customer
 2 numbers (as reported in THESL's RRR filing) be used for the calculation of the class rate
 3 riders. Table 7 below details the 2008-2013 revenue requirement, associated revenues,
 4 and resulting SMDR rate riders by class.

5
 6 **Table 7: Allocation of SMDR Revenue Requirements and Calculation of Rate**
 7 **Riders (\$000s)**

	Residential Class	GS<50kW Class	GS50-999 kW Class	Total
OPEX	5,794.1	1,080.9	230.1	7,105.1
Depreciation	14,953.5	8,956.2	4,724.4	28,634.1
Interest Expense	4,408.7	2,859.6	1,512.7	8,781.0
Return	5,231.5	3,443.5	1,823.2	10,498.3
PILs	1,814.6	975.7	495.1	3,285.4
Total Revenue Requirement	32,202.4	17,316.0	8,785.4	58,303.9
Net Carrying Charges	572.5	62.2	11.6	646.3
Revenues Collected	-31,028.0	-3,368.6	-626.7	-35,023.3
Net for disposal	1,746.9	14,009.6	8,170.3	23,926.9
Total Number of Metered Customers (2012 RRR Data)	602,375	67,970	12,225	
SMDR Rate Rider (\$/30 days) – three-year recovery	0.08	5.65	18.31	

8 THESL has detailed records of installed smart meters, which were used to determine the
 9 capital costs directly allocated to each rate class. These capital amounts were further
 10 used to determine the depreciation, interest, and return components of the revenue
 11 requirement by class. OPEX is allocated to each class based on the total number of
 12 meters installed in each class over the 2008-2010 period. PILs is allocated to each class
 13 based on the Revenue Requirement before PILs amounts. Revenue collected through the
 14 existing Smart Meter Rate Adder is directly allocated back by rate class. Revenue
 15 received from classes that did not have smart meters installed has been re-allocated to the

1 Residential, GS<50kW, and GS>50kW classes (based proportionally on the revenue
2 collected from those three classes). Net carrying charges are allocated based on the
3 revenues received. THESL submits that these allocations are in accordance with the
4 Smart Meter Guidelines and the Board's previous smart meter clearance decisions.

5

6 **CALCULATION OF THE SMIRR**

7 In accordance with the Smart Meter Guidelines, THESL requests the collection of the
8 SMIRR annually beginning May 1, 2014, until THESL's next Cost of Service rate
9 application.

10

11 THESL proposes that the SMIRR, with a total net debit amount of \$9,630,787 be
12 collected annually from those rate classes that had smart meters installed and that these
13 amounts be collected by way of fixed monthly charges using actual 2012 customer
14 numbers (as reported in THESL's RRR filing) for the calculation of the class rate riders.
15 THESL further proposes that the components of revenue requirement for the SMIRR be
16 directly allocated to the Residential, GS<50 kW and GS50-999 kW classes in the same
17 proportion as derived for the SMDR. This is consistent with the guidance provided by
18 the Board in the Smart Meter Guidelines (which require the same allocation methodology
19 for both the SMDR and SMIRR). The allocated revenue requirement and calculated rate
20 riders by rate class are shown in Table 8 below.

1 **Table 8: Allocation of SMIRR Revenue Requirements and Calculation of Rate**
 2 **Riders (\$000s)**

	Residential	GS<50 kW	GS 50-999 kW	Total
OPEX	-	-	-	-
Depreciation	2,786.1	1,668.7	880.2	5,335.1
Interest Expense	690.3	447.7	236.8	1,374.8
Return	844.7	556.0	294.4	1,695.1
PILS	630.2	389.8	205.9	1,225.9
Total Revenue Requirement	4,951.3	3,062.2	1,617.3	9,630.8
Total Number of Metered Customers (2012 RRR Data)	602,375	67,970	12,225	
Fixed Rate Rider (\$/30 days)	0.68	3.70	10.87	

3 **BILL IMPACTS**

4 A summary of the proposed SMDRR and SMIRR rate riders by rate class are shown in
 5 Table 9 below.

6
 7 **Table 9: Rate Riders by Rate Class (\$)**

	Residential	GS<50 kW	GS 50-999 kW
SMDR Rate Rider	0.08	5.65	18.31
SMIRR Rate Rider	0.68	3.70	10.87
Total	0.76	9.35	29.18
- Smart Meter Rate Adder	-0.68	-0.68	-0.68
Net	0.08	8.67	28.50

8 On a combined basis, the proposed introduction of the SMDR and the SMIRR, and the
 9 simultaneous discontinuation of the Smart Meter Rate Adder would result in a \$0.08
 10 monthly increase for a typical residential customer. Bill impacts for typical customers in
 11 each class are shown below in Table 10.

1 **Table 10: Total Bill Impacts by Class**

Monthly Bills	Residential (800kWh)	GS<50 kW (2000kWh)	GS 50-999 kW (150,000kWh)
Total Bill Before Rate Riders	\$119.99	\$299.72	\$19,550.78
Total Bill after Rate Riders	\$120.07	\$308.39	\$19,579.28
Change (\$)	\$0.08	\$8.67	\$28.50
Change (%)	0.07%	2.89%	0.15%

Table 1: Costs by Minimum and Beyond Minimum Functionality

Description	2008						2009						2010					
	Min. Functionality			Beyond Min. Functionality			Min. Functionality			Beyond Min. Functionality			Min. Functionality			Beyond Min. Functionality		
	Cost (\$000s)	Units	Unit Cost (\$)	Cost (\$000s)	Units	Unit Cost (\$)	Cost (\$000s)	Units	Unit Cost (\$)	Cost (\$000s)	Units	Unit Cost (\$)	Cost (\$000s)	Units	Unit Cost (\$)	Cost (\$000s)	Units	Unit Cost (\$)
Advanced Metering Communication Device (AMCD)																		
1 Smart Meters	17,601.8	154,708	113.77	1,869.3	2,505	746.24	9,666.5	54,721	176.65	1,944.3	2,666	729.30	7,443.4	40,161	185.34	1,370.6	3,200	428.31
2 Installation	6,401.2	154,708	41.38	1,654.9	2,505	660.63	4,613.5	54,721	84.31	1,897.6	2,666	711.78	4,870.0	40,161	121.26	2,717.2	3,200	849.12
3 Workforce Automation	0.0	0	0.00	61.6	2,505	24.59	0.0	0	0.00	0.0	0	0.00	0.0	40,161	0.00	0.0	0	0.00
Total	24,003.0	154,708	155.15	3,585.8	2,505	1,431.47	14,280.0	54,721	260.96	3,841.9	2,666	1,441.08	12,313.4	40,161	306.60	4,087.8	3,200	1,277.42
Advanced Metering Regional Collector (AMRC) (includes LAN)																		
4 Collectors	177.2	218	812.94	0.0	0	0.00	236.4	279	847.38	0.0	0	0.00	25.4	32	794.92	0.0	0	0.00
5 Repeaters	0.0	0	0.00	0.0	0	0.00	0.0	0	0.00	0.0	0	0.00	0.0	0	0.00	0.0	0	0.00
6 Installation	64.6	218	296.22	0.0	0	0.00	124.9	279	447.74	0.0	0	0.00	16.0	32	499.76	0.0	0	0.00
Total	241.8	218	1,109.16	0.0	0	0.00	361.3	279	1,295.12	0.0	0	0.00	41.4	32	1,294.68	0.0	0	0.00
Advanced Metering Control Computer (AMCC)																		
7 Computer Hardware	0.0	154,926	0.00	0.0	0	0.00	24.0	55,000	0.44	0.0	0	0.00	0.0	40,193	0.00	306.0	3,200	95.63
8 Computer Software	781.7	154,926	5.05	0.0	0	0.00	210.4	55,000	3.83	0.9	2,666	0.35	161.8	40,193	4.03	261.9	3,200	81.83
9 Computer Software Licence & Installation	0.0	154,926	0.00	0.0	0	0.00	0.0	55,000	0.00	0.0	0	0.00	0.0	40,193	0.00	0.0	0	0.00
Total	781.7	154,926	5.05	0.0	0	0.00	234.4	55,000	4.26	0.9	2,666	0.35	161.8	40,193	4.03	567.9	3,200	177.46
Wide Area Network (WAN)																		
10 Activation fees	0.0	0	0.00	0.0	0	0.00	0.0	0	0.00	0.0	0	0.00	0.0	0	0.00	0.0	0	0.00
Total	0.0	0	0.00	0.0	0	0.00	0.0	0	0.00	0.0	0	0.00	0.0	0	0.00	0.0	0	0.00
Other AMI Capital Costs																		
Repairs of Damaged Customer Equipment	73.6	154,926	0.47				141.3	55,000	2.57				28.9	40,193	0.72			
11 AMI Interface to CIS	0.0	154,926	0.00	0.0	0	0.00	0.0	55,000	0.00	0.0	0	0.00	0.0	40,193	0.00	0.0	0	0.00
12 Professional Fees	0.0	154,926	0.00	0.0	0	0.00	0.0	55,000	0.00	0.0	0	0.00	0.0	40,193	0.00	0.0	0	0.00
13 Integration	0.0	154,926	0.00	0.0	0	0.00	0.0	55,000	0.00	0.0	0	0.00	0.0	40,193	0.00	0.0	0	0.00
14a Program Management	1,111.6	154,926	7.18	240.7	2,505	96.09	1,071.0	55,000	19.47	0.0	0	0.00	1,174.1	40,193	29.21	0.0	0	0.00
14b Program Management IT	0.0	154,926	0.00	0.0	0	0.00	0.0	55,000	0.00	0.0	0	0.00	0.0	40,193	0.00	0.0	0	0.00
Total	1,185.2	154,926	7.65	240.7	2,505	96.09	1,212.3	55,000	22.04	0.0	0	0.00	1,203.0	40,193	29.93	0.0	0	0.00
Total (1-14b)	26,211.7			3,826.5			16,088.0			3,842.9	0	0.00	13,719.7	0	0.00	4,655.6	0	0.00
Other Capital Costs																		
Web Presentment				1,206.4						277.3						0.0		
TOU / Business/ System Readiness				2,848.1						2,096.7						1,253.5		
MDMR Integration				542.9						513.8						93.6		
WAN Cost				171.1						6.6						30.7		
Cost Related to technical capabilities in the smart meters or related communications infrastructure that exceeds those specified in O.Reg 425/6 (Stock code 9662875 & 9662876)				5.8						8.0						46.2		
Total Other Capital Costs	0.0			4,774.3			0.0			2,902.3			0.0			1,424.0		
Total Capital Costs	26,211.7			8,600.8			16,088.0			6,745.2			13,719.7			6,079.7		
Total Operating Costs	751.5			111.2			2,521.4			610.7			2,391.7			718.6		
Total Costs	26,963.2			8,712.0			18,609.4			7,355.9			16,111.4			6,798.3		

2008 Revenue Requirement from 2008 Smart Meters

	Col. 1	Col. 2	Col. 3	Col. 4
		(\$000s)	(\$000s)	Calculation
1				
2	Smart Meter 2008 Expenses			
3	Incremental Operating Expense		862.7	A
4	Depreciation Expense		1,128.3	B
5	Total Expenses		<u>1,991.0</u>	C = A + B
6				
7	Calculated Return on Rate Base			
8	Smart Meter Fixed Assets Net Book Value - Dec. 31, 2008	27,559.4		D
9	Net Fixed Assets (average of Smart Meter Fixed Assets			
10	opening and closing 2008 Net Book Value)	13,779.7		E = D / 2
11	Working Capital Allowance	107.8		F = A * 12.5%
12	Total Rate Base	13,887.5		G = E + F
13				
14	Debt Cost - weighted debt rate	5.42%	470.4	H = G * 62.5% * 5.42%
15	Return on Equity	8.57%	446.3	I = G * 37.5% * 8.57%
16	Return on Rate Base		<u>916.8</u>	J = H + I
17				
18	Revenue Requirement before PILs		<u>2,907.7</u>	K = C + J
19				
20	Calculation of Income for PILs Purposes			
21	Incremental Operating Expenses		862.7	A
22	Depreciation Expense		1,128.3	B
23	Interest Expense		470.4	H
24	Income for PILs purposes		<u>446.3</u>	L = K - A - B - H
25				
26	Grossed up PILs		<u>277.2</u>	M
27				
28	Revenue Requirement before PILs		2,907.7	K
29	Grossed up PILs		<u>277.2</u>	M
30	2008 Revenue Requirement for 2008 Smart Meters		<u>3,184.9</u>	N = K + M

2008 Revenue Requirement - PILs Calculation

Col. 1	Col. 2	Col. 3	Col. 4
1	(\$000s)		(\$000s)
2	Income Tax		
3	446.3		
4	1,128.3		
5	(1,147.5)		
6	0.0		
7	0.0		
8	427.1		
9	33.50%		
10	143.1		
11			
12	Ontario Capital Tax		
13	27,559.4		
14	0.0		
15	0.0		
16	27,559.4		
17	0.0		
18	27,559.4		
19	0.225%		
20	62.0		
21			
22			
23	PILs Payable	Gross Up	Grossed Up PILs
24	143.1	33.50%	215.2
25	62.0		62.0
26	205.1		277.2

2009 Revenue Requirement from 2008 Smart Meters

	Col. 1	Col. 2	Col. 3	Col. 4
		(\$000s)	(\$000s)	Calculation
Rate Base				
2008 Smart Meter Fixed Assets Cost		Start of 2009	End of 2009	
Smart Meters		28,687.7	28,687.7	A
H/W & S/W		0.0	5,611.8	B
Total		<u>28,687.7</u>	<u>34,299.5</u>	C = A + B
Less: Smart Meter Accumulated Depreciation				
Smart Meters		1,128.3	3,041.8	D
H/W & S/W		0.0	703.3	E
Total		<u>1,128.3</u>	<u>3,745.1</u>	F = D + E
Smart Meter Fixed Assets Net Book Value				
Smart Meters		27,559.4	25,645.9	G = A - D
H/W & S/W		0.0	4,908.5	H = B - E
Total		<u>27,559.4</u>	<u>30,554.4</u>	I = G + H
Average Smart Meter Fixed Assets			<u>29,056.9</u>	J = avg(I _{start of 2009} , I _{end of 2009})
Smart Meters Fixed Assets in Rate Base			<u>29,056.9</u>	K = J
Return on Rate Base				
Deemed Debt		60%	17,434.2	L = K * 60%
Deemed Equity		40%	<u>11,622.8</u>	M = K * 40%
			<u>29,056.9</u>	N = L + M
Weighted Debt Rate		5.22%	910.1	O = L * 5.22%
Equity Rate		8.01%	<u>931.0</u>	P = M * 8.01%
Return on Rate Base			<u>1,841.0</u>	Q = O + P
Amortization Expenses				
2008 Smart Meters:				
Smart Meters			1,913.5	R = D _{end of 2009} - D _{start of 2009}
H/W & S/W			<u>703.3</u>	S = E _{end of 2009} - E _{start of 2009}
			<u>2,616.8</u>	T = R + S
Revenue Requirement Before PILs			<u>4,457.9</u>	U = T + Q
Calculation of Income for PILs Purposes				
Depreciation Expense			2,616.8	T
Interest Expense			<u>910.1</u>	O
Income for PILs purposes			<u>931.0</u>	V = U - T - O
Grossed up PILs			<u>(649.2)</u>	W
Revenue Requirement Before PILs			4,457.9	U
Grossed up PILs			<u>(649.2)</u>	W
2009 Revenue Req't for 2008 Smart Meters			<u>3,808.7</u>	X = U + W

2009 Revenue Requirement - PILs Calculation

Col. 1	Col. 2	Col. 3	Col. 4
	(\$000s)		(\$000s)
1			
2	Income Tax		
3	Net Income	931.0	
4	Amortization	2,616.8	
5	CCA - Class 47 (8%) SM with ½ year rule	(2,203.2)	
6	CCA - Class 50 (55%) HW with ½ year rule	(4.5)	
7	CCA - Class 50 (55%) Sys SW with ½ year rule	0.0	
8	CCA - Class 12 (100%) App SW with ½ year rule	(2,797.7)	
9	Change in taxable income	(1,457.6)	
10	Tax Rate	33.00%	
11	Income Taxes Payable	(481.0)	
12			
13	Ontario Capital Tax		
14	Smart Meters	25,645.9	
15	Computer SW & Hardware	4,908.5	
16	Rate Base	30,554.4	
17	Less: Exemption	0.0	
18	Deemed Taxable Capital	30,554.4	
19	Ontario Capital Tax Rate	0.225%	
20	Net Amount (Taxable Capital x Rate)	68.7	
21			
22			
23		PILs Payable	Gross Up
24	Change in Income Taxes Payable	(481.0)	33.00%
25	Change in OCT	68.7	(717.9)
26	PILs	(412.3)	68.7
			(649.2)

2010 Revenue Requirement from 2008 Smart Meters

	Col. 1	Col. 2	Col. 3	Col. 4
		(\$000s)	(\$000s)	Calculation
1				
2	Rate Base			
3	2008 Smart Meter Fixed Assets Cost	Start of 2010	End of 2010	
4	Smart Meters	28,687.7	28,687.7	A
5	H/W & S/W	5,611.8	5,611.8	B
6	Total	<u>34,299.5</u>	<u>34,299.5</u>	C = A + B
7				
8	Less: Smart Meter Accumulated Depreciation			
9	Smart Meters	3,041.8	4,955.2	D
10	H/W & S/W	703.3	1,827.3	E
11	Total	<u>3,745.1</u>	<u>6,782.5</u>	F = D + E
12				
13	Smart Meter Fixed Assets Net Book Value			
14	Smart Meters	25,645.9	23,732.5	G = A - D
15	H/W & S/W	4,908.5	3,784.6	H = B - E
16	Total	<u>30,554.4</u>	<u>27,517.0</u>	I = G + H
17				
18	Average Smart Meter Fixed Assets		<u>29,035.7</u>	J = avg(I _{start of 2010} , I _{end of 2010})
19				
20	Smart Meters Fixed Assets in Rate Base		<u>29,035.7</u>	K = J
21				
22	Return on Rate Base			
23	Deemed Debt	60%	17,421.4	L = K * 60%
24	Deemed Equity	40%	<u>11,614.3</u>	M = K * 40%
25			<u>29,035.7</u>	N = L + M
26				
27	Weighted Debt Rate	5.17%	900.7	O = L * 5.17%
28	Equity Rate	9.85%	<u>1,144.0</u>	P = M * 9.85%
29	Return on Rate Base		<u>2,044.7</u>	Q = O + P
30				
31	Amortization Expenses			
32	2008 Smart Meters:			
33	Smart Meters		1,913.5	R = D _{end of 2010} - D _{start of 2010}
34	H/W & S/W		<u>1,123.9</u>	S = E _{end of 2010} - E _{start of 2010}
35			<u>3,037.4</u>	T = R + S
36				
37	Revenue Requirement Before PILs		<u>5,082.1</u>	U = T + Q
38				
39	Calculation of Income for PILs Purposes			
40	Depreciation Expense		3,037.4	T
41	Interest Expense		<u>900.7</u>	O
42	Income for PILs purposes		<u>1,144.0</u>	V = U - T - O
43				
44	Grossed up PILs		<u>(271.3)</u>	W
45				
46	Revenue Requirement Before PILs		5,082.1	U
47	Grossed up PILs		<u>(271.3)</u>	W
48	2010 Revenue Req't for 2008 Smart Meters		<u>4,810.8</u>	X = U + W

2010 Revenue Requirement - PILs Calculation

	Col. 1	Col. 2	Col. 3	Col. 4
		(\$000s)		(\$000s)
1				
2	Income Tax			
3	Net Income	1,144.0		
4	Amortization	3,037.4		
5	CCA - Class 47 (8%) SM with ½ year rule	(2,027.0)		
6	CCA - Class 50 (55%) HW with ½ year rule	(6.6)		
7	CCA - Class 12 (100%) App SW with ½ year rule	(2,797.7)		
8	Change in taxable income	(649.8)		
9	Tax Rate	31.00%		
10	Income Taxes Payable	(201.4)		
11				
12	Ontario Capital Tax			
13	Smart Meters	23,732.5		
14	Computer SW & Hardware	3,784.6		
15	Rate Base	27,517.0		
16	Less: Exemption	0.0		
17	Deemed Taxable Capital	27,517.0		
18	Ontario Capital Tax Rate	0.075%		
19	Net Amount (Taxable Capital x Rate)	20.6		
20				
21				
22		PILs Payable	Gross Up	Grossed Up PILs
23	Change in Income Taxes Payable	(201.4)	31.00%	(291.9)
24	Change in OCT	20.6		20.6
25	PILs	(180.8)		(271.3)

2011 Revenue Requirement from 2008 Smart Meters

	Col. 1	Col. 2	Col. 3	Col. 4
		(\$000s)	(\$000s)	Calculation
1				
2	Rate Base			
3	2008 Smart Meter Fixed Assets Cost	Start of 2011	End of 2011	
4	Smart Meters	28,687.7	28,687.7	A
5	H/W & S/W	5,611.8	5,611.8	B
6	Total	<u>34,299.5</u>	<u>34,299.5</u>	C = A + B
7				
8	Less: Smart Meter Accumulated Depreciation			
9	Smart Meters	4,955.2	6,868.7	D
10	H/W & S/W	1,827.3	3,031.7	E
11	Total	<u>6,782.5</u>	<u>9,900.4</u>	F = D + E
12				
13	Smart Meter Fixed Assets Net Book Value			
14	Smart Meters	23,732.5	21,819.0	G = A - D
15	H/W & S/W	3,784.6	2,580.1	H = B - E
16	Total	<u>27,517.0</u>	<u>24,399.1</u>	I = G + H
17				
18	Average Smart Meter Fixed Assets		<u>25,958.1</u>	J = avg(I _{start of 2010} , I _{end of 2010})
19				
20	Smart Meters Fixed Assets in Rate Base		<u>25,958.1</u>	K = J
21				
22	Return on Rate Base			
23	Deemed Debt	60%	15,574.9	L = K * 60%
24	Deemed Equity	40%	<u>10,383.2</u>	M = K * 40%
25			<u>25,958.1</u>	N = L + M
26				
27	Weighted Debt Rate	5.18%	806.8	O = L * 5.18%
28	Equity Rate	9.58%	<u>994.7</u>	P = M * 9.58%
29	Return on Rate Base		<u>1,801.5</u>	Q = O + P
30				
31	Amortization Expenses			
32	2008 Smart Meters:			
33	Smart Meters		1,913.5	R = D _{end of 2010} - D _{start of 2010}
34	H/W & S/W		<u>1,204.4</u>	S = E _{end of 2010} - E _{start of 2010}
35			<u>3,117.9</u>	T = R + S
36				
37	Revenue Requirement Before PILs		<u>4,919.4</u>	U = T + Q
38				
39	Calculation of Income for PILs Purposes			
40	Depreciation Expense		3,117.9	T
41	Interest Expense		806.8	O
42	Income for PILs purposes		<u>994.7</u>	V = U - T - O
43				
44	Grossed up PILs		<u>883.9</u>	W
45				
46	Revenue Requirement Before PILs		4,919.4	U
47	Grossed up PILs		<u>883.9</u>	W
48	2011 Revenue Req't for 2008 Smart Meters		<u>5,803.3</u>	X = U + W

2011 Revenue Requirement - PILs Calculation

	Col. 1	Col. 2	Col. 3	Col. 4
1		(\$000s)		(\$000s)
2	Income Tax			
3	Net Income	994.7		
4	Amortization	3,117.9		
5	CCA - Class 47 (8%) SM with ½ year rule	(1,864.8)		
6	CCA - Class 50 (55%) HW with ½ year rule	(3.0)		
7	CCA - Class 12 (100%) App SW with ½ year rule	0.0		
8	Change in taxable income	2,244.9		
9	Tax Rate	28.25%		
10	Income Taxes Payable	634.2		
11				
12	Ontario Capital Tax			
13	Smart Meters	0.0		
14	Computer SW & Hardware	0.0		
15	Rate Base	0.0		
16	Less: Exemption	0.0		
17	Deemed Taxable Capital	0.0		
18	Ontario Capital Tax Rate	0.000%		
19	Net Amount (Taxable Capital x Rate)	0.0		
20				
21				
22		PILs Payable	Gross Up	Grossed Up PILs
23	Change in Income Taxes Payable	634.2	28.25%	883.9
24	Change in OCT	0.0		0.0
25	PILs	634.2		883.9

2012 Revenue Requirement from 2008 Smart Meters

	Col. 1	Col. 2	Col. 3	Col. 4
		(\$000s)	(\$000s)	Calculation
1				
2	Rate Base			
3	2008 Smart Meter Fixed Assets Cost	Start of 2012	End of 2012	
4	Smart Meters	28,687.7	28,687.7	A
5	H/W & S/W	5,611.8	5,611.8	B
6	Total	<u>34,299.5</u>	<u>34,299.5</u>	C = A + B
7				
8	Less: Smart Meter Accumulated Depreciation			
9	Smart Meters	6,868.7	8,782.2	D
10	H/W & S/W	3,031.7	4,236.1	E
11	Total	<u>9,900.4</u>	<u>13,018.3</u>	F = D + E
12				
13	Smart Meter Fixed Assets Net Book Value			
14	Smart Meters	21,819.0	19,905.5	G = A - D
15	H/W & S/W	2,580.1	1,375.7	H = B - E
16	Total	<u>24,399.1</u>	<u>21,281.2</u>	I = G + H
17				
18	Average Smart Meter Fixed Assets		<u>22,840.2</u>	J = avg(I _{start of 2010} , I _{end of 2010})
19				
20	Smart Meters Fixed Assets in Rate Base		<u>22,840.2</u>	K = J
21				
22	Return on Rate Base			
23	Deemed Debt	60%	13,704.1	L = K * 60%
24	Deemed Equity	40%	<u>9,136.1</u>	M = K * 40%
25			<u>22,840.2</u>	N = L + M
26				
27	Weighted Debt Rate	5.18%	709.9	O = L * 5.18%
28	Equity Rate	9.58%	<u>875.2</u>	P = M * 9.58%
29	Return on Rate Base		<u>1,585.1</u>	Q = O + P
30				
31	Amortization Expenses			
32	2008 Smart Meters:			
33	Smart Meters		1,913.5	R = Dend of 2012 - Dstart of 2012
34	H/W & S/W		<u>1,204.4</u>	S = Eend of 2012 - Estart of 2012
35			<u>3,117.9</u>	T = R + S
36				
37	Revenue Requirement Before PILs		<u>4,703.0</u>	U = T + Q
38				
39	Calculation of Income for PILs Purposes			
40	Depreciation Expense		3,117.9	T
41	Interest Expense		<u>709.9</u>	O
42	Income for PILs purposes		<u>875.2</u>	V = U - T - O
43				
44	Grossed up PILs		<u>820.7</u>	W
45				
46	Revenue Requirement Before PILs		4,703.0	U
47	Grossed up PILs		<u>820.7</u>	W
48	2012 Revenue Req't for 2008 Smart Meters		<u>5,523.7</u>	X = U + W

2012 Revenue Requirement - PILs Calculation

Col. 1	Col. 2	Col. 3	Col. 4
1	(\$000s)		(\$000s)
2	Income Tax		
3	Net Income	875.2	
4	Amortization	3,117.9	
5	CCA - Class 47 (8%) SM with ½ year rule	(1,715.6)	
6	CCA - Class 50 (55%) HW with ½ year rule	(1.3)	
7	CCA - Class 12 (100%) App SW with ½ year rule	0.0	
8	Change in taxable income	2,276.2	
9	Tax Rate	26.50%	
10	Income Taxes Payable	603.2	
11			
12	Ontario Capital Tax		
13	Smart Meters	0.0	
14	Computer SW & Hardware	0.0	
15	Rate Base	0.0	
16	Less: Exemption	0.0	
17	Deemed Taxable Capital	0.0	
18	Ontario Capital Tax Rate	0.000%	
19	Net Amount (Taxable Capital x Rate)	0.0	
20			
21			
22		PILs Payable	Gross Up
23	Change in Income Taxes Payable	603.2	26.50%
24	Change in OCT	0.0	820.7
25	PILs	603.2	820.7

2013 Revenue Requirement from 2008 Smart Meters

	Col. 2	Col. 3	Col. 4	
Col. 1	(\$000s)	(\$000s)	Calculation	
1				
2	Rate Base			
3	2008 Smart Meter Fixed Assets Cost			
4	Start of 2013	End of 2013		
4	Smart Meters	28,687.7	28,687.7	A
5	H/W & S/W	5,611.8	5,611.8	B
6	Total	34,299.5	34,299.5	C = A + B
7				
8	Less: Smart Meter Accumulated Depreciation			
9	Smart Meters	8,782.2	10,695.7	D
10	H/W & S/W	4,236.1	5,238.1	E
11	Total	13,018.3	15,933.8	F = D + E
12				
13	Smart Meter Fixed Assets Net Book Value			
14	Smart Meters	19,905.5	17,992.1	G = A - D
15	H/W & S/W	1,375.7	373.7	H = B - E
16	Total	21,281.2	18,365.8	I = G + H
17				
18	Average Smart Meter Fixed Assets		19,823.5	J = avg(I _{start of 2010} , I _{end of 2010})
19				
20	Smart Meters Fixed Assets in Rate Base		19,823.5	K = J
21				
22	Return on Rate Base			
23	Deemed Debt	60%	11,894.1	L = K * 60%
24	Deemed Equity	40%	7,929.4	M = K * 40%
25			19,823.5	N = L + M
26				
27	Weighted Debt Rate	5.18%	616.1	O = L * 5.18%
28	Equity Rate	9.58%	759.6	P = M * 9.58%
29	Return on Rate Base		1,375.8	Q = O + P
30				
31	Amortization Expenses			
32	2008 Smart Meters:			
33	Smart Meters		1,913.5	R = Dend of 2012 - Dstart of 2012
34	H/W & S/W		1,002.0	S = Eend of 2012 - Estart of 2012
35			2,915.5	T = R + S
36				
37	Revenue Requirement Before PILs		4,291.2	U = T + Q
38				
39	Calculation of Income for PILs Purposes			
40	Depreciation Expense		2,915.5	T
41	Interest Expense		616.1	O
42	Income for PILs purposes		759.6	V = U - T - O
43				
44	Grossed up PILs		755.7	W
45				
46	Revenue Requirement Before PILs		4,291.2	U
47	Grossed up PILs		755.7	W
48	2013 Revenue Req't for 2008 Smart Meters		5,047.0	X = U + W

2013 Revenue Requirement - PILs Calculation

Col. 1	Col. 2	Col. 3	Col. 4
1	(\$000s)		(\$000s)
2	Income Tax		
3	759.6		
4	2,915.5		
5	(1,578.4)		
6	(0.6)		
7	0.0		
8	2,096.1		
9	26.50%		
10	555.5		
11			
12	Ontario Capital Tax		
13	0.0		
14	0.0		
15	0.0		
16	0.0		
17	0.0		
18	0.000%		
19	0.0		
20			
21			
22	PILs Payable	Gross Up	Grossed Up PILs
23	555.5	26.50%	755.7
24	0.0		0.0
25	555.5		755.7

2009 Revenue Requirement from 2009 Smart Meters

	Col. 1	Col. 2	Col. 3	Col. 4
		(\$000s)	(\$000s)	Calculation
1				
2	Smart Meter 2009 Expenses			
3	Incremental Operating Expense		3,132.1	A
4	Depreciation Expense		846.3	E = B + C + D
5	Total Expenses		<u>3,978.4</u>	F = A + E
6				
7	Calculated Return on Rate Base			
8	Smart Meter Fixed Assets Net Book Value - Dec. 31, 2009	20,946.4		I = G + H
9	Net Fixed Assets (average of Smart Meter Fixed Assets opening and closing 2009 Net Book Value)	10,473.2		J = I / 2
10	Working Capital Allowance	393.4		K = A * 12.56%
11	Total Rate Base	10,866.6		L = J + K
12				
13				
14	Debt Cost - weighted debt rate	5.22%	340.3	M = L * 60% * 5.22%
15	Return on Equity	8.01%	348.2	N = L * 40% * 8.01%
16	Return on Rate Base		<u>688.5</u>	O = M + N
17				
18	Revenue Requirement before PILs		<u>4,666.9</u>	P = F + O
19				
20	Calculation of Income for PILs Purposes			
21	Incremental Operating Expenses		3,132.1	A
22	Depreciation Expense		846.3	E
23	Interest Expense		340.3	M
24	Income for PILs purposes		<u>348.2</u>	N = P - A - E - M
25				
26	Grossed up PILs		<u>(254.4)</u>	O
27				
28	Revenue Requirement before PILs		4,666.9	P
29	Grossed up PILs		<u>(254.4)</u>	O
30	2009 Revenue Requirement for 2009 Smart Meters		<u>4,412.5</u>	Q = P + O

2009 Revenue Requirement - PILs Calculation

Col. 1	Col. 2	Col. 3	Col. 4
1	(\$000s)		(\$000s)
2	Income Tax		
3	348.2		
4	846.3		
5	(811.2)		
6	(477.5)		
7	0.0		
8	(518.1)		
9	(612.2)		
10	33.00%		
11	(202.0)		
12			
13	Ontario Capital Tax		
14	19,534.5		
15	1,411.9		
16	20,946.4		
17	0.0		
18	20,946.4		
19	0.225%		
20	47.1		
21			
22			
23	PILs Payable	Gross Up	Grossed Up PILs
24	(202.0)	33.00%	(301.5)
25	47.1		47.1
26	(154.9)		(254.4)

2010 Revenue Requirement from 2009 Smart Meters

	Col. 1	Col. 2	Col. 3	Col. 4
		(\$000s)	(\$000s)	Calculation
Rate Base				
2009 Smart Meter Fixed Assets Cost		Start of 2010	End of 2010	
Residential		11,694.3	11,694.3	A
General Service		8,584.8	8,584.8	B
H/W & S/W		1,513.6	1,513.6	C
Total		<u>21,792.7</u>	<u>21,792.7</u>	D = A + B + C
Less: Smart Meter Accumulated Depreciation				
Residential		474.2	1,254.2	E
General Service		270.5	843.1	F
H/W & S/W		101.7	418.7	G
Total		<u>846.3</u>	<u>2,516.0</u>	H = E + F + G
Smart Meter Fixed Assets Net Book Value				
Residential		11,220.1	10,440.1	I = A - E
General Service		8,314.4	7,741.8	J = B - F
H/W & S/W		1,411.9	1,094.9	K = C - G
Total		<u>20,946.4</u>	<u>19,276.7</u>	L = I + J + K
Average Smart Meter Fixed Assets			<u>20,111.5</u>	M = avg(L _{start of 2010} , L _{end of 2010})
Smart Meters Fixed Assets in Rate Base			<u>20,111.5</u>	M
Return on Rate Base				
Deemed Debt		60%	12,066.9	N = M * 60%
Deemed Equity		40%	<u>8,044.6</u>	O = M * 40%
			<u>20,111.5</u>	P = N + O
Weighted Debt Rate		5.17%	623.9	Q = N * 5.17%
Equity Rate		9.85%	<u>792.4</u>	R = O * 9.85%
Return on Rate Base			<u>1,416.3</u>	S = Q + R
Amortization Expenses				
2009 Smart Meters:				
Residential			780.0	T = E _{end of 2010} - E _{start of 2010}
General Service			572.6	U = F _{end of 2010} - F _{start of 2010}
H/W & S/W			<u>317.0</u>	V = G _{end of 2010} - G _{start of 2010}
			<u>1,669.6</u>	W = T + U + V
Revenue Requirement Before PILs			<u>3,085.9</u>	X = S + W
Calculation of Income for PILs Purposes				
Depreciation Expense			1,669.6	W
Interest Expense			<u>623.9</u>	Q
Income for PILs purposes			<u>792.4</u>	Y = X - W - Q
Grossed up PILs			<u>188.1</u>	Z
Revenue Requirement Before PILs			3,085.9	X
Grossed up PILs			<u>188.1</u>	Z
2010 Revenue Req't for 2009 Smart Meters			<u>3,274.0</u>	AA = X + Z

2010 Revenue Requirement - PILs Calculation

	Col. 1	Col. 2	Col. 3	Col. 4
1		(\$000s)		(\$000s)
2	Income Tax			
3	Net Income	792.4		
4	Amortization	1,669.6		
5	CCA - Class 47 (8%) SM with ½ year rule	(1,557.4)		
6	CCA - Class 52 (100%) Sys SW with no ½ year rule	0.0		
7	CCA - Class 12 (100%) App SW with ½ year rule	(518.1)		
8	Change in taxable income	386.5		
9	Tax Rate	31.00%		
10	Income Taxes Payable	119.8		
11				
12	Ontario Capital Tax			
13	Smart Meters	18,181.8		
14	Computer Hardware & Software	1,094.9		
15	Rate Base	19,276.7		
16	Less: Exemption	0.0		
17	Deemed Taxable Capital	19,276.7		
18	Ontario Capital Tax Rate	0.075%		
19	Net Amount (Taxable Capital x Rate)	14.5		
20				
21				
22		PILs Payable	Gross Up	Grossed Up PILs
23	Change in Income Taxes Payable	119.8	31.00%	173.7
24	Change in OCT	14.5		14.5
25	PILs	134.3		188.1

2011 Revenue Requirement from 2009 Smart Meters

	Col. 2	Col. 3	Col. 4
	(\$000s)	(\$000s)	Calculation
Rate Base			
2009 Smart Meter Fixed Assets Cost	Start of 2011	End of 2011	
Residential	11,694.3	11,694.3	A
General Service	8,584.8	8,584.8	B
H/W & S/W	1,513.6	1,513.6	C
Total	21,792.7	21,792.7	D = A + B + C
Less: Smart Meter Accumulated Depreciation			
Residential	1,254.2	2,034.2	E
General Service	843.1	1,415.7	F
H/W & S/W	418.7	762.8	G
Total	2,516.0	4,212.7	H = E + F + G
Smart Meter Fixed Assets Net Book Value			
Residential	10,440.1	9,660.1	I = A - E
General Service	7,741.8	7,169.2	J = B - F
H/W & S/W	1,094.9	750.8	K = C - G
Total	19,276.7	17,580.0	L = I + J + K
Average Smart Meter Fixed Assets		18,428.4	M = avg(L _{start of 2010} , L _{end of 2010})
Smart Meters Fixed Assets in Rate Base		18,428.4	M
Return on Rate Base			
Deemed Debt	60%	11,057.0	N = M * 60%
Deemed Equity	40%	7,371.3	O = M * 40%
		18,428.4	P = N + O
Weighted Debt Rate	5.18%	572.8	Q = N * 5.18%
Equity Rate	9.58%	706.2	R = O * 9.58%
Return on Rate Base		1,278.9	S = Q + R
Amortization Expenses			
2009 Smart Meters:			
Residential		780.0	T = E _{end of 2010} - E _{start of 2010}
General Service		572.6	U = F _{end of 2010} - F _{start of 2010}
H/W & S/W		344.1	V = G _{end of 2010} - G _{start of 2010}
		1,696.7	W = T + U + V
Revenue Requirement Before PILs		2,975.6	X = S + W
Calculation of Income for PILs Purposes			
Depreciation Expense		1,696.7	W
Interest Expense		572.8	Q
Income for PILs purposes		706.2	Y = X - W - Q
Grossed up PILs		381.9	Z
Revenue Requirement Before PILs		2,975.6	X
Grossed up PILs		381.9	Z
2011 Revenue Req't for 2009 Smart Meters		3,357.6	AA = X + Z

2011 Revenue Requirement - PILs Calculation

Col. 1	Col. 2	Col. 3	Col. 4
	(\$000s)		(\$000s)
1			
2	Income Tax		
3	706.2		
4	1,696.7		
5	(1,432.8)		
6	0.0		
7	0.0		
8	Change in taxable income		
9	970.0		
10	28.25%		
11	274.0		
12	Ontario Capital Tax		
13	0.0		
14	0.0		
15	Rate Base		
16	0.0		
17	0.0		
18	0.000%		
19	0.0		
20			
21			
22	PILs Payable	Gross Up	Grossed Up PILs
23	274.0	28.25%	381.9
24	0.0		0.0
25	274.0		381.9

2012 Revenue Requirement from 2009 Smart Meters

Col. 1	Col. 2	Col. 3	Col. 4
	(\$000s)	(\$000s)	Calculation
Rate Base			
2009 Smart Meter Fixed Assets Cost	Start of 2012	End of 2012	
Residential	11,694.3	11,694.3	A
General Service	8,584.8	8,584.8	B
H/W & S/W	1,513.6	1,513.6	C
Total	<u>21,792.7</u>	<u>21,792.7</u>	D = A + B + C
Less: Smart Meter Accumulated Depreciation			
Residential	2,034.2	2,814.2	E
General Service	1,415.7	1,988.3	F
H/W & S/W	762.8	1,106.9	G
Total	<u>4,212.7</u>	<u>5,909.4</u>	H = E + F + G
Smart Meter Fixed Assets Net Book Value			
Residential	9,660.1	8,880.1	I = A - E
General Service	7,169.2	6,596.5	J = B - F
H/W & S/W	750.8	406.7	K = C - G
Total	<u>17,580.0</u>	<u>15,883.3</u>	L = I + J + K
Average Smart Meter Fixed Assets		<u>16,731.7</u>	M = avg(L _{start of 2012} , L _{end of 2012})
Smart Meters Fixed Assets in Rate Base		<u>16,731.7</u>	M
Return on Rate Base			
Deemed Debt	60%	10,039.0	N = M * 60%
Deemed Equity	40%	<u>6,692.7</u>	O = M * 40%
		<u>16,731.7</u>	P = N + O
Weighted Debt Rate	5.18%	520.0	Q = N * 5.18%
Equity Rate	9.58%	<u>641.2</u>	R = O * 9.58%
Return on Rate Base		<u>1,161.2</u>	S = Q + R
Amortization Expenses			
2009 Smart Meters:			
Residential		780.0	T = E end of 2012 - E start of 2012
General Service		572.6	U = F end of 2012 - F start of 2012
H/W & S/W		<u>344.1</u>	V = G end of 2012 - G start of 2012
		<u>1,696.7</u>	W = T + U + V
Revenue Requirement Before PILs		<u>2,857.9</u>	X = S + W
Calculation of Income for PILs Purposes			
Depreciation Expense		1,696.7	W
Interest Expense		<u>520.0</u>	Q
Income for PILs purposes		<u>641.2</u>	Y = X - W - Q
Grossed up PILs		<u>367.6</u>	Z
Revenue Requirement Before PILs		2,857.9	X
Grossed up PILs		<u>367.6</u>	Z
2012 Revenue Req't for 2009 Smart Meters		<u>3,225.5</u>	AA = X + Z

2012 Revenue Requirement - PILs Calculation

Col. 1	Col. 2	Col. 3	Col. 4
1	(\$000s)		(\$000s)
2	Income Tax		
3	641.2		
4	1,696.7		
5	(1,318.2)		
6	0.0		
7	0.0		
8	1,019.6		
9	26.50%		
10	270.2		
11			
12	Ontario Capital Tax		
13	0.0		
14	0.0		
15	0.0		
16	0.0		
17	0.0		
18	0.000%		
19	0.0		
20			
21			
22	PILs Payable	Gross Up	Grossed Up PILs
23	270.2	26.50%	367.6
24	0.0		0.0
25	270.2		367.6

2013 Revenue Requirement from 2009 Smart Meters

Col. 1	Col. 2 (\$000s)	Col. 3 (\$000s)	Col. 4 Calculation
Rate Base			
2009 Smart Meter Fixed Assets Cost	Start of 2013	End of 2013	
Residential	11,694.3	11,694.3	A
General Service	8,584.8	8,584.8	B
H/W & S/W	1,513.6	1,513.6	C
Total	<u>21,792.7</u>	<u>21,792.7</u>	D = A + B + C
Less: Smart Meter Accumulated Depreciation			
Residential	2,814.2	3,594.2	E
General Service	1,988.3	2,560.9	F
H/W & S/W	1,106.9	1,307.4	G
Total	<u>5,909.4</u>	<u>7,462.5</u>	H = E + F + G
Smart Meter Fixed Assets Net Book Value			
Residential	8,880.1	8,100.1	I = A - E
General Service	6,596.5	6,023.9	J = B - F
H/W & S/W	406.7	206.2	K = C - G
Total	<u>15,883.3</u>	<u>14,330.2</u>	L = I + J + K
Average Smart Meter Fixed Assets		<u>15,106.7</u>	M = avg(L _{start of 2012} , L _{end of 2012})
Smart Meters Fixed Assets in Rate Base		<u>15,106.7</u>	M
Return on Rate Base			
Deemed Debt	60%	9,064.0	N = M * 60%
Deemed Equity	40%	6,042.7	O = M * 40%
		<u>15,106.7</u>	P = N + O
Weighted Debt Rate	5.18%	469.5	Q = N * 5.18%
Equity Rate	9.58%	578.9	R = O * 9.58%
Return on Rate Base		<u>1,048.4</u>	S = Q + R
Amortization Expenses			
2009 Smart Meters:			
Residential		780.0	T = E end of 2012 - E start of 2012
General Service		572.6	U = F end of 2012 - F start of 2012
H/W & S/W		200.5	V = G end of 2012 - G start of 2012
		<u>1,553.2</u>	W = T + U + V
Revenue Requirement Before PILs		<u>2,601.6</u>	X = S + W
Calculation of Income for PILs Purposes			
Depreciation Expense		1,553.2	W
Interest Expense		469.5	Q
Income for PILs purposes		<u>578.9</u>	Y = X - W - Q
Grossed up PILs		<u>331.4</u>	Z
Revenue Requirement Before PILs		2,601.6	X
Grossed up PILs		331.4	Z
2012 Revenue Req't for 2009 Smart Meters		<u>2,933.0</u>	AA = X + Z

2013 Revenue Requirement - PILs Calculation

Col. 1	Col. 2	Col. 3	Col. 4
1	(\$000s)		(\$000s)
2	Income Tax		
3	578.9		
4	1,553.2		
5	(1,212.8)		
6	0.0		
7	0.0		
8	919.3		
9	26.50%		
10	243.6		
11			
12	Ontario Capital Tax		
13	0.0		
14	0.0		
15	0.0		
16	0.0		
17	0.0		
18	0.000%		
19	0.0		
20			
21			
22	PILs Payable	Gross Up	Grossed Up PILs
23	243.6	26.50%	331.4
24	0.0		0.0
25	243.6		331.4

2010 Revenue Requirement from 2010 Smart Meters

	Col. 1	Col. 2	Col. 3	Col. 4
		(\$000s)	(\$000s)	Calculation
1				
2	Smart Meter 2010 Target Expenses			
3	Incremental Operating Expense		3,110.3	A
4	Depreciation Expense		649.5	B
5	Total Expenses		<u>3,759.9</u>	C = A + B
6				
7	Calculated Return on Rate Base			
8	Smart Meter Fixed Assets Net Book Value - Dec. 31, 2010	18,794.3		D
9	Net Fixed Assets (average of Smart Meter Fixed Assets			
10	opening and closing 2010 Net Book Value)	9,397.1		E = D / 2
11	Working Capital Allowance	392.8		F = A * 12.63%
12	Total Rate Base	9,790.0		G = E + F
13				
14	Debt Cost - weighted debt rate	5.17%	303.7	H = G * 60% * 5.17%
15	Return on Equity	9.85%	385.7	I = G * 40% * 9.85%
16	Return on Rate Base		<u>689.4</u>	J = H + I
17				
18	Revenue Requirement before PILs		<u>4,449.3</u>	K = C + J
19				
20	Calculation of Income for PILs Purposes			
21	Incremental Operating Expenses		3,110.3	A
22	Depreciation Expense		649.5	B
23	Interest Expense		303.7	H
24	Income for PILs purposes		<u>385.7</u>	L = K - A - B - H
25				
26	Grossed up PILs		<u>(231.6)</u>	M
27				
28	Revenue Requirement before PILs		4,449.3	K
29	Grossed up PILs		<u>(231.6)</u>	M
30	2010 Revenue Requirement for 2010 Smart Meters		<u>4,217.7</u>	N = K + M

2010 Revenue Requirement - PILs Calculation

Col. 1	Col. 2	Col. 3	Col. 4
1	(\$000s)		(\$000s)
2	Income Tax		
3	Net Income	385.7	
4	Amortization	649.5	
5	CCA - Class 47 (8%) SM with ½ year rule	(710.3)	
6	CCA - Class 52 (100%) HW with no ½ year rule	(56.5)	
7	CCA - Class 52 (100%) Sys SW with no ½ year rule	0.0	
8	CCA - Class 12 (100%) App SW with ½ year rule	(815.3)	
9	Change in taxable income	(546.8)	
10	Tax Rate	31.00%	
11	Income Taxes Payable	(169.5)	
12			
13	Ontario Capital Tax		
17	Rate Base	18,794.3	
18	Less: Exemption	0.0	
19	Deemed Taxable Capital	18,794.3	
20	Ontario Capital Tax Rate	0.075%	
21	Net OCT Amount	14.1	
22			
23			
24		PILs Payable	Gross Up
25	Change in Income Taxes Payable	(169.5)	31.00%
26	Change in OCT	14.1	Grossed Up PILs
27	PILs	(155.4)	(245.7)
			14.1
			(231.6)

2011 Revenue Requirement from 2010 Smart Meters

	Col. 1	Col. 2	Col. 3	Col. 4
		(\$000s)	(\$000s)	Calculation
1				
2	Rate Base			
3	2010 Smart Meter Fixed Assets Cost	Start of 2011	End of 2011	
4	Residential	7,383.9	7,383.9	A
5	General Service	10,372.9	10,372.9	B
6	H/W & S/W	1,687.1	1,687.1	C
7	Total	19,443.8	19,443.8	D = A + B + C
8				
9	Less: Smart Meter Accumulated Depreciation			
10	Residential	621.2	737.5	E
11	General Service	27.2	1,065.4	F
12	H/W & S/W	1.2	393.5	G
13	Total	649.5	2,196.3	H = E + F + G
14				
15	Smart Meter Fixed Assets Net Book Value			
16	Residential	6,762.7	6,646.4	I = A - E
17	General Service	10,345.7	9,307.5	J = B - F
18	H/W & S/W	1,685.9	1,293.6	K = C - G
19	Total	18,794.3	17,247.5	L = I + J + K
20				
21	Average Smart Meter Fixed Assets		18,020.9	M = avg(L _{start of 2010} , L _{end of 2010})
22				
23	Smart Meters Fixed Assets in Rate Base		18,020.9	M
24				
25	Return on Rate Base			
26	Deemed Debt	60%	10,812.5	N = M * 60%
27	Deemed Equity	40%	7,208.4	O = M * 40%
28			18,020.9	P = N + O
29				
30	Weighted Debt Rate	5.18%	560.1	Q = N * 5.18%
31	Equity Rate	9.58%	690.6	R = O * 9.58%
32	Return on Rate Base		1,250.6	S = Q + R
33				
34	Amortization Expenses			
35	2010 Smart Meters:			
36	Residential		116.3	T = E _{end of 2010} - E _{start of 2010}
37	General Service		1,038.2	U = F _{end of 2010} - F _{start of 2010}
38	H/W & S/W		392.3	V = G _{end of 2010} - G _{start of 2010}
39			1,546.8	W = T + U + V
40				
41	Revenue Requirement Before PILs		2,797.4	X = S + W
42				
43	Calculation of Income for PILs Purposes			
44	Depreciation Expense		1,546.8	W
45	Interest Expense		560.1	Q
46	Income for PILs purposes		690.6	Y = X - W - Q
47				
48	Grossed up PILs		23.0	Z
49				
50	Revenue Requirement Before PILs		2,797.4	X
51	Grossed up PILs		23.0	Z
52	2011 Revenue Req't for 2010 Smart Meters		2,820.4	AA = X + Z

2011 Revenue Requirement - PILs Calculation

Col. 1	Col. 2	Col. 3	Col. 4
1	(\$000s)		(\$000s)
2	Income Tax		
3	Net Income	690.6	
4	Amortization	1,546.8	
5	CCA - Class 47 (8%) SM with ½ year rule	(1,363.7)	
6	CCA - Class 52 (100%) Sys SW with no ½ year rule	0.0	
7	CCA - Class 12 (100%) App SW with ½ year rule	(815.3)	
8	Change in taxable income	58.4	
9	Tax Rate	28.25%	
10	Income Taxes Payable	16.5	
11			
12	Ontario Capital Tax		
13	Rate Base	0.0	
14	Less: Exemption	0.0	
15	Deemed Taxable Capital	0.0	
16	Ontario Capital Tax Rate	0.000%	
17	Net Amount (Taxable Capital x Rate)	0.0	
18			
19			
20		PILs Payable	Gross Up
21	Change in Income Taxes Payable	16.5	28.25%
22	Change in OCT	0.0	
23	PILs	16.5	Grossed Up PILs
			23.0

2012 Revenue Requirement from 2010 Smart Meters

Col. 1	Col. 2	Col. 3	Col. 4
	(\$000s)	(\$000s)	Calculation
Rate Base			
2010 Smart Meter Fixed Assets Cost	Start of 2012	End of 2012	
Residential	7,383.9	7,383.9	A
General Service	10,372.9	10,372.9	B
H/W & S/W	1,687.1	1,687.1	C
Total	<u>19,443.8</u>	<u>19,443.8</u>	D = A + B + C
Less: Smart Meter Accumulated Depreciation			
Residential	737.5	1,228.6	E
General Service	1,065.4	1,755.9	F
H/W & S/W	393.5	758.6	G
Total	<u>2,196.3</u>	<u>3,743.1</u>	H = E + F + G
Smart Meter Fixed Assets Net Book Value			
Residential	6,646.4	6,155.3	I = A - E
General Service	9,307.5	8,617.0	J = B - F
H/W & S/W	1,293.6	928.4	K = C - G
Total	<u>17,247.5</u>	<u>15,700.7</u>	L = I + J + K
Average Smart Meter Fixed Assets		<u>16,474.1</u>	M = avg(L _{start of 2012} , L _{end of 2012})
Smart Meters Fixed Assets in Rate Base		<u>16,474.1</u>	M
Return on Rate Base			
Deemed Debt	60%	9,884.5	N = M * 60%
Deemed Equity	40%	<u>6,589.6</u>	O = M * 40%
		<u>16,474.1</u>	P = N + O
Weighted Debt Rate	5.18%	512.0	Q = N * 5.18%
Equity Rate	9.58%	<u>631.3</u>	R = O * 9.58%
Return on Rate Base		<u>1,143.3</u>	S = Q + R
Amortization Expenses			
2010 Smart Meters:			
Residential		491.1	T = E _{end of 2010} - E _{start of 2010}
General Service		690.5	U = F _{end of 2010} - F _{start of 2010}
H/W & S/W		<u>365.1</u>	V = G _{end of 2010} - G _{start of 2010}
		<u>1,546.8</u>	W = T + U + V
Revenue Requirement Before PILs		<u>2,690.1</u>	X = S + W
Calculation of Income for PILs Purposes			
Depreciation Expense		1,546.8	W
Interest Expense		<u>512.0</u>	Q
Income for PILs purposes		<u>631.3</u>	Y = X - W - Q
Grossed up PILs		<u>332.9</u>	Z
Revenue Requirement Before PILs		2,690.1	X
Grossed up PILs		<u>332.9</u>	Z
2011 Revenue Req't for 2010 Smart Meters		<u>3,023.0</u>	AA = X + Z

2012 Revenue Requirement - PILs Calculation

Col. 1	Col. 2	Col. 3	Col. 4
	(\$000s)		(\$000s)
1			
2	Income Tax		
3	631.3		
4	1,546.8		
5	(1,254.6)		
6	0.0		
7	0.0		
8	Change in taxable income		
9	26.50%		
10	244.7		
11			
12	Ontario Capital Tax		
13	Rate Base		
14	0.0		
15	0.0		
16	0.000%		
17	0.0		
18			
19			
20	PILs Payable	Gross Up	Grossed Up PILs
21	244.7	26.50%	332.9
22	0.0		0.0
23	244.7		332.9

2013 Revenue Requirement from 2010 Smart Meters

Col. 1	Col. 2 (\$000s)	Col. 3 (\$000s)	Col. 4 Calculation
Rate Base			
2010 Smart Meter Fixed Assets Cost	Start of 2013	End of 2013	
Residential	7,383.9	7,383.9	A
General Service	10,372.9	10,372.9	B
H/W & S/W	1,687.1	1,687.1	C
Total	19,443.8	19,443.8	D = A + B + C
Less: Smart Meter Accumulated Depreciation			
Residential	1,228.6	1,719.7	E
General Service	1,755.9	2,446.4	F
H/W & S/W	758.6	1,071.7	G
Total	3,743.1	5,237.9	H = E + F + G
Smart Meter Fixed Assets Net Book Value			
Residential	6,155.3	5,664.2	I = A - E
General Service	8,617.0	7,926.4	J = B - F
H/W & S/W	928.4	615.4	K = C - G
Total	15,700.7	14,206.0	L = I + J + K
Average Smart Meter Fixed Assets		14,953.3	M = avg(L _{start of 2012} , L _{end of 2012})
Smart Meters Fixed Assets in Rate Base		14,953.3	M
Return on Rate Base			
Deemed Debt	60%	8,972.0	N = M * 60%
Deemed Equity	40%	5,981.3	O = M * 40%
		14,953.3	P = N + O
Weighted Debt Rate	5.18%	464.7	Q = N * 5.18%
Equity Rate	9.58%	573.0	R = O * 9.58%
Return on Rate Base		1,037.8	S = Q + R
Amortization Expenses			
2013 Smart Meters:			
Residential		491.1	T = E _{end of 2010} - E _{start of 2010}
General Service		690.5	U = F _{end of 2010} - F _{start of 2010}
H/W & S/W		313.1	V = G _{end of 2010} - G _{start of 2010}
		1,494.7	W = T + U + V
Revenue Requirement Before PILs		2,532.5	X = S + W
Calculation of Income for PILs Purposes			
Depreciation Expense		1,494.7	W
Interest Expense		464.7	Q
Income for PILs purposes		573.0	Y = X - W - Q
Grossed up PILs		329.4	Z
Revenue Requirement Before PILs		2,532.5	X
Grossed up PILs		329.4	Z
2013 Revenue Req't for 2010 Smart Meters		2,861.8	AA = X + Z

2013 Revenue Requirement - PILs Calculation

	Col. 1	Col. 2	Col. 3	Col. 4
1		(\$000s)		(\$000s)
2	Income Tax			
3	Net Income	573.0		
4	Amortization	1,494.7		
5	CCA - Class 47 (8%) SM with ½ year rule	(1,154.3)		
6	CCA - Class 52 (100%) Sys SW with no ½ year rule	0.0		
7	CCA - Class 12 (100%) App SW with ½ year rule	0.0		
8	Change in taxable income	913.5		
9	Tax Rate	26.50%		
10	Income Taxes Payable	242.1		
11				
12	Ontario Capital Tax			
13	Rate Base	0.0		
14	Less: Exemption	0.0		
15	Deemed Taxable Capital	0.0		
16	Ontario Capital Tax Rate	0.000%		
17	Net Amount (Taxable Capital x Rate)	0.0		
18				
19				
20		PILs Payable	Gross Up	Grossed Up PILs
21	Change in Income Taxes Payable	242.1	26.50%	329.4
22	Change in OCT	0.0		0.0
23	PILs	242.1		329.4

Table 1 - Carrying Cost Calculations (Net Balance)

	Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10	Col. 11	Col. 12	Col. 13	Col. 14	
	2008 Balance Amounts		2009 Balance Amounts		2010 Balance Amounts		2011 Balance Amounts		2012 Balance Amounts		2013 Balance Amounts				
	Monthly Carrying Cost Rate (%)	Cumulative (Over) / Under Recovery (000s)	Carrying Costs (000s)	Cumulative (Over) / Under Recovery (000s)	Carrying Costs (000s)	Cumulative (Over) / Under Recovery (000s)	Carrying Costs (000s)	Cumulative (Over) / Under Recovery (000s)	Carrying Costs (000s)	Cumulative (Over) / Under Recovery (000s)	Carrying Costs (000s)	Cumulative (Over) / Under Recovery (000s)	Carrying Costs (000s)	Cumulative (Over) / Under Recovery (000s)	Carrying Costs (000s)
1															
2															
3	Jan-09	0.2042%	-2,526	-5.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0
4	Feb-09	0.2042%	-2,531	-5.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0
5	Mar-09	0.2042%	-2,536	-5.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0
6	Apr-09	0.0833%	-2,541	-2.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0
7	May-09	0.0833%	-2,543	-2.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0
8	Jun-09	0.0833%	-2,545	-2.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0
9	Jul-09	0.0458%	-2,548	-1.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0
10	Aug-09	0.0458%	-2,549	-1.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0
11	Sep-09	0.0458%	-2,550	-1.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0
12	Oct-09	0.0458%	-2,551	-1.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0
13	Nov-09	0.0458%	-2,552	-1.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0
14	Dec-09	0.0458%	-2,553	-1.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0
15	Jan-10	0.0458%	-2,555	-1.2	2,509	1.2	0	0.0	0	0.0	0	0.0	0	0.0	0.0
16	Feb-10	0.0458%	-2,556	-1.2	2,510	1.2	0	0.0	0	0.0	0	0.0	0	0.0	0.0
17	Mar-10	0.0458%	-2,557	-1.2	2,512	1.2	0	0.0	0	0.0	0	0.0	0	0.0	0.0
18	Apr-10	0.0458%	-2,558	-1.2	2,513	1.2	0	0.0	0	0.0	0	0.0	0	0.0	0.0
19	May-10	0.0458%	-2,559	-1.2	2,514	1.2	0	0.0	0	0.0	0	0.0	0	0.0	0.0
20	Jun-10	0.0458%	-2,560	-1.2	2,515	1.2	0	0.0	0	0.0	0	0.0	0	0.0	0.0
21	Jul-10	0.0742%	-2,562	-1.9	2,516	1.9	0	0.0	0	0.0	0	0.0	0	0.0	0.0
22	Aug-10	0.0742%	-2,564	-1.9	2,518	1.9	0	0.0	0	0.0	0	0.0	0	0.0	0.0
23	Sep-10	0.0742%	-2,565	-1.9	2,520	1.9	0	0.0	0	0.0	0	0.0	0	0.0	0.0
24	Oct-10	0.1000%	-2,567	-2.6	2,522	2.5	0	0.0	0	0.0	0	0.0	0	0.0	0.0
25	Nov-10	0.1000%	-2,570	-2.6	2,524	2.5	0	0.0	0	0.0	0	0.0	0	0.0	0.0
26	Dec-10	0.1000%	-2,572	-2.6	2,527	2.5	0	0.0	0	0.0	0	0.0	0	0.0	0.0
27	Jan-11	0.1225%	-2,575	-3.2	2,529	3.1	6,456	7.9	0	0.0	0	0.0	0	0.0	0.0
28	Feb-11	0.1225%	-2,578	-3.2	2,532	3.1	6,464	7.9	0	0.0	0	0.0	0	0.0	0.0
29	Mar-11	0.1225%	-2,581	-3.2	2,536	3.1	6,472	7.9	0	0.0	0	0.0	0	0.0	0.0
30	Apr-11	0.1225%	-2,585	-3.2	2,539	3.1	6,480	7.9	0	0.0	0	0.0	0	0.0	0.0
31	May-11	0.1225%	-2,588	-3.2	2,542	3.1	6,487	7.9	0	0.0	0	0.0	0	0.0	0.0
32	Jun-11	0.1225%	-2,591	-3.2	2,545	3.1	6,495	8.0	0	0.0	0	0.0	0	0.0	0.0
33	Jul-11	0.1225%	-2,594	-3.2	2,548	3.1	6,503	8.0	0	0.0	0	0.0	0	0.0	0.0
34	Aug-11	0.1225%	-2,597	-3.2	2,551	3.1	6,511	8.0	0	0.0	0	0.0	0	0.0	0.0
35	Sep-11	0.1225%	-2,600	-3.2	2,554	3.1	6,519	8.0	0	0.0	0	0.0	0	0.0	0.0
36	Oct-11	0.1225%	-2,604	-3.2	2,557	3.1	6,527	8.0	0	0.0	0	0.0	0	0.0	0.0
37	Nov-11	0.1225%	-2,607	-3.2	2,561	3.1	6,535	8.0	0	0.0	0	0.0	0	0.0	0.0
38	Dec-11	0.1225%	-2,610	-3.2	2,564	3.1	6,543	8.0	0	0.0	0	0.0	0	0.0	0.0
39	Jan-12	0.1225%	-2,613	-3.2	2,567	3.1	6,551	8.0	6,158	7.5	0	0.0	0	0.0	0.0
40	Feb-12	0.1225%	-2,616	-3.2	2,570	3.1	6,559	8.0	6,166	7.6	0	0.0	0	0.0	0.0
41	Mar-12	0.1225%	-2,620	-3.2	2,573	3.2	6,567	8.0	6,173	7.6	0	0.0	0	0.0	0.0
42	Apr-12	0.1225%	-2,623	-3.2	2,576	3.2	6,575	8.1	6,181	7.6	0	0.0	0	0.0	0.0
43	May-12	0.1225%	-2,626	-3.2	2,579	3.2	6,583	8.1	6,189	7.6	0	0.0	0	0.0	0.0
44	Jun-12	0.1225%	-2,629	-3.2	2,583	3.2	6,592	8.1	6,196	7.6	0	0.0	0	0.0	0.0
45	Jul-12	0.1225%	-2,632	-3.2	2,586	3.2	6,600	8.1	6,204	7.6	0	0.0	0	0.0	0.0
46	Aug-12	0.1225%	-2,636	-3.2	2,589	3.2	6,608	8.1	6,211	7.6	0	0.0	0	0.0	0.0
47	Sep-12	0.1225%	-2,639	-3.2	2,592	3.2	6,616	8.1	6,219	7.6	0	0.0	0	0.0	0.0
48	Oct-12	0.1225%	-2,642	-3.2	2,595	3.2	6,624	8.1	6,227	7.6	0	0.0	0	0.0	0.0
49	Nov-12	0.1225%	-2,645	-3.2	2,598	3.2	6,632	8.1	6,234	7.6	0	0.0	0	0.0	0.0
50	Dec-12	0.1225%	-2,649	-3.2	2,602	3.2	6,640	8.1	6,242	7.6	0	0.0	0	0.0	0.0
51	Jan-13	0.1225%	-2,652	-3.2	2,605	3.2	6,648	8.1	6,250	7.7	5,821	7.1	0	0.0	0.0
52	Feb-13	0.1225%	-2,655	-3.3	2,608	3.2	6,656	8.2	6,257	7.7	5,828	7.1	0	0.0	0.0
53	Mar-13	0.1225%	-2,658	-3.3	2,611	3.2	6,665	8.2	6,265	7.7	5,836	7.1	0	0.0	0.0
54	Apr-13	0.1225%	-2,662	-3.3	2,614	3.2	6,673	8.2	6,273	7.7	5,843	7.2	0	0.0	0.0
55	May-13	0.1225%	-2,665	-3.3	2,618	3.2	6,681	8.2	6,280	7.7	5,850	7.2	0	0.0	0.0
56	Jun-13	0.1225%	-2,668	-3.3	2,621	3.2	6,689	8.2	6,288	7.7	5,857	7.2	0	0.0	0.0
57	Jul-13	0.1225%	-2,671	-3.3	2,624	3.2	6,697	8.2	6,296	7.7	5,864	7.2	0	0.0	0.0
58	Aug-13	0.1225%	-2,675	-3.3	2,627	3.2	6,706	8.2	6,303	7.7	5,871	7.2	0	0.0	0.0
59	Sep-13	0.1225%	-2,678	-3.3	2,630	3.2	6,714	8.2	6,311	7.7	5,879	7.2	0	0.0	0.0
60	Oct-13	0.1225%	-2,681	-3.3	2,634	3.2	6,722	8.2	6,319	7.7	5,886	7.2	0	0.0	0.0
61	Nov-13	0.1225%	-2,685	-3.3	2,637	3.2	6,730	8.2	6,327	7.7	5,893	7.2	0	0.0	0.0
62	Dec-13	0.1225%	-2,688	-3.3	2,640	3.2	6,738	8.3	6,334	7.8	5,900	7.2	0	0.0	0.0
63	Jan-14	0.1225%	-2,691	-3.3	2,643	3.2	6,747	8.3	6,342	7.8	5,908	7.2	4,862	6.0	6.0
64	Feb-14	0.1225%	-2,694	-3.3	2,647	3.2	6,755	8.3	6,350	7.8	5,915	7.2	4,868	6.0	6.0
65	Mar-14	0.1225%	-2,698	-3.3	2,650	3.2	6,763	8.3	6,358	7.8	5,922	7.3	4,873	6.0	6.0
66	Apr-14	0.1225%	-2,701	-3.3	2,653	3.2	6,772	8.3	6,365	7.8	5,929	7.3	4,879	6.0	6.0
67															
68		Total		-178.6		147.0		324.0		214.8		115.2		23.9	

Table 2 - Carrying Cost Calculations (Revenue Requirement Amounts)

Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10	Col. 11	Col. 12	Col. 13	Col. 14	
		2008 Balance Amounts		2009 Balance Amounts		2010 Balance Amounts		2011 Balance Amounts		2012 Balance Amounts		2013 Balance Amounts		
	Monthly Carrying Cost Rate (%)	Cumulative (Over) / Under Recovery (000s)	Carrying Costs (000s)	Cumulative (Over) / Under Recovery (000s)	Carrying Costs (000s)	Cumulative (Over) / Under Recovery (000s)	Carrying Costs (000s)	Cumulative (Over) / Under Recovery (000s)	Carrying Costs (000s)	Cumulative (Over) / Under Recovery (000s)	Carrying Costs (000s)	Cumulative (Over) / Under Recovery (000s)	Carrying Costs (000s)	
1														
2														
3	Jan-09	0.2042%	3,185	6.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
4	Feb-09	0.2042%	3,191	6.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
5	Mar-09	0.2042%	3,198	6.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
6	Apr-09	0.0833%	3,204	2.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
7	May-09	0.0833%	3,207	2.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
8	Jun-09	0.0833%	3,210	2.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
9	Jul-09	0.0458%	3,212	1.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
10	Aug-09	0.0458%	3,214	1.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
11	Sep-09	0.0458%	3,215	1.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
12	Oct-09	0.0458%	3,217	1.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
13	Nov-09	0.0458%	3,218	1.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
14	Dec-09	0.0458%	3,220	1.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
15	Jan-10	0.0458%	3,221	1.5	8,221	3.8	0	0.0	0	0.0	0	0.0	0	0.0
16	Feb-10	0.0458%	3,223	1.5	8,225	3.8	0	0.0	0	0.0	0	0.0	0	0.0
17	Mar-10	0.0458%	3,224	1.5	8,229	3.8	0	0.0	0	0.0	0	0.0	0	0.0
18	Apr-10	0.0458%	3,226	1.5	8,233	3.8	0	0.0	0	0.0	0	0.0	0	0.0
19	May-10	0.0458%	3,227	1.5	8,236	3.8	0	0.0	0	0.0	0	0.0	0	0.0
20	Jun-10	0.0458%	3,229	1.5	8,240	3.8	0	0.0	0	0.0	0	0.0	0	0.0
21	Jul-10	0.0742%	3,230	2.4	8,244	6.1	0	0.0	0	0.0	0	0.0	0	0.0
22	Aug-10	0.0742%	3,233	2.4	8,250	6.1	0	0.0	0	0.0	0	0.0	0	0.0
23	Sep-10	0.0742%	3,235	2.4	8,256	6.1	0	0.0	0	0.0	0	0.0	0	0.0
24	Oct-10	0.1000%	3,237	3.2	8,262	8.3	0	0.0	0	0.0	0	0.0	0	0.0
25	Nov-10	0.1000%	3,241	3.2	8,270	8.3	0	0.0	0	0.0	0	0.0	0	0.0
26	Dec-10	0.1000%	3,244	3.2	8,279	8.3	0	0.0	0	0.0	0	0.0	0	0.0
27	Jan-11	0.1225%	3,247	4.0	8,287	10.2	12,302	15.1	0	0.0	0	0.0	0	0.0
28	Feb-11	0.1225%	3,251	4.0	8,297	10.2	12,318	15.1	0	0.0	0	0.0	0	0.0
29	Mar-11	0.1225%	3,255	4.0	8,307	10.2	12,333	15.1	0	0.0	0	0.0	0	0.0
30	Apr-11	0.1225%	3,259	4.0	8,317	10.2	12,348	15.1	0	0.0	0	0.0	0	0.0
31	May-11	0.1225%	3,263	4.0	8,328	10.2	12,363	15.1	0	0.0	0	0.0	0	0.0
32	Jun-11	0.1225%	3,267	4.0	8,338	10.2	12,378	15.2	0	0.0	0	0.0	0	0.0
33	Jul-11	0.1225%	3,271	4.0	8,348	10.2	12,393	15.2	0	0.0	0	0.0	0	0.0
34	Aug-11	0.1225%	3,275	4.0	8,358	10.2	12,408	15.2	0	0.0	0	0.0	0	0.0
35	Sep-11	0.1225%	3,279	4.0	8,369	10.3	12,424	15.2	0	0.0	0	0.0	0	0.0
36	Oct-11	0.1225%	3,283	4.0	8,379	10.3	12,439	15.2	0	0.0	0	0.0	0	0.0
37	Nov-11	0.1225%	3,287	4.0	8,389	10.3	12,454	15.3	0	0.0	0	0.0	0	0.0
38	Dec-11	0.1225%	3,291	4.0	8,399	10.3	12,469	15.3	0	0.0	0	0.0	0	0.0
39	Jan-12	0.1225%	3,295	4.0	8,410	10.3	12,485	15.3	11,981	14.7	0	0.0	0	0.0
40	Feb-12	0.1225%	3,299	4.0	8,420	10.3	12,500	15.3	11,996	14.7	0	0.0	0	0.0
41	Mar-12	0.1225%	3,303	4.0	8,430	10.3	12,515	15.3	12,011	14.7	0	0.0	0	0.0
42	Apr-12	0.1225%	3,307	4.1	8,441	10.3	12,530	15.3	12,025	14.7	0	0.0	0	0.0
43	May-12	0.1225%	3,311	4.1	8,451	10.4	12,546	15.4	12,040	14.7	0	0.0	0	0.0
44	Jun-12	0.1225%	3,315	4.1	8,461	10.4	12,561	15.4	12,055	14.8	0	0.0	0	0.0
45	Jul-12	0.1225%	3,319	4.1	8,472	10.4	12,577	15.4	12,070	14.8	0	0.0	0	0.0
46	Aug-12	0.1225%	3,324	4.1	8,482	10.4	12,592	15.4	12,084	14.8	0	0.0	0	0.0
47	Sep-12	0.1225%	3,328	4.1	8,492	10.4	12,607	15.4	12,099	14.8	0	0.0	0	0.0
48	Oct-12	0.1225%	3,332	4.1	8,503	10.4	12,623	15.5	12,114	14.8	0	0.0	0	0.0
49	Nov-12	0.1225%	3,336	4.1	8,513	10.4	12,638	15.5	12,129	14.9	0	0.0	0	0.0
50	Dec-12	0.1225%	3,340	4.1	8,524	10.4	12,654	15.5	12,144	14.9	0	0.0	0	0.0
51	Jan-13	0.1225%	3,344	4.1	8,534	10.5	12,669	15.5	12,159	14.9	11,772	14.4	0	0.0
52	Feb-13	0.1225%	3,348	4.1	8,545	10.5	12,685	15.5	12,173	14.9	11,787	14.4	0	0.0
53	Mar-13	0.1225%	3,352	4.1	8,555	10.5	12,700	15.6	12,188	14.9	11,801	14.5	0	0.0
54	Apr-13	0.1225%	3,356	4.1	8,565	10.5	12,716	15.6	12,203	14.9	11,816	14.5	0	0.0
55	May-13	0.1225%	3,360	4.1	8,576	10.5	12,732	15.6	12,218	15.0	11,830	14.5	0	0.0
56	Jun-13	0.1225%	3,364	4.1	8,586	10.5	12,747	15.6	12,233	15.0	11,845	14.5	0	0.0
57	Jul-13	0.1225%	3,369	4.1	8,597	10.5	12,763	15.6	12,248	15.0	11,859	14.5	0	0.0
58	Aug-13	0.1225%	3,373	4.1	8,608	10.5	12,778	15.7	12,263	15.0	11,874	14.5	0	0.0
59	Sep-13	0.1225%	3,377	4.1	8,618	10.6	12,794	15.7	12,278	15.0	11,888	14.6	0	0.0
60	Oct-13	0.1225%	3,381	4.1	8,629	10.6	12,810	15.7	12,293	15.1	11,903	14.6	0	0.0
61	Nov-13	0.1225%	3,385	4.1	8,639	10.6	12,825	15.7	12,308	15.1	11,917	14.6	0	0.0
62	Dec-13	0.1225%	3,389	4.2	8,650	10.6	12,841	15.7	12,323	15.1	11,932	14.6	0	0.0
63	Jan-14	0.1225%	3,393	4.2	8,660	10.6	12,857	15.7	12,339	15.1	11,946	14.6	10,842	13.3
64	Feb-14	0.1225%	3,398	4.2	8,671	10.6	12,873	15.8	12,354	15.1	11,961	14.7	10,855	13.3
65	Mar-14	0.1225%	3,402	4.2	8,682	10.6	12,888	15.8	12,369	15.2	11,976	14.7	10,868	13.3
66	Apr-14	0.1225%	3,406	4.2	8,692	10.6	12,904	15.8	12,384	15.2	11,990	14.7	10,882	13.3
67														
68		Total	225.2	481.7	617.4	617.4	417.8	232.9	53.2					

Table 3 - Carrying Cost Calculations (Rate Adder Revenue)

Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10	Col. 11	Col. 12	Col. 13	Col. 14	
		2008 Balance Amounts		2009 Balance Amounts		2010 Balance Amounts		2011 Balance Amounts		2012 Balance Amounts		2013 Balance Amounts		
	Monthly Carrying Cost Rate (%)	Cumulative (Over) / Under Recovery (000s)	Carrying Costs (000s)	Cumulative (Over) / Under Recovery (000s)	Carrying Costs (000s)	Cumulative (Over) / Under Recovery (000s)	Carrying Costs (000s)	Cumulative (Over) / Under Recovery (000s)	Carrying Costs (000s)	Cumulative (Over) / Under Recovery (000s)	Carrying Costs (000s)	Cumulative (Over) / Under Recovery (000s)	Carrying Costs (000s)	
3	Jan-09	0.2042%	-5,711	-11.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
4	Feb-09	0.2042%	-5,722	-11.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
5	Mar-09	0.2042%	-5,734	-11.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
6	Apr-09	0.0833%	-5,746	-4.8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
7	May-09	0.0833%	-5,750	-4.8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
8	Jun-09	0.0833%	-5,755	-4.8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
9	Jul-09	0.0458%	-5,760	-2.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
10	Aug-09	0.0458%	-5,763	-2.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
11	Sep-09	0.0458%	-5,765	-2.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
12	Oct-09	0.0458%	-5,768	-2.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
13	Nov-09	0.0458%	-5,771	-2.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
14	Dec-09	0.0458%	-5,773	-2.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
15	Jan-10	0.0458%	-5,776	-2.6	-5,712	-2.6	0	0.0	0	0.0	0	0.0	0	0.0
16	Feb-10	0.0458%	-5,779	-2.6	-5,715	-2.6	0	0.0	0	0.0	0	0.0	0	0.0
17	Mar-10	0.0458%	-5,781	-2.6	-5,717	-2.6	0	0.0	0	0.0	0	0.0	0	0.0
18	Apr-10	0.0458%	-5,784	-2.7	-5,720	-2.6	0	0.0	0	0.0	0	0.0	0	0.0
19	May-10	0.0458%	-5,787	-2.7	-5,722	-2.6	0	0.0	0	0.0	0	0.0	0	0.0
20	Jun-10	0.0458%	-5,789	-2.7	-5,725	-2.6	0	0.0	0	0.0	0	0.0	0	0.0
21	Jul-10	0.0742%	-5,792	-4.3	-5,728	-4.2	0	0.0	0	0.0	0	0.0	0	0.0
22	Aug-10	0.0742%	-5,796	-4.3	-5,732	-4.3	0	0.0	0	0.0	0	0.0	0	0.0
23	Sep-10	0.0742%	-5,800	-4.3	-5,736	-4.3	0	0.0	0	0.0	0	0.0	0	0.0
24	Oct-10	0.1000%	-5,805	-5.8	-5,740	-5.7	0	0.0	0	0.0	0	0.0	0	0.0
25	Nov-10	0.1000%	-5,811	-5.8	-5,746	-5.7	0	0.0	0	0.0	0	0.0	0	0.0
26	Dec-10	0.1000%	-5,816	-5.8	-5,752	-5.8	0	0.0	0	0.0	0	0.0	0	0.0
27	Jan-11	0.1225%	-5,822	-7.1	-5,758	-7.1	-5,847	-7.2	0	0.0	0	0.0	0	0.0
28	Feb-11	0.1225%	-5,829	-7.1	-5,765	-7.1	-5,854	-7.2	0	0.0	0	0.0	0	0.0
29	Mar-11	0.1225%	-5,836	-7.1	-5,772	-7.1	-5,861	-7.2	0	0.0	0	0.0	0	0.0
30	Apr-11	0.1225%	-5,844	-7.2	-5,779	-7.1	-5,868	-7.2	0	0.0	0	0.0	0	0.0
31	May-11	0.1225%	-5,851	-7.2	-5,786	-7.1	-5,875	-7.2	0	0.0	0	0.0	0	0.0
32	Jun-11	0.1225%	-5,858	-7.2	-5,793	-7.1	-5,883	-7.2	0	0.0	0	0.0	0	0.0
33	Jul-11	0.1225%	-5,865	-7.2	-5,800	-7.1	-5,890	-7.2	0	0.0	0	0.0	0	0.0
34	Aug-11	0.1225%	-5,872	-7.2	-5,807	-7.1	-5,897	-7.2	0	0.0	0	0.0	0	0.0
35	Sep-11	0.1225%	-5,879	-7.2	-5,814	-7.1	-5,904	-7.2	0	0.0	0	0.0	0	0.0
36	Oct-11	0.1225%	-5,887	-7.2	-5,821	-7.1	-5,911	-7.2	0	0.0	0	0.0	0	0.0
37	Nov-11	0.1225%	-5,894	-7.2	-5,829	-7.1	-5,919	-7.3	0	0.0	0	0.0	0	0.0
38	Dec-11	0.1225%	-5,901	-7.2	-5,836	-7.1	-5,926	-7.3	0	0.0	0	0.0	0	0.0
39	Jan-12	0.1225%	-5,908	-7.2	-5,843	-7.2	-5,933	-7.3	-5,823	-7.1	0	0.0	0	0.0
40	Feb-12	0.1225%	-5,916	-7.2	-5,850	-7.2	-5,940	-7.3	-5,830	-7.1	0	0.0	0	0.0
41	Mar-12	0.1225%	-5,923	-7.3	-5,857	-7.2	-5,948	-7.3	-5,837	-7.2	0	0.0	0	0.0
42	Apr-12	0.1225%	-5,930	-7.3	-5,864	-7.2	-5,955	-7.3	-5,844	-7.2	0	0.0	0	0.0
43	May-12	0.1225%	-5,937	-7.3	-5,872	-7.2	-5,962	-7.3	-5,851	-7.2	0	0.0	0	0.0
44	Jun-12	0.1225%	-5,945	-7.3	-5,879	-7.2	-5,970	-7.3	-5,859	-7.2	0	0.0	0	0.0
45	Jul-12	0.1225%	-5,952	-7.3	-5,886	-7.2	-5,977	-7.3	-5,866	-7.2	0	0.0	0	0.0
46	Aug-12	0.1225%	-5,959	-7.3	-5,893	-7.2	-5,984	-7.3	-5,873	-7.2	0	0.0	0	0.0
47	Sep-12	0.1225%	-5,966	-7.3	-5,900	-7.2	-5,992	-7.3	-5,880	-7.2	0	0.0	0	0.0
48	Oct-12	0.1225%	-5,974	-7.3	-5,908	-7.2	-5,999	-7.3	-5,887	-7.2	0	0.0	0	0.0
49	Nov-12	0.1225%	-5,981	-7.3	-5,915	-7.2	-6,006	-7.4	-5,895	-7.2	0	0.0	0	0.0
50	Dec-12	0.1225%	-5,988	-7.3	-5,922	-7.3	-6,014	-7.4	-5,902	-7.2	0	0.0	0	0.0
51	Jan-13	0.1225%	-5,996	-7.3	-5,929	-7.3	-6,021	-7.4	-5,909	-7.2	-5,951	-7.3	0	0.0
52	Feb-13	0.1225%	-6,003	-7.4	-5,937	-7.3	-6,028	-7.4	-5,916	-7.2	-5,958	-7.3	0	0.0
53	Mar-13	0.1225%	-6,010	-7.4	-5,944	-7.3	-6,036	-7.4	-5,924	-7.3	-5,965	-7.3	0	0.0
54	Apr-13	0.1225%	-6,018	-7.4	-5,951	-7.3	-6,043	-7.4	-5,931	-7.3	-5,973	-7.3	0	0.0
55	May-13	0.1225%	-6,025	-7.4	-5,958	-7.3	-6,051	-7.4	-5,938	-7.3	-5,980	-7.3	0	0.0
56	Jun-13	0.1225%	-6,033	-7.4	-5,966	-7.3	-6,058	-7.4	-5,945	-7.3	-5,987	-7.3	0	0.0
57	Jul-13	0.1225%	-6,040	-7.4	-5,973	-7.3	-6,065	-7.4	-5,953	-7.3	-5,995	-7.3	0	0.0
58	Aug-13	0.1225%	-6,047	-7.4	-5,980	-7.3	-6,073	-7.4	-5,960	-7.3	-6,002	-7.4	0	0.0
59	Sep-13	0.1225%	-6,055	-7.4	-5,988	-7.3	-6,080	-7.4	-5,967	-7.3	-6,009	-7.4	0	0.0
60	Oct-13	0.1225%	-6,062	-7.4	-5,995	-7.3	-6,088	-7.5	-5,975	-7.3	-6,017	-7.4	0	0.0
61	Nov-13	0.1225%	-6,070	-7.4	-6,002	-7.4	-6,095	-7.5	-5,982	-7.3	-6,024	-7.4	0	0.0
62	Dec-13	0.1225%	-6,077	-7.4	-6,010	-7.4	-6,103	-7.5	-5,989	-7.3	-6,032	-7.4	0	0.0
63	Jan-14	0.1225%	-6,085	-7.5	-6,017	-7.4	-6,110	-7.5	-5,996	-7.3	-6,039	-7.4	-5,980	-7.3
64	Feb-14	0.1225%	-6,092	-7.5	-6,024	-7.4	-6,118	-7.5	-6,004	-7.4	-6,046	-7.4	-5,988	-7.3
65	Mar-14	0.1225%	-6,099	-7.5	-6,032	-7.4	-6,125	-7.5	-6,011	-7.4	-6,054	-7.4	-5,995	-7.3
66	Apr-14	0.1225%	-6,107	-7.5	-6,039	-7.4	-6,133	-7.5	-6,019	-7.4	-6,061	-7.4	-6,002	-7.4
67														
68		Total	-403.7		-334.7		-293.4		-203.1		-117.7		-29.4	

Table 1: 2014 Revenue Requirement Due to 2008-2010 Smart Meter Spending

Col. 1	Col. 2	Col. 3	Col. 4
	(\$000s)	(\$000s)	Calculation
Rate Base			
2008-2010 Smart Meter Fixed Assets Cost	Start of 2012	End of 2012	
Smart Meters	66,724	66,724	A
H/W & S/W	8,812	8,812	B
Total	<u>75,536</u>	<u>75,536</u>	C = A + B
Less: Smart Meter Accumulated Depreciation			
Smart Meters	21,017	25,465	D
H/W & S/W	7,617	8,504	E
Total	<u>28,634</u>	<u>33,969</u>	F = D + E
Smart Meter Fixed Assets Net Book Value			
Smart Meters	45,707	41,259	G = A - D
H/W & S/W	1,195	308	H = B - E
Total	<u>46,902</u>	<u>41,567</u>	I = G + H
Average Smart Meter Fixed Assets		<u>44,234</u>	J = avg(I _{start of 2012} , I _{end of 2012})
Smart Meters Fixed Assets in Rate Base		<u>44,234</u>	K = J
Return on Rate Base			
Deemed Debt	60%	26,541	L = K * 60%
Deemed Equity	40%	17,694	M = K * 40%
		<u>44,234</u>	N = L + M
Weighted Debt Rate	5.18%	1,375	O = L * 5.18%
Equity Rate	9.58%	1,695	P = M * 9.58%
Return on Rate Base		<u>3,070</u>	Q = O + P
Amortization Expenses			
2008-2010 Smart Meters:			
Smart Meters		4,448	R = D _{end of 2012} - D _{start of 2012}
H/W & S/W		887	S = E _{end of 2012} - E _{start of 2012}
		<u>5,335</u>	T = R + S
Revenue Requirement Before PILs		<u>8,405</u>	U = T + Q
Calculation of Income for PILs Purposes			
Depreciation Expense		5,335	T
Interest Expense		1,375	O
Income for PILs purposes		<u>1,695</u>	V = U - T - O
Grossed up PILs		<u>1,226</u>	W
Revenue Requirement Before PILs		8,405	U
Grossed up PILs		<u>1,226</u>	W
2014 Revenue Req't for 2008-2010 Smart Meters		<u>9,631</u>	X = U + W

Table 2: 2011 Revenue Requirement - PILs Calculation

	Col. 1	Col. 2	Col. 3	Col. 4
		(\$000s)		(\$000s)
1	Income Tax			
2	Net Income	1,695		
3	Amortization	5,335		
4	CCA - Class 47 (8%) SM with ½ year rule	(3,630)		
5	CCA- 50 (55%) HW with ½ year rule	(0)		
	CCA- 12 (100%) HW with ½ year rule	0		
6	Change in taxable income	3,400		
7	Tax Rate	26.50%		
8	Income Taxes Payable	901		
9				
10	Ontario Capital Tax			
11	Smart Meters	41,259		
12	Computer SW & Hardware	308		
13	Rate Base	41,567		
14	Less: Exemption	0		
15	Deemed Taxable Capital	41,567		
16	Ontario Capital Tax Rate	0.000%		
17	Net Amount (Taxable Capital x Rate)	0		
18				
19				
20		PILs Payable	Gross Up	Grossed Up PILs
21	Change in Income Taxes Payable	901	26.50%	1,226
22	Change in OCT	0		0
23	PILs	901		1,226



Ontario Energy Board

Smart Meter Model

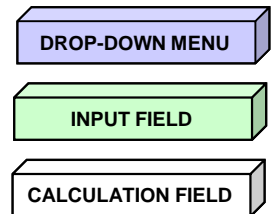
Choose Your Utility:

Tillsonburg Hydro Inc.	▲
Toronto Hydro-Electric System Limited	▼

Application Contact Information

Name:	<input type="text"/>
Title:	<input type="text"/>
Phone Number:	<input type="text"/>
Email Address:	<input type="text"/>
We are applying for rates effective:	<input type="text" value="May 1, 2014"/>
Last COS Re-based Year	<input type="text" value="2011"/>

Legend



Copyright

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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. The use of any models and spreadsheets does not automatically imply Board approval. The onus is on the distributor to prepare, document and support its application. Board-issued Excel models and spreadsheets are offered to assist parties in providing the necessary information so as to facilitate an expeditious review of an application. The onus remains on the applicant to ensure the accuracy of the data and the results.



Ontario Energy Board
Smart Meter Model

#N/A

Distributors must enter all incremental costs related to their smart meter program and all revenues recovered to date in the applicable tabs except for those costs (and associated revenues) for which the Board has approved on a final basis, i.e. capital costs have been included in rate base and OM&A costs in revenue requirement.

For 2012, distributors that have completed their deployments by the end of 2011 are not expected to enter any capital costs. However, for OM&A, regardless of whether a distributor has deployments in 2012, distributors should enter the forecasted OM&A for 2012 for all smart meters in service.

	2008	2009	2010	2011	2012	2013	2014	Total
	2006	2007	2008	2009	2010	2011	2012 and later	
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
Smart Meter Capital Cost and Operational Expense Data								
Smart Meter Installation Plan								
Actual/Planned number of Smart Meters installed during the Calendar Year								
Residential	191,370	202,882	144,242	41,555	24,468			604517
General Service < 50 kW	2,070	7,564	10,466	13,166	15,693			48959
Actual/Planned number of Smart Meters installed (Residential and GS < 50 kW only)	193440	210446	154708	54721	40161	0	0	653476
Percentage of Residential and GS < 50 kW Smart Meter Installations Completed	29.60%	61.81%	85.48%	93.85%	100.00%	0.00%	100.00%	100.00%
Actual/Planned number of GS > 50 kW meters installed	560	4,206	2,505	2,666	3,200			13137
Other (please identify) Collector Meter			218	279	32			529
Total Number of Smart Meters installed or planned to be installed	194000	214652	157431	57666	43393	0	0	667142

1 Capital Costs

1.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)

	Asset Type		Asset type must be selected to enable calculations		Asset Type		Asset type must be selected to enable calculations		Asset Type		Asset type must be selected to enable calculations	
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast				
1.1.1 Smart Meters (may include new meters and modules, etc.)	Smart Meter	17,601,781	9,666,499	7,443,438							\$	34,711,718
1.1.2 Installation Costs (may include socket kits, labour, vehicle, benefits, etc.)	Smart Meter	6,401,179	4,613,493	4,869,991							\$	15,884,663
1.1.3a Workforce Automation Hardware (may include fieldwork handhelds, barcode hardware, etc.)											\$	-
1.1.3b Workforce Automation Software (may include fieldwork handhelds, barcode hardware, etc.)											\$	-
Total Advanced Metering Communications Devices (AMCD)		\$ 24,002,959	\$ 14,279,993	\$ 12,313,429	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$	50,596,381

1.2 ADVANCED METERING REGIONAL COLLECTOR (AMRC) (includes LAN)

	Asset Type		Asset Type		Asset Type		Asset Type		Asset Type		Asset Type	
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast				
1.2.1 Collectors	Smart Meter	177,221	236,420	25,438							\$	439,079
1.2.2 Repeaters (may include radio licence, etc.)											\$	-
1.2.3 Installation (may include meter seals and rings, collector computer hardware, etc.)	Smart Meter	64,576	124,920	15,992							\$	205,488
Total Advanced Metering Regional Collector (AMRC) (Includes LAN)		\$ 241,797	\$ 361,339	\$ 41,430	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$	644,566

1.3 ADVANCED METERING CONTROL COMPUTER (AMCC)

	Asset Type							Forecast	
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual		
1.3.1 Computer Hardware	Computer Hardware	0	24,018	0					\$ 24,018
1.3.2 Computer Software	Computer Software	781,744	210,398	161,846					\$ 1,153,988
1.3.3 Computer Software Licences & Installation (includes hardware and software) <i>(may include AS/400 disk space, backup and recovery computer, UPS, etc.)</i>		0	0	0					\$ -
Total Advanced Metering Control Computer (AMCC)		<u>\$ 781,744</u>	<u>\$ 234,415</u>	<u>\$ 161,846</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 1,178,005</u>

1.4 WIDE AREA NETWORK (WAN)

	Asset Type							Forecast	
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual		
1.4.1 Activation Fees		0	0	0					\$ -
Total Wide Area Network (WAN)		<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>

1.5 OTHER AMI CAPITAL COSTS RELATED TO MINIMUM FUNCTIONALITY

	Asset Type							Forecast	
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual		
1.5.1 Customer Equipment <i>(including repair of damaged equipment)</i>	Smart Meter	73,581	141,254	28,877					\$ 243,712
1.5.2 AMI Interface to CIS		0	0	0					\$ -
1.5.3 Professional Fees		0	0	0					\$ -
1.5.4 Integration		0	0	0					\$ -
1.5.5 Program Management	Smart Meter	1,111,641	1,071,016	1,174,121					\$ 3,356,778
1.5.6 Other AMI Capital									\$ -
Total Other AMI Capital Costs Related to Minimum Functionality		<u>\$ 1,185,222</u>	<u>\$ 1,212,270</u>	<u>\$ 1,202,998</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 3,600,490</u>
Total Capital Costs Related to Minimum Functionality		<u>\$ 26,211,722</u>	<u>\$ 16,088,017</u>	<u>\$ 13,719,703</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 56,019,442</u>

1.6 CAPITAL COSTS BEYOND MINIMUM FUNCTIONALITY

(Please provide a descriptive title and identify nature of beyond minimum functionality costs)

	Asset Type							Forecast	
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual		
1.6.1 Costs related to technical capabilities in the smart meters or related communications infrastructure that exceed those specified in O.Reg 425/06	Smart Meter	5,809	7,980	46,219					\$ 60,008
1.6.2 Costs for deployment of smart meters to customers other than residential and small general service	Smart Meter	3,764,930	3,841,926	4,087,754					\$ 11,694,609
1.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDM/R, etc.	Computer Software	4,830,071	2,895,265	1,945,709					\$ 9,671,044
Total Capital Costs Beyond Minimum Functionality		<u>\$ 8,600,809</u>	<u>\$ 6,745,170</u>	<u>\$ 6,079,682</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 21,425,661</u>
Total Smart Meter Capital Costs		<u>\$ 34,812,531</u>	<u>\$ 22,833,187</u>	<u>\$ 19,799,385</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 77,445,103</u>

2 OM&A Expenses

	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast		
2.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)									
2.1.1 Maintenance (may include meter reverification costs, etc.)								\$	-
2.1.2 Other (please specify)								\$	-
Total Incremental AMCD OM&A Costs	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
2.2 ADVANCED METERING REGIONAL COLLECTOR (AMRC) (includes LAN)									
2.2.1 Maintenance								\$	-
2.2.2 Other (please specify)								\$	-
Total Incremental AMRC OM&A Costs	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
2.3 ADVANCED METERING CONTROL COMPUTER (AMCC)									
2.3.1 Hardware Maintenance (may include server support, etc.)								\$	-
2.3.2 Software Maintenance (may include maintenance support, etc.)								\$	-
2.3.2 Other (please specify)								\$	-
Total Incremental AMCC OM&A Costs	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
2.4 WIDE AREA NETWORK (WAN)									
2.4.1 WAN Maintenance								\$	-
2.4.2 Other (please specify)								\$	-
Total Incremental AMRC OM&A Costs	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
2.5 OTHER AMI OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY									
2.5.1 Business Process Redesign								\$	-
2.5.2 Customer Communication (may include project communication, etc.)	223,287	1,562,209	1,939,852					\$	3,725,348
2.5.3 Program Management	419,707	213,750	391,555					\$	1,025,012
2.5.4 Change Management (may include training, etc.)								\$	-
2.5.5 Administration Costs								\$	-
2.5.6 Other AMI Expenses (please specify)	108,471	745,395	60,265					\$	914,132
Total Other AMI OM&A Costs Related to Minimum Functionality	<u>\$ 751,465</u>	<u>\$ 2,521,354</u>	<u>\$ 2,391,673</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 5,664,492</u>
TOTAL OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY	<u>\$ 751,465</u>	<u>\$ 2,521,354</u>	<u>\$ 2,391,673</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 5,664,492</u>
2.6 OM&A COSTS RELATED TO BEYOND MINIMUM FUNCTIONALITY									
(Please provide a descriptive title and identify nature of beyond minimum functionality costs)									
2.6.1 Costs related to technical capabilities in the smart meters or related communications infrastructure that exceed those specified in O.Reg 425/06								\$	-
2.6.2 Costs for deployment of smart meters to customers other than residential and small general service	111,230	610,712	718,650					\$	1,440,592
2.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDM/R, etc.								\$	-
Total OM&A Costs Beyond Minimum Functionality	<u>\$ 111,230</u>	<u>\$ 610,712</u>	<u>\$ 718,650</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 1,440,592</u>
Total Smart Meter OM&A Costs	<u>\$ 862,695</u>	<u>\$ 3,132,066</u>	<u>\$ 3,110,323</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 7,105,084</u>

3 Aggregate Smart Meter Costs by Category

3.1	Capital									
3.1.1	Smart Meter	\$ 29,200,717	\$ 19,703,507	\$ 17,691,830	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 66,596,054
3.1.2	Computer Hardware	\$ -	\$ 24,018	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 24,018
3.1.3	Computer Software	\$ 5,611,815	\$ 3,105,662	\$ 2,107,555	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,825,032
3.1.4	Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1.5	Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1.6	Applications Software	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1.7	Total Capital Costs	<u><u>\$ 34,812,531</u></u>	<u><u>\$ 22,833,187</u></u>	<u><u>\$ 19,799,385</u></u>	<u><u>\$ -</u></u>	<u><u>\$ -</u></u>	<u><u>\$ -</u></u>	<u><u>\$ -</u></u>	<u><u>\$ -</u></u>	<u><u>\$ 77,445,103</u></u>
3.2	OM&A Costs									
3.2.1	Total OM&A Costs	<u><u>\$ 862,695</u></u>	<u><u>\$ 3,132,066</u></u>	<u><u>\$ 3,110,323</u></u>	<u><u>\$ -</u></u>	<u><u>\$ -</u></u>	<u><u>\$ -</u></u>	<u><u>\$ -</u></u>	<u><u>\$ -</u></u>	<u><u>\$ 7,105,084</u></u>



Ontario Energy Board

Smart Meter Model



#N/A

	2008	2009	2010	2011	2012	2013	2014
	2006	2007	2008	2009	2010	2011	2012 and later
Cost of Capital							
Capital Structure¹							
Deemed Short-term Debt Capitalization			4.0%	4.0%	4.0%	4.0%	4.0%
Deemed Long-term Debt Capitalization	62.5%	62.5%	56.0%	56.0%	56.0%	56.0%	56.0%
Deemed Equity Capitalization	37.5%	37.5%	40.0%	40.0%	40.0%	40.0%	40.0%
Preferred Shares							
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Cost of Capital Parameters							
Deemed Short-term Debt Rate			2.07%	2.46%	2.46%	2.46%	2.46%
Long-term Debt Rate (actual/embedded/deemed) ²	5.42%	5.42%	5.38%	5.37%	5.37%	5.37%	5.37%
Target Return on Equity (ROE)	8.6%	8.57%	9.85%	9.58%	9.58%	9.58%	9.58%
Return on Preferred Shares							
WACC	6.60%	6.60%	7.04%	6.94%	6.94%	6.94%	6.94%
Working Capital Allowance							
Working Capital Allowance Rate <i>(% of the sum of Cost of Power + controllable expenses)</i>	12.5%	12.6%	12.5%	12.9%	12.9%	12.9%	12.9%
Taxes/PILs							
Aggregate Corporate Income Tax Rate	33.50%	33.00%	31.00%	28.25%	26.50%	26.50%	26.50%
Capital Tax (until July 1st, 2010)	0.30%	0.225%	0.225%	0.225%	0.075%	0.00%	0.00%
Depreciation Rates <i>(expressed as expected useful life in years)</i>							
Smart Meters - years	15	15	15	15	15	15	15
- rate (%)	6.67%	6.67%	6.67%	6.67%	6.67%	6.67%	6.67%
Computer Hardware - years	5	5	5	5	5	5	5
- rate (%)	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
Computer Software - years	5	5	5	5	5	5	5
- rate (%)	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
Tools & Equipment - years	10	10	10	10	10	10	10
- rate (%)	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
Other Equipment - years	10	10	10	10	10	10	10
- rate (%)	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
CCA Rates							
Smart Meters - CCA Class	47	47	47	47	47	47	47
Smart Meters - CCA Rate	8%	8%	8%	8%	8%	8%	8%
Computer Equipment - CCA Class	50	52	52	52	52	52	52
Computer Equipment - CCA Rate	55%	100%	100%	100%	100%	100%	100%
General Equipment - CCA Class	8	8	8	8	8	8	8
General Equipment - CCA Rate	20%	20%	20%	20%	20%	20%	20%
Applications Software - CCA Class	12	12	12	12	12	12	12
Applications Software - CCA Rate	100%	100%	100%	100%	100%	100%	100%

Assumptions

- ¹ Planned smart meter installations occur evenly throughout the year.
- ² Fiscal calendar year (January 1 to December 31) used.
- ³ Amortization is done on a straight line basis and has the "half-year" rule applied.



Ontario Energy Board
Smart Meter Model

#N/A

	2008	2009	2010	2011	2012	2013	2014
	2006	2007	2008	2009	2010	2011	2012 and later
Net Fixed Assets - Smart Meters							
Gross Book Value							
Opening Balance		\$ 29,200,717	\$ 48,904,224	\$ 66,596,054	\$ 66,596,054	\$ 66,596,054	\$ 66,596,054
Capital Additions during year (from Smart Meter Costs)	\$ 29,200,717	\$ 19,703,507	\$ 17,691,830	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ 29,200,717	\$ 48,904,224	\$ 66,596,054	\$ 66,596,054	\$ 66,596,054	\$ 66,596,054	\$ 66,596,054
Accumulated Depreciation							
Opening Balance		-\$ 1,128,299	-\$ 3,786,436	-\$ 7,673,705	-\$ 12,121,458	-\$ 16,569,211	-\$ 21,016,964
Amortization expense during year	-\$ 1,128,299	-\$ 2,658,137	-\$ 3,887,269	-\$ 4,447,753	-\$ 4,447,753	-\$ 4,447,753	-\$ 4,447,754
Retirements/Removals (if applicable)							
Closing Balance	-\$ 1,128,299	-\$ 3,786,436	-\$ 7,673,705	-\$ 12,121,458	-\$ 16,569,211	-\$ 21,016,964	-\$ 25,464,718
Net Book Value							
Opening Balance	\$ -	\$ 28,072,418	\$ 45,117,788	\$ 58,922,349	\$ 54,474,596	\$ 50,026,843	\$ 45,579,090
Closing Balance	\$ 28,072,418	\$ 45,117,788	\$ 58,922,349	\$ 54,474,596	\$ 50,026,843	\$ 45,579,090	\$ 41,131,336
Average Net Book Value	\$ 14,036,209	\$ 36,595,103	\$ 52,020,068	\$ 56,698,472	\$ 52,250,719	\$ 47,802,966	\$ 43,355,213
Net Fixed Assets - Computer Hardware							
Gross Book Value							
Opening Balance		\$ -	\$ 24,018	\$ 24,018	\$ 24,018	\$ 24,018	\$ 24,018
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ 24,018	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ 24,018	\$ 24,018	\$ 24,018	\$ 24,018	\$ 24,018	\$ 24,018
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	-\$ 2,402	-\$ 7,205	-\$ 12,009	-\$ 16,812	-\$ 21,616
Amortization expense during year	\$ -	-\$ 2,402	-\$ 4,804	-\$ 4,804	-\$ 4,804	-\$ 4,804	-\$ 2,402
Retirements/Removals (if applicable)							
Closing Balance	\$ -	-\$ 2,402	-\$ 7,205	-\$ 12,009	-\$ 16,812	-\$ 21,616	-\$ 24,018
Net Book Value							
Opening Balance	\$ -	\$ -	\$ 21,616	\$ 16,812	\$ 12,009	\$ 7,205	\$ 2,402
Closing Balance	\$ -	\$ 21,616	\$ 16,812	\$ 12,009	\$ 7,205	\$ 2,402	\$ -
Average Net Book Value	\$ -	\$ 10,808	\$ 19,214	\$ 14,411	\$ 9,607	\$ 4,804	\$ 1,201
Net Fixed Assets - Computer Software (including Applications Software)							
Gross Book Value							
Opening Balance		\$ 5,611,815	\$ 8,717,477	\$ 10,825,032	\$ 10,825,032	\$ 10,825,032	\$ 10,825,032
Capital Additions during year (from Smart Meter Costs)	\$ 5,611,815	\$ 3,105,662	\$ 2,107,555	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ 5,611,815	\$ 8,717,477	\$ 10,825,032	\$ 10,825,032	\$ 10,825,032	\$ 10,825,032	\$ 10,825,032
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	-\$ 802,608	-\$ 2,267,081	-\$ 4,175,928	-\$ 6,084,776	-\$ 7,595,560
Amortization expense during year	\$ -	-\$ 802,608	-\$ 1,464,473	-\$ 1,908,848	-\$ 1,908,848	-\$ 1,510,785	-\$ 884,916
Retirements/Removals (if applicable)							
Closing Balance	\$ -	-\$ 802,608	-\$ 2,267,081	-\$ 4,175,928	-\$ 6,084,776	-\$ 7,595,560	-\$ 8,480,477
Net Book Value							
Opening Balance	\$ -	\$ 5,611,815	\$ 7,914,868	\$ 8,557,951	\$ 6,649,103	\$ 4,740,256	\$ 3,229,471
Closing Balance	\$ 5,611,815	\$ 7,914,868	\$ 8,557,951	\$ 6,649,103	\$ 4,740,256	\$ 3,229,471	\$ 2,344,555
Average Net Book Value	\$ 2,805,907	\$ 6,763,341	\$ 8,236,410	\$ 7,603,527	\$ 5,694,680	\$ 3,984,864	\$ 2,787,013
Net Fixed Assets - Tools and Equipment							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Amortization expense during year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Average Net Book Value	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Fixed Assets - Other Equipment							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Amortization expense during year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Average Net Book Value	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -



#N/A

	2008 2006	2009 2007	2010 2008	2011 2009	2012 2010	2013 2011	2014 2012 and Later
Average Net Fixed Asset Values (from Sheet 4)							
Smart Meters	\$ 14,036,209	\$ 36,595,103	\$ 52,020,068	\$ 56,698,472	\$ 52,250,719	\$ 47,802,966	\$ 43,355,213
Computer Hardware	\$ -	\$ 10,808	\$ 19,214	\$ 14,411	\$ 9,607	\$ 4,804	\$ 1,201
Computer Software	\$ 2,805,907	\$ 6,763,341	\$ 8,236,410	\$ 7,603,527	\$ 5,694,680	\$ 3,984,864	\$ 2,787,013
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Net Fixed Assets	\$ 16,842,116	\$ 43,369,252	\$ 60,275,692	\$ 64,316,410	\$ 57,955,006	\$ 51,792,633	\$ 46,143,427
Working Capital							
Operating Expenses (from Sheet 2)	\$ 862,695	\$ 3,132,066	\$ 3,110,323	\$ -	\$ -	\$ -	\$ -
Working Capital Factor (from Sheet 3)	12%	13%	13%	13%	13%	13%	13%
Working Capital Allowance	\$ 107,822	\$ 393,342	\$ 389,101	\$ -	\$ -	\$ -	\$ -
Incremental Smart Meter Rate Base	\$ 16,949,938	\$ 43,762,594	\$ 60,664,793	\$ 64,316,410	\$ 57,955,006	\$ 51,792,633	\$ 46,143,427
Return on Rate Base							
Capital Structure							
Deemed Short Term Debt	\$ -	\$ -	\$ 2,426,592	\$ 2,572,656	\$ 2,318,200	\$ 2,071,705	\$ 1,845,737
Deemed Long Term Debt	\$ 10,593,711	\$ 27,351,621	\$ 33,972,284	\$ 36,017,189	\$ 32,454,803	\$ 29,003,875	\$ 25,840,319
Equity	\$ 6,356,227	\$ 16,410,973	\$ 24,265,917	\$ 25,726,564	\$ 23,182,002	\$ 20,717,053	\$ 18,457,371
Preferred Shares	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Capitalization	\$ 16,949,938	\$ 43,762,594	\$ 60,664,793	\$ 64,316,410	\$ 57,955,006	\$ 51,792,633	\$ 46,143,427
Return on							
Deemed Short Term Debt	\$ -	\$ -	\$ 50,230	\$ 63,287	\$ 57,028	\$ 50,964	\$ 45,405
Deemed Long Term Debt	\$ 574,179	\$ 1,482,458	\$ 1,827,709	\$ 1,934,123	\$ 1,742,823	\$ 1,557,508	\$ 1,387,625
Equity	\$ 544,729	\$ 1,406,420	\$ 2,390,193	\$ 2,464,605	\$ 2,220,836	\$ 1,984,694	\$ 1,768,216
Preferred Shares	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Return on Capital	\$ 1,118,908	\$ 2,888,878	\$ 4,268,132	\$ 4,462,015	\$ 4,020,686	\$ 3,593,166	\$ 3,201,246
Operating Expenses	\$ 862,695	\$ 3,132,066	\$ 3,110,323	\$ -	\$ -	\$ -	\$ -
Amortization Expenses (from Sheet 4)							
Smart Meters	\$ 1,128,299	\$ 2,658,137	\$ 3,887,269	\$ 4,447,753	\$ 4,447,753	\$ 4,447,753	\$ 4,447,754
Computer Hardware	\$ -	\$ 2,402	\$ 4,804	\$ 4,804	\$ 4,804	\$ 4,804	\$ 2,402
Computer Software	\$ -	\$ 802,608	\$ 1,464,473	\$ 1,908,848	\$ 1,908,848	\$ 1,510,785	\$ 884,916
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Amortization Expense in Year	\$ 1,128,299	\$ 3,463,147	\$ 5,356,545	\$ 6,361,404	\$ 6,361,404	\$ 5,963,341	\$ 5,335,072
Incremental Revenue Requirement before Taxes/PILs	\$ 3,109,902	\$ 9,484,092	\$ 12,735,000	\$ 10,823,419	\$ 10,382,090	\$ 9,556,507	\$ 8,536,318
Calculation of Taxable Income							
Incremental Operating Expenses	\$ 862,695	\$ 3,132,066	\$ 3,110,323	\$ -	\$ -	\$ -	\$ -
Amortization Expense	\$ 1,128,299	\$ 3,463,147	\$ 5,356,545	\$ 6,361,404	\$ 6,361,404	\$ 5,963,341	\$ 5,335,072
Interest Expense	\$ 574,179	\$ 1,482,458	\$ 1,877,939	\$ 1,997,410	\$ 1,799,851	\$ 1,608,472	\$ 1,433,030
Net Income for Taxes/PILs	\$ 544,729	\$ 1,406,420	\$ 2,390,193	\$ 2,464,605	\$ 2,220,836	\$ 1,984,694	\$ 1,768,216
Grossed-up Taxes/PILs (from Sheet 7)	-\$ 421,975.51	-\$ 1,749,606.64	\$ 531,062.40	\$ 1,367,238.83	\$ 1,593,263.66	\$ 1,446,891.46	\$ 1,255,821.08
Revenue Requirement, including Grossed-up Taxes/PILs	\$ 2,687,926	\$ 7,734,485	\$ 13,266,062	\$ 12,190,658	\$ 11,975,354	\$ 11,003,398	\$ 9,792,139



Ontario Energy Board
Smart Meter Model

#N/A

For PILs Calculation

	2008	2009	2010	2011	2012	2013	2014
UCC - Smart Meters	2006	2007	2008	2009	2010	2011	2012 and later
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast
Opening UCC	\$ -	\$ 28,032,687.84	\$ 44,705,439.82	\$ 58,113,161.44	\$ 53,464,108.52	\$ 49,186,979.84	\$ 45,252,021.45
Capital Additions	\$ 29,200,716.50	\$ 19,703,507.30	\$ 17,691,830.00	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
UCC Before Half Year Rule	\$ 29,200,716.50	\$ 47,736,195.14	\$ 62,397,269.82	\$ 58,113,161.44	\$ 53,464,108.52	\$ 49,186,979.84	\$ 45,252,021.45
Half Year Rule (1/2 Additions - Disposals)	\$ 14,600,358.25	\$ 9,851,753.65	\$ 8,845,915.00	\$ -	\$ -	\$ -	\$ -
Reduced UCC	\$ 14,600,358.25	\$ 37,884,441.49	\$ 53,551,354.82	\$ 58,113,161.44	\$ 53,464,108.52	\$ 49,186,979.84	\$ 45,252,021.45
CCA Rate Class	47	47	47	47	47	47	47
CCA Rate	8%	8%	8%	8%	8%	8%	8%
CCA	\$ 1,168,028.66	\$ 3,030,755.32	\$ 4,284,108.39	\$ 4,649,052.91	\$ 4,277,128.68	\$ 3,934,958.39	\$ 3,620,161.72
Closing UCC	\$ 28,032,687.84	\$ 44,705,439.82	\$ 58,113,161.44	\$ 53,464,108.52	\$ 49,186,979.84	\$ 45,252,021.45	\$ 41,631,859.74
UCC - Computer Equipment	2008	2009	2010	2011	2012	2013	2014
	2006	2007	2008	2009	2010	2011	2012 and later
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast
Opening UCC	\$ -	\$ 4,068,565.51	\$ 1,564,839.75	\$ 1,053,777.50	\$ -	\$ -	\$ -
Capital Additions Computer Hardware	\$ -	\$ 24,017.50	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions Computer Software	\$ 5,611,814.50	\$ 3,105,662.00	\$ 2,107,555.00	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
UCC Before Half Year Rule	\$ 5,611,814.50	\$ 7,198,245.01	\$ 3,672,394.75	\$ 1,053,777.50	\$ -	\$ -	\$ -
Half Year Rule (1/2 Additions - Disposals)	\$ 2,805,907.25	\$ 1,564,839.75	\$ 1,053,777.50	\$ -	\$ -	\$ -	\$ -
Reduced UCC	\$ 2,805,907.25	\$ 5,633,405.26	\$ 2,618,617.25	\$ 1,053,777.50	\$ -	\$ -	\$ -
CCA Rate Class	50	52	52	52	52	52	52
CCA Rate	55%	100%	100%	100%	100%	100%	100%
CCA	\$ 1,543,248.99	\$ 5,633,405.26	\$ 2,618,617.25	\$ 1,053,777.50	\$ -	\$ -	\$ -
Closing UCC	\$ 4,068,565.51	\$ 1,564,839.75	\$ 1,053,777.50	\$ -	\$ -	\$ -	\$ -
UCC - General Equipment	2008	2009	2010	2011	2012	2013	2014
	2006	2007	2008	2009	2010	2011	2012 and later
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast
Opening UCC	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
UCC Before Half Year Rule	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Half Year Rule (1/2 Additions - Disposals)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Reduced UCC	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CCA Rate Class	8	8	8	8	8	8	8
CCA Rate	20%	20%	20%	20%	20%	20%	20%
CCA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing UCC	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
UCC - Applications Software	2008	2009	2010	2011	2012	2013	2014
	2006	2007	2008	2009	2010	2011	2012 and later
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast
Opening UCC	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions Applications Software	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
UCC Before Half Year Rule	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Half Year Rule (1/2 Additions - Disposals)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Reduced UCC	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CCA Rate Class	12	12	12	12	12	12	12
CCA Rate	100%	100%	100%	100%	100%	100%	100%
CCA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing UCC	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -



Ontario Energy Board
Smart Meter Model

#N/A

PILs Calculation

	2008	2009	2010	2011	2012	2013	2014
	2006 Audited Actual	2007 Audited Actual	2008 Audited Actual	2009 Audited Actual	2010 Audited Actual	2011 Audited Actual	2012 and later Forecast
INCOME TAX							
Net Income	\$ 544,728.63	\$ 1,406,420.36	\$ 2,390,192.85	\$ 2,464,604.82	\$ 2,220,835.82	\$ 1,984,693.71	\$ 1,768,216.11
Amortization	\$ 1,128,299.00	\$ 3,463,147.00	\$ 5,356,545.00	\$ 6,361,404.00	\$ 6,361,404.00	\$ 5,963,341.00	\$ 5,335,072.00
CCA - Smart Meters	-\$ 1,168,028.66	-\$ 3,030,755.32	-\$ 4,284,108.39	-\$ 4,649,052.91	-\$ 4,277,128.68	-\$ 3,934,958.39	-\$ 3,620,161.72
CCA - Computers	-\$ 1,543,248.99	-\$ 5,633,405.26	-\$ 2,618,617.25	-\$ 1,053,777.50	\$ -	\$ -	\$ -
CCA - Applications Software	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CCA - Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Change in taxable income	-\$ 1,038,250.02	-\$ 3,794,593.23	\$ 844,012.22	\$ 3,123,178.41	\$ 4,305,111.14	\$ 4,013,076.32	\$ 3,483,126.40
Tax Rate (from Sheet 3)	33.50%	33.00%	31.00%	28.25%	26.50%	26.50%	26.50%
Income Taxes Payable	-\$ 347,813.76	-\$ 1,252,215.76	\$ 261,643.79	\$ 882,297.90	\$ 1,140,854.45	\$ 1,063,465.23	\$ 923,028.50
ONTARIO CAPITAL TAX							
Smart Meters	\$ 28,072,417.50	\$ 45,117,787.80	\$ 58,922,348.80	\$ 54,474,595.80	\$ 50,026,842.80	\$ 45,579,089.80	\$ 41,131,335.80
Computer Hardware	\$ -	\$ 21,615.75	\$ 16,812.25	\$ 12,008.75	\$ 7,205.25	\$ 2,401.75	\$ -
Computer Software (Including Application Software)	\$ 5,611,814.50	\$ 7,914,868.25	\$ 8,557,950.75	\$ 6,649,103.25	\$ 4,740,255.75	\$ 3,229,471.25	\$ 2,344,555.00
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Rate Base	\$ 33,684,232.00	\$ 53,054,271.80	\$ 67,497,111.80	\$ 61,135,707.80	\$ 54,774,303.80	\$ 48,810,962.80	\$ 43,475,890.80
Less: Exemption	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Deemed Taxable Capital	\$ 33,684,232.00	\$ 53,054,271.80	\$ 67,497,111.80	\$ 61,135,707.80	\$ 54,774,303.80	\$ 48,810,962.80	\$ 43,475,890.80
Ontario Capital Tax Rate (from Sheet 3)	0.300%	0.225%	0.225%	0.225%	0.075%	0.000%	0.000%
Net Amount (Taxable Capital x Rate)	\$ 101,052.70	\$ 119,372.11	\$ 151,868.50	\$ 137,555.34	\$ 41,080.73	\$ -	\$ -
Change in Income Taxes Payable	-\$ 347,813.76	-\$ 1,252,215.76	\$ 261,643.79	\$ 882,297.90	\$ 1,140,854.45	\$ 1,063,465.23	\$ 923,028.50
Change in OCT	\$ 101,052.70	\$ 119,372.11	\$ 151,868.50	\$ 137,555.34	\$ 41,080.73	\$ -	\$ -
PILs	-\$ 246,761.06	-\$ 1,132,843.65	\$ 413,512.29	\$ 1,019,853.24	\$ 1,181,935.18	\$ 1,063,465.23	\$ 923,028.50
Gross Up PILs							
Tax Rate	33.50%	33.00%	31.00%	28.25%	26.50%	26.50%	26.50%
Change in Income Taxes Payable	-\$ 523,028.20	-\$ 1,868,978.75	\$ 379,193.89	\$ 1,229,683.48	\$ 1,552,182.93	\$ 1,446,891.46	\$ 1,255,821.08
Change in OCT	\$ 101,052.70	\$ 119,372.11	\$ 151,868.50	\$ 137,555.34	\$ 41,080.73	\$ -	\$ -
PILs	-\$ 421,975.51	-\$ 1,749,606.64	\$ 531,062.40	\$ 1,367,238.83	\$ 1,593,263.66	\$ 1,446,891.46	\$ 1,255,821.08



Ontario Energy Board
Smart Meter Model

#N/A

This worksheet calculates the funding adder revenues.

Account 1555 - Sub-account Funding Adder Revenues

Interest Rates	Approved Deferral and Variance Accounts	CWIP	Date	Year	Quarter	Opening Balance (Principal)	Funding Adder Revenues	Interest Rate	Interest	Closing Balance	Annual amounts	Board Approved Smart Meter Funding Adder (from Tariff)
2006 Q1			Jan-06	2006	Q1	\$ -	\$ -	0.00%	\$ -	\$ -		\$ 0.68
2006 Q2	4.14%	4.68%	Feb-06	2006	Q1	\$ -	\$ -	0.00%	\$ -	\$ -		\$ 0.68
2006 Q3	4.59%	5.05%	Mar-06	2006	Q1	\$ -	\$ -	0.00%	\$ -	\$ -		\$ 0.68
2006 Q4	4.59%	4.72%	Apr-06	2006	Q2	\$ -	\$ -	4.14%	\$ -	\$ -		\$ 0.68
2007 Q1	4.59%	4.72%	May-06	2006	Q2	\$ -	\$ 479,631.83	4.14%	\$ -	\$ 479,631.83		\$ 0.68
2007 Q2	4.59%	4.72%	Jun-06	2006	Q2	\$ 479,631.83	\$ 464,459.04	4.14%	\$ 1,654.73	\$ 945,745.60		\$ 0.68
2007 Q3	4.59%	5.18%	Jul-06	2006	Q3	\$ 944,090.87	\$ 479,922.83	4.59%	\$ 3,611.15	\$ 1,427,624.86		\$ 0.68
2007 Q4	5.14%	5.18%	Aug-06	2006	Q3	\$ 1,424,013.71	\$ 480,129.25	4.59%	\$ 5,446.85	\$ 1,909,589.80		\$ 0.68
2008 Q1	5.14%	5.18%	Sep-06	2006	Q3	\$ 1,904,142.95	\$ 465,094.53	4.59%	\$ 7,283.35	\$ 2,376,520.83		\$ 0.68
2008 Q2	4.08%	5.18%	Oct-06	2006	Q4	\$ 2,369,237.48	\$ 480,511.20	4.59%	\$ 9,062.33	\$ 2,858,811.02		\$ 0.68
2008 Q3	3.35%	5.43%	Nov-06	2006	Q4	\$ 2,849,748.69	\$ 465,234.24	4.59%	\$ 10,900.29	\$ 3,325,883.22		\$ 0.68
2008 Q4	3.35%	5.43%	Dec-06	2006	Q4	\$ 3,314,982.93	\$ 480,670.57	4.59%	\$ 12,679.81	\$ 3,808,333.31	\$ 3,846,292.01	\$ 0.68
2009 Q1	2.45%	6.61%	Jan-07	2007	Q1	\$ 3,795,653.50	\$ 480,856.10	4.59%	\$ 14,518.37	\$ 4,291,027.97		\$ 0.68
2009 Q2	1.00%	6.61%	Feb-07	2007	Q1	\$ 4,276,509.60	\$ 435,481.99	4.59%	\$ 16,357.65	\$ 4,728,349.24		\$ 0.68
2009 Q3	0.55%	5.67%	Mar-07	2007	Q1	\$ 4,711,991.59	\$ 482,511.39	4.59%	\$ 18,023.37	\$ 5,212,526.35		\$ 0.68
2009 Q4	0.55%	4.66%	Apr-07	2007	Q2	\$ 5,194,502.98	\$ 516,154.57	4.59%	\$ 19,868.97	\$ 5,730,526.52		\$ 0.68
2010 Q1	0.55%	4.34%	May-07	2007	Q2	\$ 5,710,657.55	\$ 483,087.70	4.59%	\$ 21,843.27	\$ 6,215,588.52		\$ 0.68
2010 Q2	0.55%	4.34%	Jun-07	2007	Q2	\$ 6,193,745.25	\$ 468,041.78	4.59%	\$ 23,691.08	\$ 6,685,478.11		\$ 0.68
2010 Q3	0.89%	4.66%	Jul-07	2007	Q3	\$ 6,661,787.03	\$ 483,762.19	4.59%	\$ 25,481.34	\$ 7,171,030.57		\$ 0.68
2010 Q4	1.20%	4.01%	Aug-07	2007	Q3	\$ 7,145,549.23	\$ 483,949.93	4.59%	\$ 27,331.73	\$ 7,656,830.88		\$ 0.68
2011 Q1	1.47%	4.29%	Sep-07	2007	Q3	\$ 7,629,499.15	\$ 468,654.43	4.59%	\$ 29,182.83	\$ 8,127,336.41		\$ 0.68
2011 Q2	1.47%	4.29%	Oct-07	2007	Q4	\$ 8,098,153.58	\$ 484,243.48	5.14%	\$ 34,687.09	\$ 8,617,084.15		\$ 0.68
2011 Q3	1.47%	4.29%	Nov-07	2007	Q4	\$ 8,582,397.06	\$ 468,914.63	5.14%	\$ 36,761.27	\$ 9,088,072.96		\$ 0.68
2011 Q4	1.47%	4.29%	Dec-07	2007	Q4	\$ 9,051,311.69	\$ 485,002.37	5.14%	\$ 38,769.79	\$ 9,575,083.85	\$ 6,047,177.32	\$ 0.68
2012 Q1	0.00%	4.29%	Jan-08	2008	Q1	\$ 9,536,314.06	\$ 485,834.41	5.14%	\$ 40,847.21	\$ 10,062,995.68		\$ 0.68
2012 Q2	0.00%	4.29%	Feb-08	2008	Q1	\$ 10,022,148.47	\$ 440,180.08	5.14%	\$ 42,928.20	\$ 10,505,256.76		\$ 0.68
2012 Q3	0.00%	4.29%	Mar-08	2008	Q1	\$ 10,462,328.56	\$ 488,054.06	5.14%	\$ 44,813.64	\$ 10,995,196.25		\$ 0.68
2012 Q4	0.00%	4.29%	Apr-08	2008	Q2	\$ 10,950,382.61	\$ 472,204.63	4.08%	\$ 37,231.30	\$ 11,459,818.54		\$ 0.68
			May-08	2008	Q2	\$ 11,422,587.24	\$ 488,011.15	4.08%	\$ 38,836.80	\$ 11,949,435.20		\$ 0.68
			Jun-08	2008	Q2	\$ 11,910,598.40	488784.412	4.08%	\$ 40,496.03	\$ 12,439,878.84		\$ 0.68
			Jul-08	2008	Q3	\$ 12,399,382.81	489948.4027	3.35%	\$ 34,614.94	\$ 12,923,946.15		\$ 0.68
			Aug-08	2008	Q3	\$ 12,889,331.21	489646.3567	3.35%	\$ 35,982.72	\$ 13,414,960.29		\$ 0.68
			Sep-08	2008	Q3	\$ 13,378,977.57	474038.78	3.35%	\$ 37,349.65	\$ 13,890,366.00		\$ 0.68
			Oct-08	2008	Q4	\$ 13,853,016.35	490338.4507	3.35%	\$ 38,673.00	\$ 14,382,027.80		\$ 0.68
			Nov-08	2008	Q4	\$ 14,343,354.80	475019.44	3.35%	\$ 40,041.87	\$ 14,858,416.11		\$ 0.68
			Dec-08	2008	Q4	\$ 14,818,374.24	492131.616	3.35%	\$ 41,367.96	\$ 15,351,873.81	\$ 6,247,375.11	\$ 0.68
			Jan-09	2009	Q1	\$ 15,310,505.85	492960.1547	2.45%	\$ 31,258.95	\$ 15,834,724.96		\$ 0.68
			Feb-09	2009	Q1	\$ 15,803,466.01	493732.8533	2.45%	\$ 32,265.41	\$ 16,329,464.27		\$ 0.68
			Mar-09	2009	Q1	\$ 16,297,198.86	494236.2973	2.45%	\$ 33,273.45	\$ 16,824,708.61		\$ 0.68
			Apr-09	2009	Q2	\$ 16,791,435.16	477830.7	1.00%	\$ 13,992.86	\$ 17,283,258.72		\$ 0.68
			May-09	2009	Q2	\$ 17,269,265.86	493862.9613	1.00%	\$ 14,391.05	\$ 17,777,519.87		\$ 0.68
			Jun-09	2009	Q2	\$ 17,763,128.82	479208.78	1.00%	\$ 14,802.61	\$ 18,257,140.21		\$ 0.68
			Jul-09	2009	Q3	\$ 18,242,337.60	495394.092	0.55%	\$ 8,361.07	\$ 18,746,092.76		\$ 0.68
			Aug-09	2009	Q3	\$ 18,737,731.69	496465.774	0.55%	\$ 8,588.13	\$ 19,242,785.60		\$ 0.68
			Sep-09	2009	Q3	\$ 19,234,197.47	480931.24	0.55%	\$ 8,815.67	\$ 19,723,944.38		\$ 0.68
			Oct-09	2009	Q4	\$ 19,715,128.71	481269.88	0.55%	\$ 9,036.10	\$ 20,205,434.69		\$ 0.68
			Nov-09	2009	Q4	\$ 20,196,398.59	481805.41	0.55%	\$ 9,256.68	\$ 20,687,460.68		\$ 0.68
			Dec-09	2009	Q4	\$ 20,678,204.00	498497.5187	0.55%	\$ 9,477.51	\$ 21,186,179.02	\$ 6,059,715.15	\$ 0.68
			Jan-10	2010	Q1	\$ 21,176,701.51	483032.56	0.55%	\$ 9,705.99	\$ 21,669,440.06		\$ 0.68
			Feb-10	2010	Q1	\$ 21,659,734.07	483296.4367	0.55%	\$ 9,927.38	\$ 22,152,957.89		\$ 0.68
			Mar-10	2010	Q1	\$ 22,143,030.51	465607.848	0.55%	\$ 10,148.89	\$ 22,618,787.25		\$ 0.68
			Apr-10	2010	Q2	\$ 22,608,638.36	483493.82	0.55%	\$ 10,362.29	\$ 23,102,494.47		\$ 0.68
			May-10	2010	Q2	\$ 23,092,132.18	485,836.28	0.55%	\$ 10,583.89	\$ 23,588,552.35		\$ 0.68
			Jun-10	2010	Q2	\$ 23,577,968.46	484,293.93	0.55%	\$ 10,806.57	\$ 24,073,068.96		\$ 0.68
			Jul-10	2010	Q3	\$ 24,062,262.39	501,405.34	0.89%	\$ 17,846.18	\$ 24,581,513.91		\$ 0.68
			Aug-10	2010	Q3	\$ 24,563,667.73	501,771.00	0.89%	\$ 18,218.05	\$ 25,083,656.77		\$ 0.68
			Sep-10	2010	Q3	\$ 25,065,438.72	503,001.02	0.89%	\$ 18,590.20	\$ 25,587,029.95		\$ 0.68
			Oct-10	2010	Q4	\$ 25,568,439.75	503,953.98	1.20%	\$ 25,568.44	\$ 26,097,962.17		\$ 0.68
			Nov-10	2010	Q4	\$ 26,072,393.73	488,373.96	1.20%	\$ 26,072.39	\$ 26,586,840.08		\$ 0.68
			Dec-10	2010	Q4	\$ 26,560,767.69	504,972.85	1.20%	\$ 26,560.77	\$ 27,092,301.31	\$ 6,083,430.07	\$ 0.68



Ontario Energy Board

Smart Meter Model

#N/A

This worksheet calculates the funding adder revenues.

Account 1555 - Sub-account Funding Adder Revenues

Interest Rates	Approved Deferral and Variance Accounts	CWIP	Date	Year	Quarter	Opening Balance (Principal)	Funding Adder Revenues	Interest Rate	Interest	Closing Balance	Annual amounts	Board Approved Smart Meter Funding Adder (from Tariff)
			Jan-11	2011	Q1	\$ 27,065,740.54	505,708.45	1.47%	\$ 33,155.53	\$ 27,604,604.52		\$ 0.68
			Feb-11	2011	Q1	\$ 27,571,448.99	473,710.85	1.47%	\$ 33,775.03	\$ 28,078,934.87		\$ 0.68
			Mar-11	2011	Q1	\$ 28,045,159.84	506,803.93	1.47%	\$ 34,355.32	\$ 28,586,319.09		\$ 0.68
			Apr-11	2011	Q2	\$ 28,551,963.77	491,046.03	1.47%	\$ 34,976.16	\$ 29,077,985.96		\$ 0.68
			May-11	2011	Q2	\$ 29,043,009.80	507692.7007	1.47%	\$ 35,577.69	\$ 29,586,280.19		\$ 0.68
			Jun-11	2011	Q2	\$ 29,550,702.50	491815.27	1.47%	\$ 36,199.61	\$ 30,078,717.38		\$ 0.68
			Jul-11	2011	Q3	\$ 30,042,517.77	501405.3353	1.47%	\$ 36,802.08	\$ 30,580,725.19		\$ 0.68
			Aug-11	2011	Q3	\$ 30,543,923.11	501770.9973	1.47%	\$ 37,416.31	\$ 31,083,110.41		\$ 0.68
			Sep-11	2011	Q3	\$ 31,045,694.10	503001.024	1.47%	\$ 38,030.98	\$ 31,586,726.11		\$ 0.68
			Oct-11	2011	Q4	\$ 31,548,695.13	503953.9827	1.47%	\$ 38,647.15	\$ 32,091,296.26		\$ 0.68
			Nov-11	2011	Q4	\$ 32,052,649.11	488373.96	1.47%	\$ 39,264.50	\$ 32,580,287.57		\$ 0.68
			Dec-11	2011	Q4	\$ 32,541,023.07	504972.8493	1.47%	\$ 39,862.75	\$ 33,085,858.67	\$ 6,418,318.49	\$ 0.68
			Jan-12	2012	Q1	\$ 33,045,995.92	505708.4493	0.00%	\$ -	\$ 33,551,704.37		\$ 0.68
			Feb-12	2012	Q1	\$ 33,551,704.37	473710.846	0.00%	\$ -	\$ 34,025,415.21		\$ 0.68
			Mar-12	2012	Q1	\$ 34,025,415.21	506803.934	0.00%	\$ -	\$ 34,532,219.15		\$ 0.68
			Apr-12	2012	Q2	\$ 34,532,219.15	491046.03	0.00%	\$ -	\$ 35,023,265.18		\$ 0.68
			May-12	2012	Q2	\$ 35,023,265.18	0	0.00%	\$ -	\$ 35,023,265.18		
			Jun-12	2012	Q2	\$ 35,023,265.18	\$ -	0.00%	\$ -	\$ 35,023,265.18		
			Jul-12	2012	Q3	\$ 35,023,265.18	\$ -	0.00%	\$ -	\$ 35,023,265.18		
			Aug-12	2012	Q3	\$ 35,023,265.18	\$ -	0.00%	\$ -	\$ 35,023,265.18		
			Sep-12	2012	Q3	\$ 35,023,265.18	\$ -	0.00%	\$ -	\$ 35,023,265.18		
			Oct-12	2012	Q4	\$ 35,023,265.18	\$ -	0.00%	\$ -	\$ 35,023,265.18		
			Nov-12	2012	Q4	\$ 35,023,265.18	\$ -	0.00%	\$ -	\$ 35,023,265.18		
			Dec-12	2012	Q4	\$ 35,023,265.18	\$ -	0.00%	\$ -	\$ 35,023,265.18	\$ 1,977,269.26	
Total Funding Adder Revenues Collected						\$ 35,023,265.18			\$ 1,656,312.23	\$ 36,679,577.41	\$ 36,679,577.41	



Ontario Energy Board
Smart Meter Model

#N/A

This worksheet calculates the interest on OM&A and amortization/depreciation expense, based on monthly data.

Account 1556 - Sub-accounts Operating Expenses, Amortization Expenses, Carrying Charges

Prescribed Interest Rates	Approved Deferral and Variance Accounts	CWIP	Date	Year	Quarter	Opening Balance (Principal)		Amortization / Depreciation Expense	Closing Balance (Principal)	(Annual) Interest Rate	Interest (on opening balance)	Cumulative Interest
						OM&A Expenses						
2006 Q1	0.00%	0.00%	Jan-06	2006	01	\$ -			-	0.00%	-	-
2006 Q2	4.14%	4.68%	Feb-06	2006	01	-			-	0.00%	-	-
2006 Q3	4.59%	5.05%	Mar-06	2006	01	-			-	0.00%	-	-
2006 Q4	4.59%	4.72%	Apr-06	2006	02	-			-	4.14%	-	-
2007 Q1	4.59%	4.72%	May-06	2006	02	-			-	4.14%	-	-
2007 Q2	4.59%	4.72%	Jun-06	2006	02	-			-	4.14%	-	-
2007 Q3	4.59%	5.18%	Jul-06	2006	03	-			-	4.59%	-	-
2007 Q4	5.14%	5.18%	Aug-06	2006	03	-			-	4.59%	-	-
2008 Q1	5.14%	5.18%	Sep-06	2006	03	-			-	4.59%	-	-
2008 Q2	4.08%	5.18%	Oct-06	2006	04	-			-	4.59%	-	-
2008 Q3	3.35%	5.43%	Nov-06	2006	04	-			-	4.59%	-	-
2008 Q4	3.35%	5.43%	Dec-06	2006	04	-			-	4.59%	-	-
2009 Q1	2.45%	6.61%	Jan-07	2007	01	-			-	4.59%	-	-
2009 Q2	1.00%	6.61%	Feb-07	2007	01	-			-	4.59%	-	-
2009 Q3	0.55%	5.67%	Mar-07	2007	01	-			-	4.59%	-	-
2009 Q4	0.55%	4.66%	Apr-07	2007	02	-			-	4.59%	-	-
2010 Q1	0.55%	4.34%	May-07	2007	02	-			-	4.59%	-	-
2010 Q2	0.55%	4.34%	Jun-07	2007	02	-			-	4.59%	-	-
2010 Q3	0.89%	4.66%	Jul-07	2007	03	-			-	4.59%	-	-
2010 Q4	1.20%	4.01%	Aug-07	2007	03	-			-	4.59%	-	-
2011 Q1	1.47%	4.29%	Sep-07	2007	03	-			-	4.59%	-	-
2011 Q2	1.47%	4.29%	Oct-07	2007	04	-			-	5.14%	-	-
2011 Q3	1.47%	4.29%	Nov-07	2007	04	-			-	5.14%	-	-
2011 Q4	1.47%	4.29%	Dec-07	2007	04	-			-	5.14%	-	-
2012 Q1	0.00%	4.29%	Jan-08	2008	01	-			-	5.14%	-	-
2012 Q2	0.00%	4.29%	Feb-08	2008	01	-			-	5.14%	-	-
2012 Q3	0.00%	4.29%	Mar-08	2008	01	-			-	5.14%	-	-
2012 Q4	0.00%	4.29%	Apr-08	2008	02	-			-	4.08%	-	-
			May-08	2008	02	-			-	4.08%	-	-
			Jun-08	2008	02	-			-	4.08%	-	-
			Jul-08	2008	03	-			-	3.35%	-	-
			Aug-08	2008	03	-			-	3.35%	-	-
			Sep-08	2008	03	-			-	3.35%	-	-
			Oct-08	2008	04	-			-	3.35%	-	-
			Nov-08	2008	04	-			-	3.35%	-	-
			Dec-08	2008	04	-			-	3.35%	-	-
			Jan-09	2009	01	-			-	2.45%	-	-
			Feb-09	2009	01	-			-	2.45%	-	-
			Mar-09	2009	01	-			-	2.45%	-	-
			Apr-09	2009	02	-			-	1.00%	-	-
			May-09	2009	02	-			-	1.00%	-	-
			Jun-09	2009	02	-			-	1.00%	-	-
			Jul-09	2009	03	-			-	0.55%	-	-
			Aug-09	2009	03	-			-	0.55%	-	-
			Sep-09	2009	03	-			-	0.55%	-	-
			Oct-09	2009	04	-			-	0.55%	-	-
			Nov-09	2009	04	-			-	0.55%	-	-
			Dec-09	2009	04	-			-	0.55%	-	-
			Jan-10	2010	01	-			-	0.55%	-	-
			Feb-10	2010	01	-			-	0.55%	-	-
			Mar-10	2010	01	-			-	0.55%	-	-
			Apr-10	2010	02	-			-	0.55%	-	-
			May-10	2010	02	-			-	0.55%	-	-
			Jun-10	2010	02	-			-	0.55%	-	-
			Jul-10	2010	03	-			-	0.89%	-	-
			Aug-10	2010	03	-			-	0.89%	-	-
			Sep-10	2010	03	-			-	0.89%	-	-
			Oct-10	2010	04	-			-	1.20%	-	-
			Nov-10	2010	04	-			-	1.20%	-	-
			Dec-10	2010	04	-			-	1.20%	-	-
			Jan-11	2011	01	-			-	1.47%	-	-
			Feb-11	2011	01	-			-	1.47%	-	-
			Mar-11	2011	01	-			-	1.47%	-	-
			Apr-11	2011	02	-			-	1.47%	-	-
			May-11	2011	02	-			-	1.47%	-	-
			Jun-11	2011	02	-			-	1.47%	-	-
			Jul-11	2011	03	-			-	1.47%	-	-
			Aug-11	2011	03	-			-	1.47%	-	-
			Sep-11	2011	03	-			-	1.47%	-	-
			Oct-11	2011	04	-			-	1.47%	-	-
			Nov-11	2011	04	-			-	1.47%	-	-
			Dec-11	2011	04	-			-	1.47%	-	-

Jan-12	2012	Q1	-			-	0.00%	-	-
Feb-12	2012	Q1	-			-	0.00%	-	-
Mar-12	2012	Q1	-			-	0.00%	-	-
Apr-12	2012	Q2	-			-	0.00%	-	-
May-12	2012	Q2	-			-	0.00%	-	-
Jun-12	2012	Q2	-			-	0.00%	-	-
Jul-12	2012	Q3	-			-	0.00%	-	-
Aug-12	2012	Q3	-			-	0.00%	-	-
Sep-12	2012	Q3	-			-	0.00%	-	-
Oct-12	2012	Q4	-			-	0.00%	-	-
Nov-12	2012	Q4	-			-	0.00%	-	-
Dec-12	2012	Q4	-			-	0.00%	-	-
			\$	-	\$	-	\$	-	\$



#N/A

This worksheet calculates the interest on OM&A and amortization/depreciation expense, in the absence of monthly data.

Year	OM&A (from Sheet 5)	Amortization Expense (from Sheet 5)	Cumulative OM&A and Amortization Expense	Average Cumulative OM&A and Amortization Expense	Average Annual Prescribed Interest Rate for Deferral and Variance Accounts (from Sheets 8A and 8B)	Simple Interest on OM&A and Amortization Expenses
2006	\$ 862,695.00	\$ 1,128,299.00	\$ 1,990,994.00	\$ 995,497.00	4.37%	\$ 43,453.44
2007	\$ 3,132,066.30	\$ 3,463,147.00	\$ 8,586,207.30	\$ 5,288,600.65	4.73%	\$ 250,018.60
2008	\$ 3,110,322.70	\$ 5,356,545.00	\$ 17,053,075.00	\$ 12,819,641.15	3.98%	\$ 510,221.72
2009	\$ -	\$ 6,361,404.00	\$ 23,414,479.00	\$ 20,233,777.00	1.14%	\$ 230,159.21
2010	\$ -	\$ 6,361,404.00	\$ 29,775,883.00	\$ 26,595,181.00	0.80%	\$ 212,096.57
2011	\$ -	\$ 5,963,341.00	\$ 35,739,224.00	\$ 32,757,553.50	1.47%	\$ 481,536.04
2012	\$ -	\$ 5,335,072.00	\$ 41,074,296.00	\$ 38,406,760.00	1.47%	\$ 564,579.37
Cumulative Interest to 2011						\$ 1,727,485.58
Cumulative Interest to 2012						\$ 2,292,064.95



#N/A

This worksheet calculates the Smart Meter Disposition Rider and the Smart Meter Incremental Revenue Requirement Rate Rider, if applicable. This worksheet also calculates any new Smart Meter Funding Adder that a distributor may wish to request. However, please note that in many 2011 IRM decisions, the Board noted that current funding adders will cease on April 30, 2011 and that the Board's expectation is that distributors will file for a final review of prudence at the earliest opportunity. The Board also noted that the SMFA is a tool designed to provide advance funding and to mitigate the anticipated rate impact of smart meter costs when recovery of those costs is approved by the Board. The Board observed that the SMFA was not intended to be compensatory (return on and of capital) on a cumulative basis over the term the SMFA was in effect. The SMFA was initially designed to fund future investment, and not fully fund prior capital investment. Distributors that seek a new SMFA should provide evidence to support its proposal. This would include documentation of where the distributor is with respect to its smart meter deployment program, and reasons as to why the distributor's circumstances are such that continuation of the SMFA is warranted. Press the "UPDATE WORKSHEET" button after choosing the applicable adders/riders.

Check if applicable

- Smart Meter Funding Adder (SMFA)
- Smart Meter Disposition Rider (SMDR)
- Smart Meter Incremental Revenue Requirement Rate Rider (SMIRR)

The SMDR is calculated based on costs to December 31, 2011

The SMIRR is calculated based on the incremental revenue requirement associated with the recovery of capital related costs to December 31, 2012 and associated OM&A.

	2008	2009	2010	2011	2012	2013	2014	Total
	2006	2007	2008	2009	2010	2011	2012 and later	
Deferred and forecasted Smart Meter Incremental Revenue Requirement (from Sheet 5)	\$ 2,687,926.27	\$ 7,734,484.87	\$ 13,266,062.28	\$ 12,190,658.07	\$ 11,975,354.14	\$ 11,003,398.19	\$ 9,792,139.46	\$ 68,650,023.29
Interest on Deferred and forecasted OM&A and Amortization Expense (Sheet 8A/8B) (Check one of the boxes below)	\$ 43,453.44	\$ 250,018.60	\$ 510,221.72	\$ 230,159.21	\$ 212,096.57	\$ 481,536.04		\$ 1,727,485.58
<input type="checkbox"/> Sheet 8A (Interest calculated on monthly balances)								\$ -
<input checked="" type="checkbox"/> Sheet 8B (Interest calculated on average annual balances)	\$ 43,453.44	\$ 250,018.60	\$ 510,221.72	\$ 230,159.21	\$ 212,096.57	\$ 481,536.04		\$ 1,727,485.58
SMFA Revenues (from Sheet 8)	\$ 3,795,653.50	\$ 5,740,660.56	\$ 5,774,191.79	\$ 5,866,195.66	\$ 5,889,039.03	\$ 5,980,255.38	\$ 1,977,269.26	\$ 35,023,265.18
SMFA Interest (from Sheet 8)	\$ 50,638.51	\$ 306,516.76	\$ 473,183.32	\$ 193,519.49	\$ 194,391.04	\$ 438,063.11	\$ -	\$ 1,656,312.23
Net Deferred Revenue Requirement	-\$ 1,114,912.30	\$ 1,937,326.15	\$ 7,528,908.89	\$ 6,361,102.14	\$ 6,104,020.64	\$ 5,066,615.74	\$ 7,814,870.20	\$ 33,697,931.46

Number of Metered Customers (average for 2012 test year) 712804

Calculation of Smart Meter Disposition Rider (per metered customer per month)

Years for collection or refunding	3	
Deferred Incremental Revenue Requirement from 2006 to December 31, 2011 plus Interest on OM&A and Amortization	\$ 60,585,369.41	
SMFA Revenues collected from 2006 to 2012 test year (inclusive) Plus Simple Interest on SMFA Revenues	\$ 36,679,577.41	
Net Deferred Revenue Requirement	\$ 23,905,792.00	} Match
SMDR May 1, 2012 to April 30, 2015	\$ 0.93	
Check: Forecasted SMDR Revenues	\$ 23,864,677.92	

Calculation of Smart Meter Incremental Revenue Requirement Rate Rider (per metered customer per month)

Incremental Revenue Requirement for 2012	\$ 9,792,139.46	} Match
SMIRR	\$ 1.14	
Check: Forecasted SMIRR Revenues	\$ 9,751,158.72	