



August 24, 2012

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

Attention: Ms. Kirsten Walli, Board Secretary

Dear Ms. Walli:

Smart Meter Application – EB-2012-0310

Please find enclosed, two hard copies of Kingston Hydro Corporation's 2013 Smart Meter Application.

A complete copy of the Application has been filed electronically through the Board's RESS filing system today.

If further information is required, please contact Sherry Gibson, Senior Advisor, Rates and Regulatory Affairs at 613-546-1181, Extension 2383.

Yours truly,

A handwritten signature in blue ink, appearing to read "J.A. Keech, P.Eng."

J.A. Keech, P.Eng.
President and CEO

Kingston Hydro Corporation

2013 Smart Meter Cost Recovery Application

EB-2012-0310

Submitted 24 August, 2012

Kingston Hydro Corporation
PO Box 790
1211 John Counter Blvd.
Kingston, ON
K7L 4X7
(613) 546-1181

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

AND IN THE MATTER OF an application by Kingston Hydro Corporation to the Ontario Energy Board for an Order approving just and reasonable rates with respect to the recovery of Smart Meter and Time of Use Implementation costs effective January 1, 2013.

Application

Kingston Hydro Corporation (the “Applicant” or “KHC”) is a corporation incorporated pursuant to the Ontario Business Corporation Act with its head office in the City of Kingston, Ontario. The Applicant is an electricity distributor that is licensed (ED-2003-0057) by the Ontario Energy Board.

The Applicant is filing this application pursuant to section 78 of the *Ontario Energy Board Act, 1998* (the “OEB Act”). The Applicant is not required to file a Cost of Service application until 2014 for rates effective in 2015. Therefore this application is a stand-alone application for recovery of costs incurred as part of the Smart Meter and Time of Use Pricing Implementation. The cost recovery is based on actual audited costs incurred to December 31, 2011 and forecasted costs to December 31, 2013.

Specifically, the Applicant hereby applies for an order or orders in accordance with G-2011-0001 Guideline, Smart Meter Funding and Cost Recovery – Final Disposition, December 15, 2011, including the following:

- a) Disposition of variance accounts 1555 and 1556 through the addition of a class specific Smart Meter Disposition Rate Rider of \$0.80 per metered customer per month for the Residential class, and \$0.65 per metered customer per month for General Service less than 50kW rate class effective January 1, 2013 over a period of 24 months; and
- b) Addition of a Smart Meter Incremental Revenue Requirement Rate Rider of \$2.22 per metered customer per month for both Residential and General Service less than 50kW classes effective January 1, 2013 to continue until the effective date of the next cost of service rate order.

Kingston Hydro is not requesting recovery of stranded meter costs at this time. The stranded meter costs will be addressed in Kingston Hydro’s next Cost of Service application. In accordance with the Board’s Smart Meter Funding and Cost Recovery – Final Dispositional Guideline (G-2011-001) the stranded meters will remain in rate base

until the re-basing application. Kingston Hydro estimates the stranded meter costs at approximately \$1,900,000 at December 31, 2011.

This Application is supported by written evidence that may be amended from time to time, prior to the Board's final decision on this Application.

The Applicant requests that, pursuant to Section 34.01 of the Board's *Rules of Practice and Procedure*, this proceeding be conducted by way of written hearing.

The Applicant requests that a copy of all documents filed with the Board in this proceeding be served on the Applicant as follows:

Kingston Hydro Corporation.
1211 John Counter Boulevard
Kingston, Ontario
K7L 4X7

Attention: Sherry Gibson

Senior Advisor, Rates and Regulatory Affairs
(613) 546-1181 ext. 2383
E-mail: sgibson@kingstonhydro.com

DATED at Kingston, Ontario, this 24th day of August, 2012.

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1 1.0 EXECUTIVE SUMMARY

Kingston Hydro Corporation is submitting this stand-alone application for the recovery of the costs the utility incurred in implementing its Smart Meter Program. Since the Applicant has now essentially reached the 90% threshold of the audited cost for its program, and since its next cost of service rate application is not required to be filed until 2014 for rates effective 2015, the utility considered it appropriate to file for a 2012 stand alone disposition.

As of end of 2011, Kingston Hydro Corporation had installed all of its Smart Meters. The total smart meter cost claimed in this application is \$5,649,343 million as indicated in Table 1.0 below.

Table 1.0-Summary of Smart Meter Costs

Description	Total Cost	Cost per Meter
Total capital costs related to minimum functionality	\$ 4,665,927	\$ 176.84
Total capital costs beyond minimum functionality	\$ 4,525	\$ 0.17
Incremental Capital Costs-2012-2013 Projected	\$ 469,341	\$ 17.79
Total Capital Costs	\$ 5,139,793	\$ 194.80
Number of Meters Installed	26,385	
Total OM&A costs related to minimum functionality	\$ 141,035	\$ 5.35
Total OM&A costs beyond minimum functionality	\$ 686	\$ 0.03
Incremental OM&A Costs-2012-2013 Projected	\$ 368,515	\$ 13.97
Total OM&A Costs	\$ 509,550	\$ 19.31
Total Smart Meter Costs	\$ 5,649,343	\$ 214.11

1 The incurred smart meter costs are partially offset (to April 30, 2012) by the Smart
2 Meter Funding Adder – including simple interest – in the amount of \$1,024,972
3 million forecasting carrying charges for the remainder of 2012. The resulting rate
4 riders being sought are presented in Table 1.1 below.

5

6 **Table 1.1- Proposed Class Specific Smart Meter Riders**

Proposed Class Specific Smart Meter Riders		
(1) Smart Meter Disposition Rider (per metered customer per month)		
SMDR - Residential	January 1, 2013 to December 31, 2014	\$0.80
SMDR - General Service < 50kW	January 1, 2013 to December 31, 2014	\$0.65
(2) Smart Meter Incremental Revenue Requirement Rate Rider (per metered customer per month)		
SMIRR - Residential		\$2.22
SMIRR - General Service < 50kW		\$2.22

7

8 All costs incurred in completing Kingston Hydro's Smart Meter Program have been
9 prudently incurred as is evidenced by a per meter capital cost of \$194.80 which
10 compares favourably to the industry average capital cost of \$226.92 (p.6 Decision
11 and Order from EB-2012-0081, dated June 21, 2012 - *application by Burlington*
12 *Hydro Inc. for an order or orders approving or fixing just and reasonable*
13 *distribution rates related to Smart Meter deployment, to be effective May 1, 2012*).
14 Kingston Hydro's implementation of Time of Use rates was initially scheduled for
15 June 2011. The Board granted the utility an extension to October 31, 2011 and
16 Time of Use rates were implemented by that date.
17

18

19 Kingston Hydro is not requesting recovery of stranded meter costs at this time.
20 The stranded meter costs will be addressed in Kingston Hydro's Cost of Service
21 application to be filed for 2015 distribution rates. In accordance with the Board's
22 Smart Meter Funding and Cost Recovery – Final Dispositional Guideline (G-2011-
23 001) the stranded meters will remain in rate base until the re-basing application.
24 Kingston Hydro estimates the stranded meter costs at approximately \$1,900,000
25 at December 31, 2011.

1 2.0 SMART METER AND TIME OF USE BILLING IMPLEMENTATION

2

3 On June 24, 2004, the Ministry of Energy issued a Directive under Section 27.1 of
4 the Ontario Energy Board Act, 1998 leading to the development by the Ontario
5 Energy Board of a plan for the deployment of smart meters throughout the
6 Province of Ontario.

7

8 Kingston Hydro subsequently participated in the London Hydro Request for
9 Proposal process that was concluded in May of 2008. The conclusion of the
10 Fairness Commissioner, Mr. Peter Sorensen, was that KTI/Sensus was successful
11 as the recommended Preferred Proponent. (Appendix A – Letter from the Fairness
12 Commissioner).

13

14 Kingston Hydro entered into contract negotiations with KTI/Sensus and concluded
15 these negotiations in September 2009.

16

17 Kingston Hydro was authorized to proceed with smart meter deployment under
18 section 1 (8) of Ontario Regulation 427/06 as follows:

19

20 ***Ontario regulation 427/06***
21 ***Smart meters: discretionary metering activity and procurement***
22 ***principles***

23 8. *Metering activities conducted by a distributor that has*
24 *procured its smart meters pursuant to and in compliance with*
25 *the parameters and process established by the Request for*
26 *Proposal for Advanced Metering Infrastructure (AMI) – Phase*
27 *1 Smart meter Deployment dated August 14, 2007, together*
28 *with any amendments to it, issued by London Hydro Inc.*
29 *O. Reg. 427/06 s. 1 (1); O. Reg. 153/07, s. 1 (1); O. Reg.*
30 *235/08, s. 2 (1-4).*

31

32 In 2005 Kingston Hydro initiated a limited pilot study (500 meters) using CDM
33 Third Tranche funding. The technology used in the pilot study was not the
34 technology selected as part of the RFP process and as a result those meters were
35 removed and replaced with KTI/Sensus meters during the smart meter
36 deployment.

1 No KTI/Sensus smart meters were purchased prior to the authorization to
2 proceed.

3

4 **2.1 SMART METER PROJECT OVERVIEW OF PROCUREMENT**

5

6 As part of the implementation of smart meters and time of use billing,
7 Kingston Hydro contracted with a number of suppliers for a variety of
8 services. The Applicant has reviewed *G-2011-0001 Filing Guidelines with*
respect to Smart Meter Funding and Cost recovery – Final Disposition in the
10 preparation of this application. The goods and services required have been
11 identified as either required to implement minimal functional requirements or
12 beyond minimum functionality as this has been defined in the filing
13 guidelines.

14

15 **2.1.1 MINIMUM FUNCTIONALITY REQUIREMENTS**

16

17 **2.1.1.1 Advanced Metering Infrastructure (AMI)**

19 Kingston Hydro was one of 32 LDC's that participated in the
20 London Hydro RFP process. The formation of the
21 consortium permitted utilities to aggregate the number of
22 meters making the process attractive to bidders and ensuring
23 competitive pricing for the utilities. In addition, the sharing of
24 costs such as the use of the Fairness Commissioner to
25 oversee the process ensured that the process was
26 conducted in the most cost effective way possible.

27

28 The Advanced Metering Infrastructure ("AMI") was
29 purchased pursuant to the contract negotiated with
30 KTI/Sensus following the selection of KTI/Sensus as the
31 preferred proponent through the London Hydro RFP process.
32 Kingston Hydro selected the option of owning the AMI
33 equipment with operations performed by KTI/Sensus. This
34 decision was made to mitigate operating risk.

1 Kingston Hydro Corporation purchased meters which meet
2 the minimum functionality adopted in O. Reg 425/06.

3 Kingston Hydro Corporation purchased the meters in their
4 standard configuration only. A total of 26,385 meters were
5 installed for 23,244 Residential customers and 3,141
6 General Service < 50 customers.

7

8 **2.1.1.2 Meter Deployment**

9

10 In the fall of 2009 a Request for Proposal (Utilities Kingston-
11 09-24) was issued for meter installation. Following the
12 evaluation process, the successful proponent was Olameter.

13

14 Olameter staff installed 18,700 meters, the majority of which
15 were residential meters. Internal staff installed the remaining
16 7,685 meters and focused on the more complex meter
17 replacements.

18

19 **2.1.1.3 Meter Disposal**

20

21 Approximately 2700 scrap meters were sold for use by
22 another Canadian utility while the remainder were disposed
23 of as scrap metal. A local scrap dealer was used. The scrap
24 pricing is regularly tested against the local market and the
25 use of a local company also eliminates the need for
26 transportation of the materials and the company provides
27 drop off and pick up of the bins.

28

29 **2.1.1.4 Meter Base Repairs**

30

31 Approximately 80 meter bases or 0.003% of the smart meter
32 population required attention for repairs. Although the meter
33 base is customer owned equipment, Kingston Hydro
34 determined that it was important to address any safety
35 issues that might be present. Further it was important not to
36 introduce any delays in the deployment that might occur as
37 the customer addressed the issues and finally Kingston
38 Hydro wanted to minimize the disruption to the customer as
39 much as possible.

1 Three local Electrical Contracting firms that were known to
2 Kingston Hydro as reliable and cost effective were used to
3 perform meter base repairs on a rotating basis.
4

5 In accordance with the Smart Meter Filing Guidelines, all
6 labour and associated costs were capitalized and tracked in
7 Variance account 1555. Materials and parts that are
8 customer owned were expensed and tracked in Variance
9 account 1556.

10

11 **2.1.1.5 Wide Area Network**

12

13 Kingston Hydro leveraged existing infrastructure provided by
14 its affiliate Utilities Kingston to provide WAN
15 communications. These fibre connections are on a private
16 network, symmetrical, and covered by a service level
17 agreement.

18

19 **2.1.1.6 Operational Data Store**

20

21 With the introduction of Time of Use Billing, a typical month
22 requires us to now capture 720 distinct data points to get
23 billing determinants for each account. The MDM/R does
24 provide for estimating some missing data however it does
25 not cover 100% of the exception scenarios. The exceptions
26 can be due to a number of reasons. Manually correcting the
27 exception errors that are outside of MDM/R functionality or
28 providing additional validations/estimations by hand quickly
29 becomes unmanageable at full production volumes.

30

31 Leading up to our cutover to TOU billing, the discovery of the
32 gaps in the way that the AMI system could be leveraged
33 when troubleshooting and solving meter data errors led us to
34 the realization that an operational data store ('ODS') solution
35 was needed to manage the growing and future potential data
36 issues. Billing is provided through a custom legacy
37 Customer Information System (CIS), and as such needed an
38 ODS product that was a stand-alone rather than an add-on
39 to a specific CIS. An ODS product was chosen from Jomar

2.1.1.7 Security Audit

In 2011 Kingston Hydro, along with several other LDC's using the KTI/Sensus technology, participated in the first stage of a security audit performed by Util-assist and Bell Wurldtech. This security audit focuses on the meters, communications between meters and head end AMI systems. It was determined that participation in the consortium would be the most cost effective approach to undertake this important assessment of the current systems' risks and vulnerabilities.

2.1.1.8 Customer Education

The customer education performed by Kingston Hydro leveraged the work that had been performed by the utilities that preceded us in their deployment. On installation of the smart meter each customer received the brochure "Getting Smart about Smart Meters". Prior to cutover to Time of Use billing customers received a post card advising of the approximate timing of the cutover.

2.1.2 BEYOND MINIMUM FUNCTIONALITY

2.1.2.1 MDM/R Integration

Preparation for MDM/R enrolment included the acquisition of the hardware and software required to provide an AS2 network security protocol for data transmission. All of the required testing with the MDM/R was performed and the Applicant filed its Self certification documents on March 21, 2011.

1 **2.1.2.2 Customer Information System Requirements**

2
3 Kingston Hydro uses a custom legacy Customer Information
4 System (CIS) that is supported internally. The deployment of
5 smart meters necessitated significant changes to the
6 system. Automated processes were developed to convert
7 the billing procedures to bill accounts based on automated
8 register readings from the Sensus AMI rather than manual
9 meter read entries. Subsequent to the smart meter
10 deployment and transition to the Sensus AMI, work was
11 undertaken to prepare the CIS to support time of use billing
12 and further to transition the bills to include register readings
13 with the MDM/R implementation of Energy IP v. 7.2.

14
15 **2.1.2.3 Web Presentment**

16
17 Kingston Hydro is currently in the process of installing
18 software to enable the presentment of smart meter
19 consumption data. After reviewing the available options,
20 Silverblaze software was selected as compatible with the
21 existing legacy CIS.

22
23 **3.0 STATUS OF SMART METER AND TIME OF USE IMPLEMENTATION**

24
25 Kingston Hydro's full-scale meter deployment began in February 2010 with full
26 meter deployment completed in early 2011. A total of 26,385 meters were
27 installed, 23,244 residential meters and 3,141 General Service < 50 kW.

28
29 Kingston Hydro's original mandatory implementation date was June 2011. The
30 company applied for and was granted an extension to October 31, 2011 (EB-
31 2011-0084) All the requirements to cut customers over to Time of Use Billing were
32 completed by October 31, 2011. In 2012, the Applicant has also completed
33 cutover over to MDM/R v 7.2 and 7.2+ in order to meet the Measurement Canada
34 requirement to show register meter reads on the customer bills.

35
36 It is anticipated that approximately 600 meters per year will be required for new
37 services and as replacements for malfunctioning meters. Our AMI provider has
38 advised us that a hardware upgrade of the Advanced Metering Control Computer
39 (AMCC) known as a Regional Network Interface will be required in 2013.

1 Forecasted operating costs to December 31, 2013 include the contract to
2 KTI/Sensus for the operation of the AMI; AMI wide area network connectivity;
3 various software maintenance agreements for AS2 connectivity, the ODS and web
4 presentment; and incremental labour required to manage the smart meter and
5 time of use billing requirements.

6

7 **4.0 CAPITAL AND OPERATION EXPENSES**

8

9 **Audited Costs**

10

11 As outlined in the Smart Meter Funding and Cost Recovery- Final Disposition
12 Guideline, 90% or more of the total program costs are required to be audited.
13 Deferral accounts 1555 and 1556 have been audited to December 31, 2011 as
14 part of Kingston Hydro Corporations annual audit. Kingston Hydro has achieved
15 85% audited costs.

16

17 **Table 4.0-Audited Costs**

18

2009	1,501,433	1,501,433	Yes
2010	2,940,574	4,442,007	Yes
2011	369,479	4,811,487	Yes
2012	291,334	5,102,821	No
2013	546,522	5,649,343	No
	Amount Audited		85%

1 **4.1 CAPITAL EXPENSES**

2 Table 4.1 provides actual capital expenditures by OEB category from 2009 to
 3 June 30, 2012 and forecasted costs are for the remainder of 2012.

4 **Table 4.1-Capital Costs**

OEB Category	Description	2009	2010	2011	2012	2013	Grand Total	Cost Per Meter
1.1.1	AMCD-Smart Meters	1,276,224	1,917,732	-	133,103	153,000	3,480,059	
1.1.2	AMCD-Installation Costs	89,563	614,876	229,779	4,506		938,724	
1.2.1	AMRC-Collectors	125,509	121,935	-	-		247,445	
1.3.1	AMCC-Computer Hardware	-	120,584	6,000	10,000	120,000	256,584	
1.3.2	AMCC-Computer Software	-	-	29,511	6,000		35,511	
1.5.1	Other AMI-Customer Equipment	-	40,460	7,558	-		48,018	
1.5.3	Other AMI-Professional Fees	10,137	34,631	41,427	-	-	86,195	
Total Costs for Minimum Functionality		1,501,433	2,850,218	314,276	153,609	273,000	5,092,536	\$ 193.01
1.6.3	Capital Costs Beyond Minimum Functionality	-	4,525	-	42,732		47,256	\$ 1.79
	Total Smart Meter Capital Costs	1,501,433	2,854,743	314,276	196,341	273,000	5,139,793	\$ 194.80

5

6

1 **4.2 OPERATIONS, MAINTENANCE AND ADMINISTRATION EXPENSES**

2 Table 4.2 provides actual OM&A by OEB category from 2009 to June 30,
 3 2012 and forecasted costs are for the remainder of 2012.

4 **Table 4.2-OM&A Costs**

OEB Category	Description	2010	2011	2012	2013	Grand Total	Cost Per Meter
2.1.1	AMCD Maintenance	53,415		-		53,415	
2.1.2	Other			-	169,830	169,830	
2.2.1	AMRC-Maintenance	23,369	46,503	80,207	85,134	235,213	
2.3.2	Software Maintenance			5,400	5,508	10,908	
2.4.1	WAN Maintenance	9,048	8,700	8,700	8,700	35,148	
	Total Costs for Minimum Functionality	85,831	55,203	94,307	269,172	504,514	
2.6.3	Costs for TOU rate implementation			686	4,350	5,036	
	Total Costs Beyond Minimum Functionality	-	-	686	4,350	5,036	-
	Total OM&A Costs	85,831	55,203	94,993	273,522	509,550	\$ 19.31

5 **5.0 RATE CHANGES SUMMARY AND BILL IMPACTS**

6 Kingston Hydro is seeking approval of the Smart Meter costs in this application
 7 and the transfer of the approved amounts from the smart meter deferral accounts
 8 to the required fixed asset, revenue and expense accounts.

11 **Table 5.0- Smart Meter Funding Adder's Collected**

	Smart Meter Funding Adder
2006 Actuals	54,394
2007 Actuals	87,846
2008 Actuals	91,089
2009 Actuals	86,301
2010 Actuals	221,931
2011 Actuals	329,798
2012 Actuals	146,386
2012-Forecasted Carrying Charges	7,226
Total	1,024,972

1 Further Kingston Hydro is seeking approval for class-specific SMDRs and SMIRRs
 2 to recover historical net deferred revenue requirements for 2006 to 2012 (Table
 3 5.1) and to recover incremental smart meter revenue requirement for 2013 (Table
 4 5.2) respectively.

5
 6 **Table 5.1 – Net Deferred Revenue Requirement to be recovered via SMDR true-up**

Net Deferred Revenue Requirement to be recovered via SMDR	
Smart Meter Revenue Requirement for Historical Years	Total 2006 to 2012
Return on Capital	\$ 677,311.20
Depreciation/Amortization expense and related interest	\$ 927,336.93
Operating Expenses and related interest	\$ 238,644.90
Revenue Requirement before Taxes/PILs	\$ 1,843,293.04
Grossed-up Taxes/PILs	-\$ 321,147.63
Total Revenue Requirement plus interest on OM&A and depreciation expense	\$ 1,522,145.42
SMFA Revenues plus interest expense	\$ 1,024,971.65
Net Deferred Revenue Requirement to be recovered via SMDR	\$ 497,173.76

7 As shown in the Table 5.1 above, there is a net deferred revenue requirement of
 8 \$497,173.76 to be recovered through the SMDR true-up.
 9

10 **Table 5.2 – 2013 Smart Meter Incremental Revenue Requirement**
 11 **recovered via SMIRR**

2013 Smart Meter Incremental Revenue Requirement to be recovered via SMIRR	
Smart Meter Revenue Requirement for Year 2013	Total 2013
Return on Capital	\$ 131,681.99
Depreciation/Amortization expense and related interest	\$ 370,799.73
Operating Expenses and related interest	\$ 273,522.00
Revenue Requirement before Taxes/PILs	\$ 776,003.72
Grossed-up Taxes/PILs	-\$ 74,338.67
Total Revenue Requirement plus interest on OM&A and depreciation expense	\$ 701,665.05
2013 Incremental Smart Meter Revenue Requirement to be recovered via SMIRR	\$ 701,665.05

13
 14 As shown in Table 5.2 above, Kingston Hydro has calculated a 2013 incremental
 15 smart meters revenue requirement of \$701,665.05 to be recovered via a SMIRR
 16 rate rider.

1 Cost Allocation

2
3 To provide for an allocation of the SMDR true-up and the 2013 SMIRR revenue
4 requirement, Kingston Hydro is proposing an approach guided by the methodology
5 approved by the Board in EB-2011-0128 with respect to class-specific riders.
6 Kingston Hydro is requesting recovery of the SMDR and the SMIRR from the two
7 customer classes that directly benefit from the smart meter initiative, namely, the
8 Residential and General Service less than 50kW classes.

9
10 Class-specific smart meter cost data is not readily available so Kingston Hydro is
11 proposing an allocator based on the number of class-specific smart meters
12 installed. The number of smart meters installed for the Residential class was
13 23,244 and 3,141 smart meters installed for the General Service less than 50kW
14 customer class, as filed in the smart meter filings. This has provided an allocation
15 factor of 88.10% for Residential customer class and 11.90% for the General
16 Service less than 50kW customer class. A summary calculation of class-specific
17 SDMR and SMIRR rate riders is provided in Table 5.3.

18

Table 5.3 – Summary Calculation of SMDR and SMIRR Rate Riders

(a) Summary Calculation of SMDR Rate Riders		Explanation / Allocator	Residential	GS < 50 kW
Total Revenue Requirement plus interest on OM&A and depreciation expense	\$ 1,522,145.42	Percentage of costs allocated to each class	88.10%	11.90%
		Percentage of costs for classes with SMDR/SMIRR	88.10%	11.90%
SMFA Revenues plus interest expense	\$ 1,024,971.65	Allocation	\$ 1,341,001.26	\$ 181,144.16
Net Deferred Revenue Requirement to be recovered via SMDR	\$ 497,173.76	SMFA Revenues directly attributable to class	86.47%	12.22%
		Residual SMFA Revenues (from other metered classes) attributed evenly	0.66%	0.66%
		Total	87.13%	12.88%
Estimated SMDR Rider Revenues	\$ 495,284.40	Allocation	\$ 893,006.55	\$ 131,965.10
		\$ 447,994.71	\$ 49,179.06	
		Average number of customers (2013)	23,244	3,141
		Recovery Period (in Years)	2	2
		SMDR Class-Specific Rate Riders	\$ 0.80	\$ 0.65
			\$ 446,284.80	\$ 48,999.60
(b) Summary Calculation of SMIRR Rate Riders		Explanation / Allocator	Residential	GS < 50 kW
Total Revenue Requirement for 2013 to be recovered via SMIRR	\$ 701,665.05	Percentage of costs allocated to each class	88.10%	11.90%
		Percentage of costs for classes with SMDR/SMIRR	88.10%	11.90%
The SMIRR is recovered as an annualized rate until the effective date of the distributor's next rebased rates resulting from a cost of service application		Allocation	\$ 618,155.80	\$ 83,509.25
		Average number of customers (2013)	23,244	3,141
		1 Year	1	1
		SMIRR Class-Specific Rate Riders	2.22	2.22
Estimated SMIRR Rider Revenues	\$ 702,896.40		\$ 619,220.16	\$ 83,676.24

In the calculation of the SMDR rate riders presented in the above table, the SMFA revenue attributable to other metered rate classes was 1.31% of total SMFA revenue collected which was evenly distributed between Residential and General Service less than 50kW classes.

The proposed recovery period for the SMDR rate rider is two (2) years, with a start date of January 1, 2013 and a sunset date of December 31, 2014.

The SMIRR rate rider is recovered as an annualized rate until the effective date of Kingston Hydro's next rebased rates resulting from a cost of service application. The proposed start date of the SMIRR rider is January 1, 2013.

1 **Rate Changes**

2 Table 5.4 summarizes the rate changes sought in this Application. All rate riders
3 shown are monthly fixed charges.

4 **Table 5.4 - Summary of Rate Changes**

Rate Rider	Residential	GS < 50kW
SMDR	\$0.80	\$0.65
SMIRR	\$2.22	\$2.22
Total	\$3.02	\$2.87

6
7
8
9 A typical residential customer using 800 kWhs per month will see an increase of
10 \$3.07 or 2.69% on their monthly bill after the impact of taxes and the Ontario
11 Clean Energy Benefit.

12
13 A General Service less than 50kW customer using 2,000 kWhs per month will see
14 an increase of \$2.92 or 1.09% on their monthly bill after the impact of taxes and
15 the Ontario Clean Energy Benefit.

16
17 Kingston Hydro has provided bill impact calculations in Appendix 7.2 of the
18 Application.

19 **6.0 CONCLUSION**

21 Kingston Hydro respectfully submits that the costs incurred to fulfill its obligations
22 under the provincially mandated Smart Meter initiative have been prudently
23 incurred in accordance with Board Guidelines; that the proposed rate riders are
24 just and reasonable, and that it appropriate the Board approve the proposed
25 rate riders for implementation effective January 1, 2013.

26
27 **7.0 APPENDICES**



PRP International, Inc.

Fairness Advisory Services

May 30, 2008

Ms. Nancy Taylor
Kingston Electricity Distribution Limited
P.O. Box 790, 1211 John Counter Boulevard
Kingston, ON K7L 4X7

Dear Ms. Taylor:

Subject: Attestation of the Fairness Commissioner
Advanced Metering Infrastructure RFP, August 2007
London Hydro & Consortium of LDCs Smartmetering Project

PRP International, Inc. is pleased to submit its letter report of the Fairness Commissioner for the noted Request for Proposal (RFP) evaluation and selection phase. This judgment is being provided for the information and use of each Consortium LDC Sponsor, in their consideration of the report from the Evaluation Phase, for this competitive transaction.

"It is the judgment of PRP International, Inc., as the Fairness Commissioner, that the determinations of the two (2) highest ranked Proponents for the Kingston Electricity Distribution Limited requirements are:

- *KTI/Sensus Limited, as the recommended Preferred Proponent, based on its highest ranking, and*
- *Elster Metering being the second ranked Proponent.*

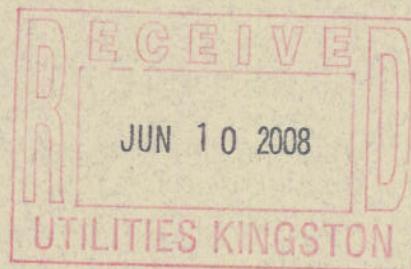
These determinations were made in a fair (objective and competent) manner and consistent with the evaluation and selection processes set out in the RFP, issued August 14, 2007."

A detailed report for your records will be submitted to you, by August 31, 2008. Should you have any questions or require clarification of any matter contained in this letter report, please contact the undersigned.

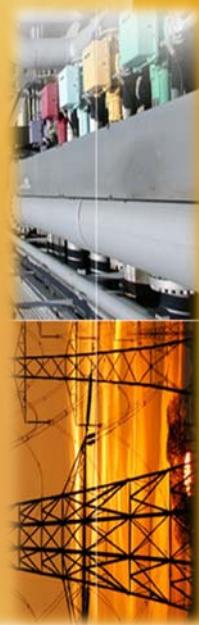
Yours truly,

Peter Sorensen
President

cc: Mr. Gary Rains, RFP Project Director



Smart Meter Model for Electricity Distributors (2013 Filers)



Utility Name	Kingston Hydro Corporation	Version	3.00
Assigned EB Number	EB-2012-0310		
Name and Title	Sherry Gibson, Senior Advisor, Rates and Regulatory Affairs		
Phone Number	613-546-1181 x 2383		
Email Address	sgibson@kingstonhydro.com		
Date	24/08/2012 11:42		
Last COS Re-based Year	2011		

Note: Drop-down lists are shaded blue; Input cells are shaded green.

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

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



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 O&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 O&A, regardless of whether a distributor has deployments in 2012, distributors should enter the forecasted O&A for 2012 for all smart meters in service.

Smart Meter Capital Cost and Operational Expense Data

Smart Meter Installation Plan

Actual/Planned number of Smart Meters installed during the Calendar Year

	2006 Audited Actual	2007 Audited Actual	2008 Audited Actual	2009 Audited Actual	2010 Audited Actual	2011 Audited Actual	2012 Forecast	2013 Forecast	Total
Residential									23244
General Service < 50 kW									3141
Actual/Planned number of Smart Meters installed (Residential and GS < 50 kW only)	0	0	0	0	25888	477	20	0	26385
Percentage of Residential and GS < 50 kW Smart Meter Installations Completed	0.00%	0.00%	0.00%	0.00%	98.12%	99.92%	100.00%	100.00%	0
Actual/Planned number of GS > 50 kW meters installed									
Other (please identify)									0
Total Number of Smart Meters installed or planned to be installed					25888	477	20	0	26385

1 Capital Costs

1.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)

1.1.1 Smart Meters (may include new meters and modules, etc.)

1.1.2 Installation Costs (may include societatis, labour, vehicle, benefits, etc.)

1.1.3a Workforce Automation Hardware (may include fieldwork hardware, barcode hardware, etc.)

1.1.3b Workforce Automation Software (may include fieldwork hardware, barcode hardware, etc.)

1.1.3c Total Advanced Metering Communications Devices (AMCD)

Asset Type *Asset type must be selected to enable calculations*

1.1.4 Smart Meters

1.1.5 Total Meters

1.1.6 Total Advanced Meters

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

1.2.1 Collectors

1.2.2 Repeaters (may include radio licence, etc.)

1.2.3 Installation (may include meter seals and rings, collector computer hardware, etc.)

1.2.4 Total Advanced Metering Regional Collector (AMRC) (includes LAN)

Asset Type	Audited Actual	Forecast					
Computer Hardware	\$ -	\$ -	\$ -	\$ 120,584	\$ 6,000	\$ 10,000	\$ 120,000
Computer Software	\$ -	\$ -	\$ -	\$ -	\$ 29,511	\$ 6,000	\$ 35,511
1.3.3 Computer Software Licences & Installation (includes hardware and software) <i>(may include AS400 disk source, backup and recovery, compilers, UPS, etc.)</i>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Advanced Metering Control Computer (AMCC)	\$ -	\$ -	\$ -	\$ 120,584	\$ 35,511	\$ 16,000	\$ 120,000
Asset Type	Audited Actual	Forecast					
1.4 WIDE AREA NETWORK (WAN)	\$ -	\$ -					
1.4.1 Activation Fees	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Wide Area Network (WAN)	\$ -	\$ -					
Asset Type	Audited Actual	Forecast					
Smart Meter	\$ -	\$ -	\$ -	\$ -	\$ 40,460	\$ 7,558	\$ 48,018
Smart Meter	\$ -	\$ -	\$ -	\$ -	\$ 10,137	\$ 34,631	\$ -
1.5.3 Professional Fees	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 41,427	\$ 86,185
1.5.4 Integration	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1.5.5 Program Management	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1.5.6 Other AMI Capital	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Other AMI Capital Costs Related to Minimum Functionality	\$ -	\$ -	\$ -	\$ -	\$ 10,137	\$ 75,091	\$ 48,985
Total Capital Costs Related to Minimum Functionality	\$ -	\$ -	\$ -	\$ -	\$ 150,134	\$ 28,502,177	\$ 314,277
Asset Type	Audited Actual	Forecast					
1.6 CAPITAL COSTS BEYOND MINIMUM FUNCTIONALITY	\$ -	\$ -					
<i>(Please provide a descriptive title and identify nature or beyond minimum functionality costs)</i>							
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	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1.6.2 Costs for deployment of smart meters to customers other than residential and small general service	\$ -	\$ -	\$ -	\$ -	\$ 4,525	\$ 42,732	\$ 47,257
1.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MID/IR, etc.	\$ -	\$ -	\$ -	\$ -	\$ 4,525	\$ 42,732	\$ 47,257
Total Capital Costs Beyond Minimum Functionality	\$ -	\$ -	\$ -	\$ -	\$ 150,134	\$ 28,547,742	\$ 314,277
Total Smart Meter Capital Costs	\$ -	\$ 196,341	\$ 273,000				

COM&A Expenses

3 Aggregate Smart Meter Costs by Category						
3.1	Capital					
3.1.1	Smart Meter	\$ -	\$ -	\$ 1,501,434	\$ 272,633	\$ 278,764
3.1.2	Computer Hardware	\$ -	\$ -	\$ -	\$ 120,584	\$ 6,000
3.1.3	Computer Software	\$ -	\$ -	\$ -	\$ 4,525	\$ 29,111
3.1.4	Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ 48,732
3.1.5	Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -
3.1.6	Applications Software	\$ -	\$ -	\$ -	\$ -	\$ -
3.1.7	Total Capital Costs	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 1,501,434</u>	<u>\$ 285,772</u>	<u>\$ 314,277</u>
3.2	OM&A Costs	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 65,832</u>	<u>\$ 55,203</u>
3.2.1	Total OM&A Costs	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 94,935</u>	<u>\$ 273,322</u>
						<u><u>\$ 509,550</u></u>

Smart Meter Model for Electricity Distributors (2013 Filers)



	2006	2007	2008	2009	2010	2011	2012	2013
Cost of Capital								
Capital Structure¹								
Deemed Short-term Debt Capitalization								
Deemed Long-term Debt Capitalization								
Deemed Equity Capitalization								
Preferred Shares								
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Cost of Capital Parameters								
Deemed Short-term Debt Rate								
Long-term Debt Rate (actual/embedded/deemed) ²	6.57%	6.57%	6.57%	6.57%	6.57%	6.57%	6.57%	6.57%
Target Return on Equity (ROE)	9.0%	9.00%	9.00%	9.00%	9.00%	9.00%	9.01%	9.01%
Return on Preferred Shares								
WACC	7.79%	7.79%	7.70%	7.62%	7.54%	7.54%	7.54%	7.54%
Working Capital Allowance								
Working Capital Allowance Rate								
(% of the sum of Cost of Power + controllable expenses)								
Taxes/PILs								
Aggregate Corporate Income Tax Rate								
Capital Tax (until July 1st, 2010)	36.12%	36.12%	33.50%	33.00%	27.38%	21.00%	26.25%	25.50%
	0.30%	0.228%	0.225%	0.225%	0.075%	0.00%	0.00%	0.00%

Depreciation Rates (expressed as expected useful life in years)													
Smart Meters	- years	15	6.67%	15	6.67%	15	6.67%	15	6.67%	15	6.67%	15	6.67%
Computer Hardware	- years	5	20.00%	5	20.00%	5	20.00%	5	20.00%	5	20.00%	5	20.00%
Computer Software	- years	5	20.00%	5	20.00%	5	20.00%	5	20.00%	5	20.00%	5	20.00%
Tools & Equipment	- years	10	10.00%	10	10.00%	10	10.00%	10	10.00%	10	10.00%	10	10.00%
Other Equipment	- years	10	10.00%	10	10.00%	10	10.00%	10	10.00%	10	10.00%	10	10.00%
CCA Rates													
Smart Meters - CCA Class	Smart Meters - CCA Rate	8	20%	8	20%	8	20%	8	20%	8	20%	8	20%
Computer Equipment - CCA Class	Computer Equipment - CCA Rate	46	30%	46	30%	46	30%	46	30%	46	30%	46	30%
General Equipment - CCA Class	General Equipment - CCA Rate												
Applications Software - CCA Class	Applications Software - CCA Rate												

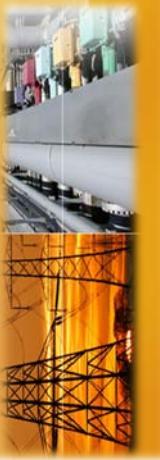
Assumptions

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.

Smart Meter Model for Electricity Distributors (2013 Filers)



Net Fixed Assets - Computer Software (including Applications Software)			
Gross Book Value			
Opening Balance	\$ -	\$ -	\$ -
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)	\$ -	\$ -	\$ -
Closing Balance	\$ 82,768	\$ 82,768	\$ 82,768
Accumulated Depreciation			
Opening Balance	\$ -	\$ -	\$ -
Amortization expense during year	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)	\$ -	\$ -	\$ -
Closing Balance	\$ 32,543	\$ 32,543	\$ 32,543
Net Book Value			
Opening Balance	\$ -	\$ -	\$ -
Closing Balance	\$ -	\$ -	\$ -
Average Net Book Value	\$ -	\$ -	\$ -
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	\$ -	\$ -	\$ -



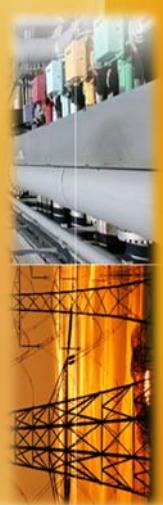
	2006	2007	2008	2009	2010	2011	2012	2013
Average Net Fixed Asset Values (from Sheet 4)								
Smart Meters	\$ -	\$ -	\$ -	\$ 725,693	\$ 2,720,661	\$ 3,983,636	\$ 3,893,520	\$ 3,728,738
Computer Hardware	\$ -	\$ -	\$ -	\$ 54,263	\$ 99,167	\$ 81,650	\$ 48,253	\$ 113,834
Computer Software	\$ -	\$ -	\$ -	\$ -	\$ 2,036	\$ 16,900	\$ -	\$ 58,502
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Net Fixed Assets	\$ -	\$ -	\$ -	\$ 725,693	\$ 2,776,960	\$ 4,099,703	\$ 4,023,423	\$ 3,901,074
Working Capital								
Operating Expenses (from Sheet 2)	\$ -	\$ -	\$ -	\$ -	\$ 85,832	\$ 55,203	\$ 94,993	\$ 273,522
Working Capital Factor (from Sheet 3)	\$ 15%	\$ 15%	\$ 15%	\$ 15%	\$ 15%	\$ 15%	\$ 15%	15% 41,028
Total Net Fixed Assets	\$ -	\$ -	\$ -	\$ -	\$ 725,693	\$ 2,789,835	\$ 4,107,384	\$ 4,037,672
Incremental Smart Meter Rate Base	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,942,103
Return on Rate Base								
Capital Structure								
Deemed Short Term Debt	\$ -	\$ -	\$ -	\$ 411,668	\$ 1,673,901	\$ 164,319	\$ 161,507	\$ 157,684
Deemed Long Term Debt	\$ -	\$ -	\$ -	\$ 314,225	\$ 1,115,934	\$ 2,300,471	\$ 2,261,097	\$ 2,207,577
Equity	\$ -	\$ -	\$ -	\$ -	\$ 1,643,193	\$ 1,643,193	\$ 1,615,069	\$ 1,576,841
Preferred Shares	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Capitalization	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,107,384	\$ 4,037,672	\$ 3,942,103
Return on								
Deemed Short Term Debt	\$ -	\$ -	\$ -	\$ 27,033	\$ 109,975	\$ 4,042	\$ 2,148	\$ 2,097
Deemed Long Term Debt	\$ -	\$ -	\$ -	\$ 28,280	\$ 100,434	\$ 115,254	\$ 132,726	\$ 129,595
Equity	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 157,418	\$ 134,-	\$ -
Preferred Shares	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Return on Capital	\$ -	\$ -	\$ -	\$ 55,314	\$ 210,409	\$ 276,714	\$ 134,874	\$ 131,682
Operating Expenses								
Amortization Expenses (from Sheet 4)								
Smart Meters	\$ -	\$ -	\$ -	\$ -	\$ 50,048	\$ 191,083	\$ 291,363	\$ 305,242
Computer Hardware	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 12,058	\$ 24,717	\$ 20,317
Computer Software	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 12,453	\$ 3,856	\$ 11,680
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16,554
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Amortization Expense in Year	\$ -	\$ -	\$ -	\$ 50,048	\$ 203,594	\$ 319,356	\$ 343,240	\$ 370,800
Incremental Revenue Requirement before Taxes/PILs								
Calculation of Taxable Income	\$ -	\$ -	\$ -	\$ 499,836	\$ 651,853	\$ 573,107	\$ 776,004	
Incremental Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ 85,832	\$ 55,203	\$ 94,993	\$ 273,522
Amortization Expense	\$ -	\$ -	\$ -	\$ -	\$ 203,594	\$ 319,356	\$ 343,240	\$ 370,800
Interest Expense	\$ -	\$ -	\$ -	\$ -	\$ 109,975	\$ 119,266	\$ 134,874	131,682
Net Income for Taxes/PILs	\$ -	\$ -	\$ -	\$ -	\$ 100,434	\$ 157,418	\$ -	\$ -
Grossed-up Taxes/PILs (from Sheet 7)								
Revenue Requirement, including Grossed-up Taxes/PILs	\$ -	\$ -	\$ -	\$ 32,106.10	\$ 94,181.63	\$ 78,495.39	\$ 116,364.30	\$ 74,338.67
				\$ 73,255	\$ 405,654	\$ 573,358	\$ 456,743	\$ 701,665

Smart Meter Model for Electricity Distributors (2013 Filers)



For PILs Calculation

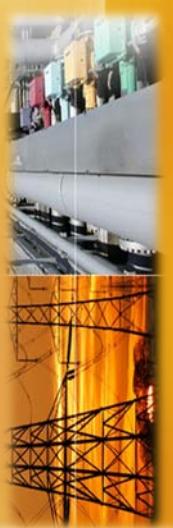
Smart Meter Model for Electricity Distributors (2013 Filers)



PILs Calculation

	2006 Audited Actual	2007 Audited Actual	2008 Audited Actual	2009 Audited Actual	2010 Audited Actual	2011 Audited Actual	2012 Forecast	2013 Forecast
INCOME TAX								
Net Income	\$ -	\$ -	\$ -	\$ -	\$ 28,280.25	\$ 100,434.05	\$ 157,417.94	\$ -
Amortization	\$ -	\$ -	\$ -	\$ -	\$ 50,047.78	\$ 203,594.25	\$ 319,936.16	\$ 343,239.56
CCA - Smart Meters	\$ -	\$ -	\$ -	\$ -	\$ 150,143.35	\$ 543,221.37	\$ 735,416.83	\$ 629,970.77
CCA - Computers	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 18,786.35	\$ 37,229.45	\$ 40,197.06
CCA - Applications Software	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CCA - Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Change in Taxable Income	\$ -	\$ -	\$ -	\$ -	\$ 71,815.32	\$ 257,959.43	\$ 295,292.18	\$ 326,828.27
Tax Rate (from Sheet 3)	36.12%	36.12%	33.50%	33.00%	27.38%	21.00%	26.25%	25.50%
Income Taxes Payable	\$ -	\$ -	\$ -	\$ -	\$ 23,699.05	\$ 70,629.29	\$ 62,011.36	\$ 85,818.67
ONTARIO CAPITAL TAX								
Smart Meters	\$ -	\$ -	\$ -	\$ -	\$ 1,451,385.72	\$ 3,989,935.75	\$ 3,977,336.49	\$ 3,809,703.13
Computer Hardware	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 108,525.60	\$ 89,808.80	\$ 73,492.00
Computer Software (Including Application Software)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,072.50	\$ 29,772.40	\$ 66,779.00
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Rate Base	\$ -	\$ -	\$ -	\$ -	\$ 1,451,385.72	\$ 4,102,533.85	\$ 4,096,872.69	\$ 3,949,974.13
Less: Exemption	\$ -	\$ -	\$ -	\$ -	\$ 1,451,385.72	\$ 4,102,533.85	\$ 4,096,872.69	\$ 3,949,974.13
Deemed Taxable Capital	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Ontario Capital Tax Rate (from Sheet 3)	0.300%	0.225%	0.225%	0.225%	0.225%	0.075%	0.000%	0.000%
Net Amount (Taxable Capital x Rate)	\$ -	\$ -	\$ -	\$ -	\$ 3,265.62	\$ 3,076.90	\$ -	\$ -
Change in Income Taxes Payable	\$ -	\$ -	\$ -	\$ -	\$ 23,699.05	\$ 70,629.29	\$ 62,011.36	\$ 85,818.67
Change in OCT PILs	\$ -	\$ -	\$ -	\$ -	\$ 3,265.62	\$ 3,076.90	\$ -	\$ -
Gross Up PILs								
Tax Rate	36.12%	36.12%	33.50%	33.00%	33.00%	27.38%	21.00%	26.25%
Change in Income Taxes Payable	\$ -	\$ -	\$ -	\$ -	\$ 35,371.72	\$ 97,258.73	\$ 78,495.39	\$ 116,364.30
Change in OCT PILs	\$ -	\$ -	\$ -	\$ -	\$ 3,265.62	\$ 3,076.90	\$ -	\$ -
					\$ 32,106.10	\$ 94,181.83	\$ 78,495.39	\$ 116,364.30
								\$ 74,338.67

Smart Meter Model for Electricity Distributors (2013 Filers)

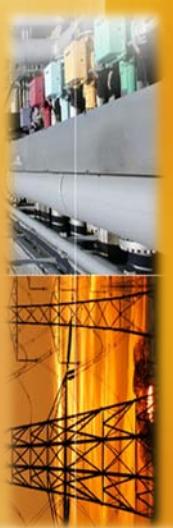


This worksheet calculates the funding adder revenues.

Account 1555 - Sub-account Funding Adder Revenues

Approved Deferral and Variance Accounts	CWP	Date	Year	Quarter	Opening Balance (Principal)	Funding Adder Revenues	Interest Rate	Interest	Closing Balance	Annual amounts	Board Approved Smart Meter Funding Adder
											0.00%
2006 Q1	4.14%	Jan-06	2006	Q1	\$ -	\$ -	0.00%	\$ -	\$ -	\$ -	\$ -
2006 Q2	4.68%	Feb-06	2006	Q1	\$ -	\$ -	0.00%	\$ -	\$ -	\$ -	\$ -
2006 Q3	5.05%	Mar-06	2006	Q1	\$ -	\$ -	0.00%	\$ -	\$ -	\$ -	\$ -
2006 Q4	4.58%	Apr-06	2006	Q2	\$ -	\$ -	4.14%	\$ -	\$ -	\$ -	\$ -
2007 Q1	4.59%	May-06	2006	Q2	\$ -	\$ 6,450.77	4.14%	\$ -	\$ 6,450.77	\$ 6,450.77	\$ 0.26
2007 Q2	4.59%	Jun-06	2006	Q2	\$ 6,450.77	\$ 7,017.99	4.14%	\$ 22.26	\$ 13,490.52	\$ 13,490.52	\$ 0.26
2007 Q3	4.59%	Jul-06	2006	Q3	\$ 13,468.26	\$ 6,421.54	4.59%	\$ 51.52	\$ 19,941.32	\$ 19,941.32	\$ 0.26
2007 Q4	5.18%	Aug-06	2006	Q3	\$ 19,889.80	\$ 7,287.88	4.59%	\$ 76.08	\$ 27,253.77	\$ 27,253.77	\$ 0.26
2008 Q1	5.14%	Sep-06	2006	Q3	\$ 27,177.69	\$ 6,422.79	4.59%	\$ 103.95	\$ 33,704.43	\$ 33,704.43	\$ 0.26
2008 Q2	5.18%	Oct-06	2006	Q4	\$ 33,600.48	\$ 7,382.04	4.59%	\$ 128.52	\$ 41,111.04	\$ 41,111.04	\$ 0.26
2008 Q3	5.35%	Nov-06	2006	Q4	\$ 40,982.52	\$ 6,966.70	4.59%	\$ 156.76	\$ 48,105.98	\$ 48,105.98	\$ 0.26
2008 Q4	5.35%	Dec-06	2006	Q4	\$ 47,949.22	\$ 5,722.36	4.59%	\$ 183.41	\$ 53,854.99	\$ 53,854.99	\$ 0.26
2009 Q1	6.61%	Jan-07	2007	Q1	\$ 53,671.58	\$ 8,192.82	4.59%	\$ 205.29	\$ 62,069.69	\$ 62,069.69	\$ 0.26
2009 Q2	1.00%	Feb-07	2007	Q1	\$ 61,864.40	\$ 6,424.95	4.59%	\$ 236.63	\$ 68,525.98	\$ 68,525.98	\$ 0.26
2009 Q3	0.55%	Mar-07	2007	Q1	\$ 68,289.35	\$ 7,429.06	4.59%	\$ 261.21	\$ 75,979.62	\$ 75,979.62	\$ 0.26
2009 Q4	0.55%	Apr-07	2007	Q2	\$ 75,718.41	\$ 6,548.05	4.59%	\$ 289.62	\$ 82,556.08	\$ 82,556.08	\$ 0.26
2010 Q1	0.55%	May-07	2007	Q2	\$ 82,286.46	\$ 7,177.58	4.59%	\$ 314.67	\$ 89,758.71	\$ 89,758.71	\$ 0.26
2010 Q2	0.55%	Jun-07	2007	Q2	\$ 89,444.04	\$ 6,838.86	4.59%	\$ 342.12	\$ 96,624.81	\$ 96,624.81	\$ 0.26
2010 Q3	0.89%	Jul-07	2007	Q3	\$ 96,282.69	\$ 6,899.41	4.59%	\$ 368.28	\$ 103,550.38	\$ 103,550.38	\$ 0.26
2010 Q4	1.20%	Aug-07	2007	Q3	\$ 103,182.10	\$ 6,981.82	4.59%	\$ 394.67	\$ 110,558.39	\$ 110,558.39	\$ 0.26
2011 Q1	1.47%	Sep-07	2007	Q3	\$ 110,163.72	\$ 6,186.72	4.59%	\$ 421.38	\$ 116,771.81	\$ 116,771.81	\$ 0.26
2011 Q2	1.47%	Oct-07	2007	Q4	\$ 116,350.43	\$ 7,599.39	5.14%	\$ 498.37	\$ 124,448.20	\$ 124,448.20	\$ 0.26
2011 Q3	1.47%	Nov-07	2007	Q4	\$ 123,949.83	\$ 7,104.34	5.14%	\$ 530.92	\$ 131,585.09	\$ 131,585.09	\$ 0.26
2011 Q4	1.47%	Dec-07	2007	Q4	\$ 131,084.17	\$ 6,038.80	5.14%	\$ 561.35	\$ 137,854.32	\$ 137,854.32	\$ 0.26
2012 Q1	1.47%	Jan-08	2008	Q1	\$ 137,092.97	\$ 7,969.80	5.14%	\$ 587.21	\$ 145,649.78	\$ 145,649.78	\$ 0.26
2012 Q2	1.47%	Feb-08	2008	Q1	\$ 145,062.57	\$ 6,552.38	5.14%	\$ 621.35	\$ 152,236.30	\$ 152,236.30	\$ 0.26
2012 Q3	1.47%	Mar-08	2008	Q1	\$ 151,614.95	\$ 6,270.36	5.14%	\$ 649.42	\$ 158,534.73	\$ 158,534.73	\$ 0.26
2012 Q4	1.47%	Apr-08	2008	Q2	\$ 157,385.31	\$ 7,967.76	4.08%	\$ 536.81	\$ 166,389.88	\$ 166,389.88	\$ 0.26
2013 Q1	1.47%	May-08	2008	Q2	\$ 165,853.07	\$ 6,406.47	4.08%	\$ 563.90	\$ 172,823.44	\$ 172,823.44	\$ 0.26
2013 Q2	1.47%	Jun-08	2008	Q2	\$ 172,259.54	\$ 7,461.33	4.08%	\$ 585.68	\$ 180,306.56	\$ 180,306.56	\$ 0.26
2013 Q3	1.47%	Jul-08	2008	Q3	\$ 179,720.88	\$ 7,263.76	3.35%	\$ 501.72	\$ 187,486.36	\$ 187,486.36	\$ 0.26
2013 Q4	1.47%	Aug-08	2008	Q3	\$ 186,984.64	\$ 6,801.39	3.35%	\$ 522.00	\$ 194,308.02	\$ 194,308.02	\$ 0.26

Smart Meter Model for Electricity Distributors (2013 Filers)

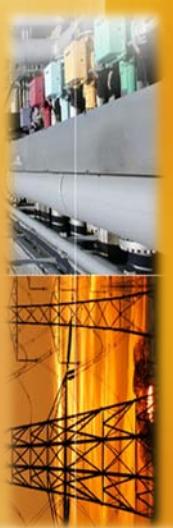


This worksheet calculates the funding adder revenues.

Account 1555 - Sub-account Funding Adder Revenues

Approved Deferral and Variance Accounts	CMP	Date	Year	Quarter	Opening Balance (Principal)	Funding Adder Revenues	Interest Rate	Interest	Closing Balance	Annual amounts	Board Approved Smart Meter Funding Adder
Sep-08	2008	Q3	\$ 193,786.02	\$ 7,007.37	\$ 3.35%	\$ 540.99	\$ 201,334.38	\$ 0.26	\$ 208,479.30	\$ 208,479.30	\$ 0.26
Oct-08	2008	Q4	\$ 200,793.39	\$ 7,125.36	\$ 3.35%	\$ 560.55	\$ 208,479.30	\$ 0.26	\$ 214,860.39	\$ 214,860.39	\$ 0.26
Nov-08	2008	Q4	\$ 207,918.75	\$ 6,361.19	\$ 3.35%	\$ 580.44	\$ 214,860.39	\$ 0.26	\$ 221,932.08	\$ 91,089.18	\$ 91,089.18
Dec-08	2008	Q4	\$ 214,279.95	\$ 7,053.93	\$ 3.35%	\$ 598.20	\$ 221,932.08	\$ 0.26	\$ 229,758.58	\$ 229,758.58	\$ 0.26
Jan-09	2009	Q1	\$ 221,333.88	\$ 7,972.81	\$ 2.45%	\$ 451.89	\$ 229,758.58	\$ 0.26	\$ 235,965.77	\$ 235,965.77	\$ 0.26
Feb-09	2009	Q1	\$ 229,306.69	\$ 6,190.91	\$ 2.45%	\$ 488.17	\$ 235,965.77	\$ 0.26	\$ 244,047.03	\$ 244,047.03	\$ 0.26
Mar-09	2009	Q1	\$ 235,497.60	\$ 8,068.62	\$ 2.45%	\$ 480.81	\$ 244,047.03	\$ 0.26	\$ 250,233.41	\$ 250,233.41	\$ 0.26
Apr-09	2009	Q2	\$ 243,566.22	\$ 6,464.22	\$ 1.00%	\$ 202.97	\$ 250,233.41	\$ 0.26	\$ 256,204.77	\$ 256,204.77	\$ 0.26
May-09	2009	Q2	\$ 250,030.44	\$ 5,965.97	\$ 1.00%	\$ 208.36	\$ 256,204.77	\$ 0.26	\$ 263,600.45	\$ 263,600.45	\$ 0.26
Jun-09	2009	Q2	\$ 255,986.41	\$ 7,390.71	\$ 1.00%	\$ 213.33	\$ 263,600.45	\$ 0.26	\$ 271,081.06	\$ 271,081.06	\$ 0.26
Jul-09	2009	Q3	\$ 263,387.12	\$ 7,573.21	\$ 0.55%	\$ 120.72	\$ 271,081.06	\$ 0.26	\$ 277,725.74	\$ 277,725.74	\$ 0.26
Aug-09	2009	Q3	\$ 270,960.34	\$ 6,641.21	\$ 0.55%	\$ 124.19	\$ 277,725.74	\$ 0.26	\$ 284,601.46	\$ 284,601.46	\$ 0.26
Sep-09	2009	Q3	\$ 277,601.55	\$ 6,872.88	\$ 0.55%	\$ 127.23	\$ 284,601.46	\$ 0.26	\$ 291,613.99	\$ 291,613.99	\$ 0.26
Oct-09	2009	Q4	\$ 284,474.23	\$ 7,009.38	\$ 0.55%	\$ 130.38	\$ 291,613.99	\$ 0.26	\$ 298,561.17	\$ 298,561.17	\$ 0.26
Nov-09	2009	Q4	\$ 291,483.61	\$ 6,943.96	\$ 0.55%	\$ 133.60	\$ 298,561.17	\$ 0.26	\$ 304,973.28	\$ 304,973.28	\$ 0.26
Dec-09	2009	Q4	\$ 298,427.57	\$ 6,408.93	\$ 0.55%	\$ 136.78	\$ 304,973.28	\$ 0.26	\$ 312,499.04	\$ 312,499.04	\$ 0.26
Jan-10	2010	Q1	\$ 304,836.50	\$ 7,522.82	\$ 0.55%	\$ 139.72	\$ 312,499.04	\$ 0.26	\$ 318,935.94	\$ 318,935.94	\$ 0.26
Feb-10	2010	Q1	\$ 312,359.32	\$ 6,433.46	\$ 0.55%	\$ 143.16	\$ 318,935.94	\$ 0.26	\$ 326,896.00	\$ 326,896.00	\$ 0.26
Mar-10	2010	Q1	\$ 318,792.78	\$ 7,957.11	\$ 0.55%	\$ 146.11	\$ 326,896.00	\$ 0.26	\$ 333,640.27	\$ 333,640.27	\$ 0.26
Apr-10	2010	Q2	\$ 326,749.89	\$ 6,740.62	\$ 0.55%	\$ 149.76	\$ 333,640.27	\$ 0.26	\$ 340,270.50	\$ 340,270.50	\$ 0.26
May-10	2010	Q2	\$ 333,490.51	\$ 6,627.14	\$ 0.55%	\$ 152.85	\$ 340,270.50	\$ 0.26	\$ 363,582.56	\$ 363,582.56	\$ 0.26
Jun-10	2010	Q2	\$ 340,117.65	\$ 23,309.02	\$ 0.55%	\$ 155.89	\$ 363,582.56	\$ 0.26	\$ 391,731.81	\$ 391,731.81	\$ 1.00
Jul-10	2010	Q3	\$ 363,426.67	\$ 28,035.60	\$ 0.89%	\$ 269.54	\$ 391,731.81	\$ 1.00	\$ 417,871.89	\$ 417,871.89	\$ 1.00
Aug-10	2010	Q3	\$ 391,462.27	\$ 26,119.29	\$ 0.89%	\$ 290.33	\$ 417,871.89	\$ 1.00	\$ 444,583.03	\$ 444,583.03	\$ 1.00
Sep-10	2010	Q3	\$ 411,581.56	\$ 26,691.76	\$ 0.89%	\$ 309.71	\$ 444,583.03	\$ 1.00	\$ 471,820.85	\$ 471,820.85	\$ 1.00
Oct-10	2010	Q4	\$ 444,273.32	\$ 27,103.26	\$ 1.20%	\$ 444.27	\$ 471,820.85	\$ 1.00	\$ 497,732.02	\$ 497,732.02	\$ 1.00
Nov-10	2010	Q4	\$ 471,376.58	\$ 25,884.06	\$ 1.20%	\$ 471.38	\$ 497,732.02	\$ 1.00	\$ 524,094.72	\$ 524,094.72	\$ 1.00
Dec-10	2010	Q4	\$ 497,260.64	\$ 26,336.82	\$ 1.20%	\$ 497.26	\$ 524,094.72	\$ 1.00	\$ 552,156.95	\$ 552,156.95	\$ 1.00
Jan-11	2011	Q1	\$ 523,597.46	\$ 28,278.08	\$ 1.47%	\$ 641.41	\$ 552,156.95	\$ 1.00	\$ 576,098.68	\$ 576,098.68	\$ 1.00
Feb-11	2011	Q1	\$ 551,875.54	\$ 23,547.09	\$ 1.47%	\$ 676.05	\$ 576,098.68	\$ 1.00	\$ 608,375.33	\$ 608,375.33	\$ 1.00
Mar-11	2011	Q1	\$ 575,422.63	\$ 32,247.81	\$ 1.47%	\$ 704.89	\$ 608,375.33	\$ 1.00	\$ 631,407.36	\$ 631,407.36	\$ 1.00
Apr-11	2011	Q2	\$ 607,670.44	\$ 22,992.52	\$ 1.47%	\$ 744.40	\$ 631,407.36	\$ 1.00	\$ 660,675.94	\$ 660,675.94	\$ 1.00
May-11	2011	Q2	\$ 630,662.96	\$ 29,240.42	\$ 1.47%	\$ 772.56	\$ 660,675.94	\$ 1.00			

Smart Meter Model for Electricity Distributors (2013 Filers)

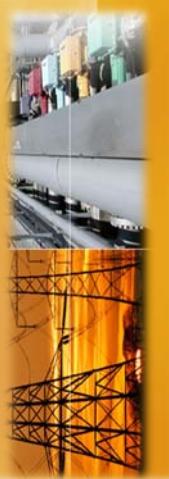


This worksheet calculates the funding adder revenues.

Account 1555 - Sub-account Funding Adder Revenues

Approved Deferral and Variance Accounts	CMP	Date	Year	Quarter	Opening Balance (Principal)	Funding Adder Revenues	Interest Rate	Interest	Closing Balance	Annual amounts	Board Approved Smart Meter Funding Adder
		Jun-11	2011	Q2	\$ 659,903.38	\$ 28,177.77	1.47%	\$ 808.38	\$ 688,889.53	\$ 688,889.53	\$ 1.00
		Jul-11	2011	Q3	\$ 688,081.15	\$ 27,449.28	1.47%	\$ 842.90	\$ 716,373.33	\$ 716,373.33	\$ 1.00
		Aug-11	2011	Q3	\$ 715,530.43	\$ 24,059.30	1.47%	\$ 876.52	\$ 740,466.75	\$ 740,466.75	\$ 1.00
		Sep-11	2011	Q3	\$ 739,590.23	\$ 28,848.34	1.47%	\$ 906.00	\$ 769,344.57	\$ 769,344.57	\$ 1.00
		Oct-11	2011	Q4	\$ 768,438.57	\$ 26,902.51	1.47%	\$ 941.34	\$ 796,282.42	\$ 796,282.42	\$ 1.00
		Nov-11	2011	Q4	\$ 795,341.08	\$ 24,095.82	1.47%	\$ 974.29	\$ 820,411.19	\$ 820,411.19	\$ 1.00
		Dec-11	2011	Q4	\$ 819,436.90	\$ 24,065.84	1.47%	\$ 1,003.81	\$ 844,506.55	\$ 844,506.55	\$ 1.00
		Jan-12	2012	Q1	\$ 843,502.74	\$ 31,290.20	1.47%	\$ 1,033.29	\$ 875,826.23	\$ 875,826.23	\$ 1.00
		Feb-12	2012	Q1	\$ 874,792.94	\$ 21,821.65	1.47%	\$ 1,071.62	\$ 897,686.21	\$ 897,686.21	\$ 1.00
		Mar-12	2012	Q1	\$ 896,614.59	\$ 30,657.35	1.47%	\$ 1,098.35	\$ 928,370.59	\$ 928,370.59	\$ 1.00
		Apr-12	2012	Q2	\$ 927,272.24	\$ 27,620.75	1.47%	\$ 1,135.91	\$ 956,028.90	\$ 956,028.90	\$ 1.00
		May-12	2012	Q2	\$ 954,892.99	\$ 24,059.10	1.47%	\$ 1,169.74	\$ 980,121.83	\$ 980,121.83	\$ 1.00
		Jun-12	2012	Q2	\$ 978,952.09	\$ 4,228.79	1.47%	\$ 1,199.22	\$ 984,380.10	\$ 984,380.10	\$ 1.00
		Jul-12	2012	Q3	\$ 983,180.88		1.47%	\$ 1,204.40	\$ 984,385.28	\$ 984,385.28	
		Aug-12	2012	Q3	\$ 983,180.88		1.47%	\$ 1,204.40	\$ 984,385.28	\$ 984,385.28	
		Sep-12	2012	Q3	\$ 983,180.88		1.47%	\$ 1,204.40	\$ 984,385.28	\$ 984,385.28	
		Oct-12	2012	Q4	\$ 983,180.88		1.47%	\$ 1,204.40	\$ 984,385.28	\$ 984,385.28	
		Nov-12	2012	Q4	\$ 983,180.88		1.47%	\$ 1,204.40	\$ 984,385.28	\$ 984,385.28	
		Dec-12	2012	Q4	\$ 983,180.88		1.47%	\$ 1,204.40	\$ 984,385.28	\$ 984,385.28	
		Jan-13	2013	Q1	\$ 983,180.88		0.00%	\$ -	\$ 983,180.88	\$ 983,180.88	
		Feb-13	2013	Q1	\$ 983,180.88		0.00%	\$ -	\$ 983,180.88	\$ 983,180.88	
		Mar-13	2013	Q1	\$ 983,180.88		0.00%	\$ -	\$ 983,180.88	\$ 983,180.88	
		Apr-13	2013	Q2	\$ 983,180.88		0.00%	\$ -	\$ 983,180.88	\$ 983,180.88	
		May-13	2013	Q2	\$ 983,180.88		0.00%	\$ -	\$ 983,180.88	\$ 983,180.88	
		Jun-13	2013	Q2	\$ 983,180.88		0.00%	\$ -	\$ 983,180.88	\$ 983,180.88	
		Jul-13	2013	Q3	\$ 983,180.88		0.00%	\$ -	\$ 983,180.88	\$ 983,180.88	
		Aug-13	2013	Q3	\$ 983,180.88		0.00%	\$ -	\$ 983,180.88	\$ 983,180.88	
		Sep-13	2013	Q3	\$ 983,180.88		0.00%	\$ -	\$ 983,180.88	\$ 983,180.88	
		Oct-13	2013	Q4	\$ 983,180.88		0.00%	\$ -	\$ 983,180.88	\$ 983,180.88	
		Nov-13	2013	Q4	\$ 983,180.88		0.00%	\$ -	\$ 983,180.88	\$ 983,180.88	
		Dec-13	2013	Q4	\$ 983,180.88		0.00%	\$ -	\$ 983,180.88	\$ 983,180.88	
Total Funding Adder Revenues Collected						\$ 983,180.88			\$ 41,790.77	\$ 1,024,971.65	\$ 1,024,971.65

Smart Meter Model for Electricity Distributors (2013 Filers)



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)	OM&A Expenses	Amortization / Depreciation Expense	Closing Balance (Principal)	(Annual) Interest Rate	Interest (on opening balance)	Cumulative Interest
2006 Q1	0.00%	0.00%	Jan-06	2006	Q1	\$ -	-	-	-	0.00%	-	-
2006 Q2	4.14%	4.68%	Feb-06	2006	Q1	-	-	-	-	0.00%	-	-
2006 Q3	4.59%	5.05%	Mar-06	2006	Q1	-	-	-	-	0.00%	-	-
2006 Q4	4.59%	4.72%	Apr-06	2006	Q2	-	-	-	-	4.14%	-	-
2007 Q1	4.59%	4.72%	May-06	2006	Q2	-	-	-	-	4.14%	-	-
2007 Q2	4.59%	4.72%	Jun-06	2006	Q2	-	-	-	-	4.14%	-	-
2007 Q3	4.59%	5.18%	Jul-06	2006	Q3	-	-	-	-	4.59%	-	-
2007 Q4	5.14%	5.18%	Aug-06	2006	Q3	-	-	-	-	4.59%	-	-
2008 Q1	5.14%	5.18%	Sep-06	2006	Q3	-	-	-	-	4.59%	-	-
2008 Q2	4.08%	5.18%	Oct-06	2006	Q4	-	-	-	-	4.59%	-	-
2008 Q3	3.35%	5.43%	Nov-06	2006	Q4	-	-	-	-	4.59%	-	-
2008 Q4	3.35%	5.43%	Dec-06	2006	Q4	-	-	-	-	4.59%	-	-
2009 Q1	2.45%	6.61%	Jan-07	2007	Q1	-	-	-	-	4.59%	-	-
2009 Q2	1.00%	6.61%	Feb-07	2007	Q1	-	-	-	-	4.59%	-	-
2009 Q3	0.55%	5.67%	Mar-07	2007	Q1	-	-	-	-	4.59%	-	-
2009 Q4	0.55%	4.66%	Apr-07	2007	Q2	-	-	-	-	4.59%	-	-
2010 Q1	0.55%	4.34%	May-07	2007	Q2	-	-	-	-	4.59%	-	-
2010 Q2	0.55%	4.34%	Jun-07	2007	Q2	-	-	-	-	4.59%	-	-
2010 Q3	0.89%	4.66%	Jul-07	2007	Q3	-	-	-	-	4.59%	-	-
2010 Q4	1.20%	4.01%	Aug-07	2007	Q3	-	-	-	-	4.59%	-	-
2011 Q1	1.47%	4.29%	Sep-07	2007	Q3	-	-	-	-	4.59%	-	-
2011 Q2	1.47%	4.29%	Oct-07	2007	Q4	-	-	-	-	5.14%	-	-
2011 Q3	1.47%	4.29%	Nov-07	2007	Q4	-	-	-	-	5.14%	-	-
2011 Q4	1.47%	3.92%	Dec-07	2007	Q4	-	-	-	-	5.14%	-	-
2012 Q1	1.47%	3.92%	Jan-08	2008	Q1	-	-	-	-	5.14%	-	-
2012 Q2	1.47%	3.51%	Feb-08	2008	Q1	-	-	-	-	5.14%	-	-
2012 Q3	1.47%	3.51%	Mar-08	2008	Q1	-	-	-	-	5.14%	-	-
2012 Q4	0.00%	0.00%	Apr-08	2008	Q2	-	-	-	-	4.08%	-	-
2013 Q1	0.00%	0.00%	May-08	2008	Q2	-	-	-	-	4.08%	-	-
2013 Q2	0.00%	0.00%	Jun-08	2008	Q2	-	-	-	-	4.08%	-	-
2013 Q3	0.00%	0.00%	Jul-08	2008	Q3	-	-	-	-	3.35%	-	-
2013 Q4	0.00%	0.00%	Aug-08	2008	Q3	-	-	-	-	3.35%	-	-
			Sep-08	2008	Q3	-	-	-	-	3.35%	-	-
			Oct-08	2008	Q4	-	-	-	-	3.35%	-	-
			Nov-08	2008	Q4	-	-	-	-	3.35%	-	-
			Dec-08	2008	Q4	-	-	-	-	3.35%	-	-
			Jan-09	2009	Q1	-	-	-	-	2.45%	-	-
			Feb-09	2009	Q1	-	-	-	-	2.45%	-	-

Smart Meter Model for Electricity Distributors (2013 Fillers)



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 Annual Prescribed Interest Rate for Deferral and Variance Accounts (from Sheets 8A and 8B)	Simple Interest on OM&A and Amortization Expenses
2006	\$ -	\$ -	\$ -	\$ -	\$ -
2007	\$ -	\$ -	\$ -	\$ -	\$ -
2008	\$ -	\$ -	\$ -	\$ -	\$ -
2009	\$ 85,832.00	\$ 50,047.78	\$ 50,047.78	\$ 25,023.89	\$ 284.65
2010	\$ 55,293.00	\$ 203,594.25	\$ 339,474.03	\$ 194,760.91	\$ 1,553.22
2011	\$ 94,963.00	\$ 319,936.16	\$ 714,613.19	\$ 527,043.61	\$ 7,747.54
2012	\$ 273,522.00	\$ 343,239.56	\$ 1,152,845.75	\$ 933,729.47	\$ 13,725.82
2013	\$ 370,799.73	\$ 1,797,167.47	\$ 1,475,006.61	\$ 0.00%	\$ -
Cumulative Interest to 2011				\$ 9,385.41	
Cumulative Interest to 2012				\$ 23,311.23	
Cumulative Interest to 2013				\$ 23,311.23	

Smart Meter Model for Electricity Distributors (2013 Filers)



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 ICM 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 those costs 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 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 SMRR is calculated based on the incremental revenue requirement associated with the recovery of capital related costs to December 31, 2012 and associated O&I.A.

	2006	2007	2008	2009	2010	2011	2012	2013	Total
Deferred and forecasted Smart Meter Incremental Revenue Requirement (from Sheet 5)	\$ -	\$ -	\$ -	\$ 73,255.37	\$ 405,663.74	\$ 573,357.55	\$ 456,742.67	\$ 701,665.05	\$ 1,569,009.32
Interest on Deferred and forecasted O&I.A. and Amortization Expense (Sheet 8A/B)	\$ -	\$ -	\$ -	\$ -	\$ 103,04	\$ 3,429.79	\$ 9,603.27	\$ -	\$ 13,136.09
Sheet 8A (Interest calculated on monthly balances)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 103,04	\$ 3,429.79	\$ 9,603.27	\$ -
Sheet 8B (Interest calculated on average annual balances)	\$ 53,571.98	\$ 83,421.39	\$ 84,240.91	\$ 83,502.62	\$ 218,760.96	\$ 319,905.28	\$ 139,678.14	\$ -	\$ 983,180.88
SMFA Revenues (from Sheet 8)	\$ 722.50	\$ 4,424.51	\$ 6,848.27	\$ 2,798.43	\$ 3,169.98	\$ 9,892.55	\$ 13,934.53	\$ -	\$ 41,790.77
SMFA Interest (from Sheet 8)	\$ 54,394.08	\$ 87,845.90	\$ 91,089.18	\$ 13,045.66	\$ 183,825.83	\$ 246,989.51	\$ 312,733.26	\$ 701,665.05	\$ 497,173.76
Net Deferred Revenue Requirement									263,855
Number of Metered Customers (average for 2013 test year)									
- Number of metered customers for which smart meter were deployed as part of program). Residential and GS < 50 kW customer classes and any other metered classes involved (e.g. GS 50 to 4996 kW for which interval meters were upgraded to utilize AMI and O&I assets)									

↑ Number of metered customers for which smart meter were deployed as part of program). Residential and GS < 50 kW customer classes and any other metered classes involved (e.g. GS 50 to 4996 kW for which interval meters were upgraded to utilize AMI and O&I assets)

Calculation of Smart Meter Disposition Rider (per metered customer per month)		
Years for collection or refunding	\$ 1,522,145.42	2
Deferred Incremental Revenue Requirement from 2006 to December 31, 2012	\$ 1,522,145.42	
plus interest on O&A and Amortization		
SMFA Revenues collected from 2006 to 2013 test year (inclusive)	\$ 1,024,971.65	
Plus Simple Interest on SMFA Revenues		
Net Deferred Revenue Requirement	\$ 497,173.76	
January 1, 2013 to December 31, 2014	\$ 500,259.60	Match
Check: Forecasted SMDR Revenues	\$ 500,259.60	Match
Calculation of Smart Meter Incremental Revenue Requirement Rate Rider (per metered customer per month)		
Incremental Revenue Requirement for 2013	\$ 701,965.05	
SMIRR	\$ 2.22	
Check: Forecasted SMIRR Revenues	\$ 702,996.40	

Smart Meter Model for
Electricity Distributors
(2013 Filers)

This worksheet calculates the class-specific SMDRs according to accepted practice. A distributor may choose to use its own methodology, but should provide analogous support for its allocation and derivation of class-specific SMDRs and SMIRRs.



Smart Meter Model for Electricity Distributors (2013 Filers)

This worksheet calculates the class-specific SMIRRs according to accepted practice. A distributor may choose to use its own methodology, but should provide analogous support for its allocation and derivation of class-specific SMDRs and SMIRRs.

Class-specific SMDRs

Revenue Requirement for 2013

	2013 Explanation / Allocator	Residential	GS < 50 kW	GS 50 to 4999 kW	Other (please specify)	Total
	Check Row if SMDR/SMIRR apply to Class	X	X	%	%	2
\$ 131,681.99	Weighted Meter Cost - Capital Allocated per class	\$ 88.10% 116,011.84	\$ 11.90% 15,670.16	\$ 0.00%	\$ 0.00%	100%
\$ 370,799.73	Weighted Meter Cost - Capital Allocated per class	\$ 88.10% 326,674.56	\$ 11.90% 44,125.17	\$ 0.00%	\$ 0.00%	100%
\$ 273,522.00	Number of Smart Meters installed by Class	# 23,244	# 3,141	#	#	-
\$ 273,522.00	Allocated per class	\$ 240,960.60	\$ 32,561.40	\$	\$	-
\$ 778,093.72	Revenue Requirement before PILs	\$ 632,646.99	\$ 92,366.73	\$	\$	-
\$ 74,338.67		\$ 88.10% 65,491.19	\$ 11.90% 8,847.48	\$ 0.00%	\$ 0.00%	100%
\$ 701,665.05	Percentage of costs allocated to each class	\$ 618,155.80	\$ 83,509.25	\$	\$	-
\$ -	Percentage of costs for classes with SMDR/SMIRR	88.10% 88.10%	11.90% 11.90%	0.00%	0.00%	-
Average number of metered customers by class (2013)		23,244	3,141	-	-	-
The SMIRR is recovered as an annualized rate until the effective date of the distributor's next rebased rates resulting from a cost of service application	1 year	1	1	1	1	1
Smart Meter Incremental Revenue Requirement Rate Rider (\$/month per metered customer in the customer class)		\$ 2.22	\$ 2.22	\$	\$	-
Estimated SMIRR Revenues		\$ 619,220.16	\$ 83,676.24	\$	\$	-
		\$ 1,231.35				

Appendix C - Bill Impact Calculations

(a) Residential – Bill Impact

Bill Impacts									
Residential									
Consumption	800	kWh							
RPP Tier One	600	kWh	TOU - Off Peak	64%					
Load Factor			TOU - Mid Peak	18%					
Loss Factor	1.0344		TOU - On Peak	18%					
CURRENT ESTIMATED BILL					PROPOSED ESTIMATED BILL				
	Volume	Current Rate (\$)	Current Charge (\$)		Volume	Proposed Rate (\$)	Proposed Charge (\$)	Change (\$)	Change (%)
Energy First Tier (kWh)	600.00	0.0750	45.00		600.00	0.0750	45.00	0.00	0.00%
Energy Second Tier (kWh)	227.52	0.0880	20.02		227.52	0.0880	20.02	0.00	0.00%
TOU - Off Peak	529.61	0.0650	34.42		529.61	0.0650	34.42	0.00	0.00%
TOU - Mid Peak	148.95	0.1000	14.90		148.95	0.1000	14.90	0.00	0.00%
TOU - On Peak	148.95	0.1170	17.43		148.95	0.1170	17.43	0.00	0.00%
Service Charge	1	12.17	12.17		1	12.17	12.17	0.00	0.00%
Service Charge SMDR Rate Rider(s)	1	0.00	0.00		1	0.80	0.80	0.80	100.00%
Service Charge SMIRR Rate Rider(s)	1	0.00	0.00		1	2.22	2.22	2.22	100.00%
Distribution Volumetric Rate	800	0.0149	11.92		800	0.0149	11.92	0.00	0.00%
Low Voltage Volumetric Rate	800	0.0007	0.56		800	0.0007	0.56	0.00	0.00%
* Distribution Volumetric Rate Riders	800	0.0004	0.32		800	0.0004	0.32	0.00	0.00%
Total: Distribution		24.97				27.99	3.02	12.09%	24.25%
Retail Transmission Rate - Network Service Rate	827.52	0.0063	5.21		827.52	0.0063	5.21	0.00	0.00%
Retail Transmission Rate - Line and Transformation Connection Service Rate	827.52	0.0051	4.22		827.52	0.0051	4.22	0.00	0.00%
Total: Retail Transmission		9.43				9.43	0.00	0.00%	8.17%
Sub-Total: Delivery (Distribution and Retail Transmission)		34.40				37.42	3.02	8.78%	32.42%
Wholesale Market Service Rate	827.52	0.0052	4.30		827.52	0.0052	4.30	0.00	0.00%
Rural Rate Protection Charge	827.52	0.0011	0.91		827.52	0.0011	0.91	0.00	0.00%
Standard Supply Service – Administration Charge (if applicable)	1	0.25	0.25		1	0.25	0.25	0.00	0.00%
Sub-Total: Regulatory		5.46				5.46	0.00	0.00%	4.73%
Debt Retirement Charge (DRC)	800.00	0.00700	5.60		800.00	0.0070	5.60	0.00	0.00%
									4.85%
									4.78%
									0.00%
Total Bill on RPP (before taxes)		110.49				113.51	3.02	2.73%	98.33%
HST		13%	14.36			13%	14.76	0.39	2.73%
Total Bill (including HST)		124.85				128.27	3.41	2.73%	111.11%
Ontario Clean Energy Benefit (OCEB)		(10%)	(12.49)			(10%)	(12.83)	(0.34)	2.73%
									-11.11%
Total Bill on RPP (including OCEB)		112.37				115.44	3.07	2.73%	100.00%
Total Bill on TOU (before taxes)		112.21				115.23	3.02	2.69%	98.33%
HST		13%	14.59			13%	14.98	0.39	2.69%
Total Bill (including HST)		126.80				130.22	3.41	2.69%	111.11%
Ontario Clean Energy Benefit (OCEB)		(10%)	(12.68)			(10%)	(13.02)	(0.34)	2.69%
									-11.11%
Total Bill on TOU (including OCEB)		114.12				117.19	3.07	2.69%	100.00%
* Distribution Volumetric Rate Riders									
Rate Rider for Deferral/Variance Account Disposition (2012) – Effective until April 30, 2013			\$/kWh				-0.0016		
Rate Rider for Deferral/Variance Account Disposition (2011) – Effective until April 30, 2013			\$/kWh				0.0011		
Rate Rider for Lost Revenue Adjustment Mechanism (LRAM) Recovery (2012) - effective			\$/kWh				0.0003		
Rate Rider for Tax Change (2012) - effective until April 30, 2013			\$/kWh				-0.0001		
Rate Rider for Incremental Capital (2012) - effective until April 30, 2015			\$/kWh				0.0007		
Total Distribution Rate Riders			\$/kWh				0.0004		

Appendix C - Bill Impact Calculations

(b) General Service less than 50kW Bill Impact

Bill Impacts									
General Service less than 50kW									
Consumption	2,000	kWh							
RPP Tier One	750	kWh	TOU - Off Peak	64%					
Load Factor			TOU - Mid Peak	18%					
Loss Factor	1.0344		TOU - On Peak	18%					
CURRENT ESTIMATED BILL					PROPOSED ESTIMATED BILL				
	Volume	Current Rate (\$)	Current Charge (\$)		Volume	Proposed Rate (\$)	Proposed Charge (\$)	Change (\$)	Change (%)
Energy First Tier (kWh)	750.00	0.0750	56.25		750.00	0.0750	56.25	0.00	0.00%
Energy Second Tier (kWh)	1,318.80	0.0880	116.05		1,318.80	0.0880	116.05	0.00	0.00%
TOU - Off Peak	1,324.03	0.0650	86.06		1,324.03	0.0650	86.06	0.00	0.00%
TOU - Mid Peak	372.38	0.1000	37.24		372.38	0.1000	37.24	0.00	0.00%
TOU - On Peak	372.38	0.1170	43.57		372.38	0.1170	43.57	0.00	0.00%
Service Charge	1	25.05	25.05		1	25.05	25.05	0.00	0.00%
Service Charge SMDR Rate Rider(s)	1	0.00	0.00		1	0.65	0.65	0.65	100.00%
Service Charge SMIRR Rate Rider(s)	1	0.00	0.00		1	2.22	2.22	2.22	100.00%
Distribution Volumetric Rate	2000	0.0104	20.80		2,000	0.0104	20.80	0.00	0.00%
Low Voltage Volumetric Rate	2000	0.0006	1.20		2,000	0.0006	1.20	0.00	0.00%
* Distribution Volumetric Rate Riders	2000	0.0001	0.20		2,000	0.0001	0.20	0.00	0.00%
Total: Distribution		47.25					50.12	2.87	6.07%
Retail Transmission Rate - Network Service Rate	2,068.80	0.0057	11.79		2,068.80	0.0057	11.79	0.00	0.00%
Retail Transmission Rate - Line and Transformation Connection Service Rate	2,068.80	0.0047	9.72		2,068.80	0.0047	9.72	0.00	0.00%
Total: Retail Transmission		21.52					21.52	0.00	0.00%
Sub-Total: Delivery (Distribution and Retail Transmission)		68.77					71.64	2.87	4.17%
Wholesale Market Service Rate	2,068.80	0.0052	10.76		2,068.80	0.0052	10.76	0.00	0.00%
Rural Rate Protection Charge	2,068.80	0.0011	2.28		2,068.80	0.0011	2.28	0.00	0.00%
Standard Supply Service – Administration Charge (if applicable)	1	0.25	0.25		1	0.25	0.25	0.00	0.00%
Sub-Total: Regulatory		13.28					13.28	0.00	0.00%
Debt Retirement Charge (DRC)	2,000.00	0.00700	14.00		2,000.00	0.0070	14.00	0.00	0.00%
Total Bill on RPP (before taxes)		268.35					271.22	2.87	1.07%
HST		13%	34.89			13%	35.26	0.37	1.07%
Total Bill (including HST)		303.24					306.48	3.24	1.07%
Ontario Clean Energy Benefit (OCEB)		(10%)	(30.32)			(10%)	(30.65)	(0.32)	1.07%
Total Bill on RPP (including OCEB)		272.92					275.83	2.92	1.07%
Total Bill on TOU (before taxes)		262.92					265.79	2.87	1.09%
HST		13%	34.18			13%	34.55	0.37	1.09%
Total Bill (including HST)		297.10					300.34	3.24	1.09%
Ontario Clean Energy Benefit (OCEB)		(10%)	(29.71)			(10%)	(30.03)	(0.32)	1.09%
Total Bill on TOU (including OCEB)		267.39					270.31	2.92	1.09%
* Distribution Volumetric Rate Riders									
Rate Rider for Deferral/Variance Account Disposition (2012) – Effective until April 30, 2013		\$/kWh		-0.0010					
Rate Rider for Deferral/Variance Account Disposition (2011) – Effective until April 30, 2013		\$/kWh		0.0004					
Rate Rider for Lost Revenue Adjustment Mechanism (LRAM) Recovery (2012) - effective		\$/kWh		0.0003					
Rate Rider for Tax Change (2012) - effective until April 30, 2013		\$/kWh		-0.0001					
Rate Rider for Incremental Capital (2012) - effective until April 30, 2015		\$/kWh		0.0005					
Total Distribution Rate Riders		\$/kWh		0.0001					