

**1. Ref: Status of Smart Meter and Time of Use/MDMR Implementation, Manager's Summary, Page 21**

Woodstock Hydro indicated that it is presently finalizing the transition from 7.2+ version of the MDM/R software, which facilitates both the printing of the register read on customer bills and access to "*calculative needs equality adjustment functionality*". Woodstock Hydro expected this activity to be complete by October 2012. Woodstock Hydro also noted that Woodstock Hydro will be in a "business-as-usual" operations state with respect to the MDM/R and TOU billing.

- a) Please report on the status of this transition.
- b) What does Woodstock Hydro mean by stating that it will be in a "business-as-usual" operations state with respect to the MDM/R and TOU billing.
- c) Please also explain what "*calculative needs equality adjustment functionality*" means, and its role in Woodstock Hydro's provision of distribution services to its customers.

**Response:**

- a) Woodstock Hydro (WHSI) successfully completed the transition to Version 7.2+ of the MDM/R's EnergyIP software as planned and without issue on October 4, 2012. EnergyIP Release 7.2 supports compliance with Measurement Canada's requirements to report the billing period start and end register readings bounding the interval data used for the billing period on the bill. Billing-quantity responses are now delivered to us in XML format and brought into our billing system for processing. The file includes beginning and end register reads as well as ON, OFF and MID peak consumption totals used for billing.
- b) The WHSI TOU project team spent 2011 preparing for the implementation of TOU billing. Customers were transitioned to TOU billing on a cycle-by-cycle basis in Fall 2011. Just as these initiatives and supporting development of continuing business processes were coming to an end, the project team moved right back into "project mode" in early 2012, attending training sessions as necessary and performing various required tests in preparation for the MDM/R upgrade to 7.2. This upgrade took place in

Spring 2012, and the transition to the XML billing format was complete in October 2012. It is only now that the various departments are settling into a “business as usual”, normalized daily, weekly, monthly and eventually annual business process with respect to MDM/R integration and TOU billing. All of the required accounts are set up, our network is stable, our staff is trained and performing well, and WHSI is not aware of any major, planned updates of the magnitude experienced in 2012 on the near horizon.

- c) The Calculative **Reads** Equality Adjustment functionality is a feature of the MDM/R’s EnergyIP software and made available in order to ensure full compliance with Measurement Canada’s requirements. In circumstances where the sum of the interval values (ON, OFF and MID peak sums) do not equal the difference between the billing period beginning and end register reads, the interval values are adjusted by the MDM/R calculative reads equality adjustment functionality in order to provide equality with consumption as reported by the register reads. These slightly adjusted, calculative read billing determinants together with register readings must be used for consumer invoice presentment in order to be compliant with Measurement Canada’s requirements for equality.

In WHSI’s case, the register reads provided by the Elster EnergyAxis system are whole numbers (zero decimal places of data accuracy), while interval data is collected to two decimal places of accuracy. As a result, the calculative reads equality adjustment is applied for all of our accounts on a monthly basis, in a manner that rounds up/down the total consumption to match the whole digit difference between the two register reads.

This calculation has no direct bearing on the provision of distribution services to our customers. It is a feature provided by the MDM/R software to ensure Measurement Canada compliance during billing.

## 2. Ref: Manager's Summary, page 27 – Capital Costs

On page 27, Woodstock Hydro includes (\$4,033) as the net proceeds from the disposition of conventional meters replaced by smart meters installed from 2009 to 2011. Normally, the net proceeds from the disposition of conventional meters replaced by smart meters is taken into account in the determination of the residual net book value of stranded meters, to be addressed in the utility's next cost of service application.

Please explain the rationale for Woodstock Hydro's approach of including these proceeds as an offset for the determination of the SMDR.

### Response:

Given the immaterial amount, WHSI had included the net credit of (\$4,033) in the calculation of the SMDR so that customers would benefit from this credit sooner through the SMDR, rather than waiting until the next cost of service application.

To ensure consistency, however, WHSI has removed the \$4,033 credit from the Smart Meter Model (Tab 2.Smart\_Meter\_Costs).

	Original	Updated	Change
2010	\$ 124,031	\$ 127,744	\$ 3,713
2011	\$ 12,639	\$ 12,960	\$ 321
Category 1.1.2	\$ 136,671	\$ 140,704	\$ 4,033

Including the total proceeds from disposition for \$4,033, the NBV of Stranded Meters to December 31, 2014 as shown in Table 24 of the Application, is now \$285,550.

Net Book Value of Stranded Meters			
	Conventional	Prepaid	TOTAL
NBV Dec 31 2014	\$2,312	\$287,251	\$289,563
Less Proceeds			(\$4,033)
NBV Stranded Meters Dec 31 2014			\$285,530

**3. Ref: Smart Meter Model, sheet 2 – OM&A Costs**

Woodstock Hydro has not included any capital and OM&A costs for 2013 in the Smart Meter Model. With these exclusions, the SMIRR, intended as a proxy monthly rate to recover the annualized revenue requirement (i.e. capital-related and operating costs) will be understated.

- a) Please provide Woodstock Hydro's estimates of these costs for 2013.
- b) Please include the estimates of depreciation expense and OM&A for each month in 2013 on sheet 8A of the Smart Meter Model. At a minimum, expenses need to be entered for the first four months (January to April) of 2013 on sheet 8A.
- c) In the alternative, please provide Woodstock Hydro's basis for its proposal, including how Woodstock Hydro will be held whole with respect to the operation of smart meters and associated communications and computer systems until it next rebases its distribution rates through a cost of service application.

**Response:**

- a) WHSI had completed its smart meter deployment by December 31, 2011 and no capital costs have been included for 2013.

WHSI's estimated OM&A costs for 2013 are \$34,628;

- 2.3 Advanced Metering Control Computer :\$10,259 for continuation of Elster Managed Service fees into 2013
- 2.5.6 Other AMI OM&A Related to Minimum Functionality: \$12,000 for continuation of maintenance and support related to the Metersense base program into 2013.
- 2.6 OM&A Beyond Minimum Functionality: \$12,369 for continuation of maintenance and monthly charges related to web presentment programs into 2013.

The estimated OM&A for 2013 is included in the summary below. The total adjusted OMA costs are \$328,222

Smart Meter OM&A	2010 Actual	2011 Actual	2012 Forecast	2013 Forecast	Total
2.1 Advanced Metering Communication Device (AMCD)	\$ 2,310	\$ 1,302			\$ 3,612
2.2 Advanced Metering Regional Collector (AMRC)	\$ 5,678	\$ 5,332			\$ 11,009
2.3 Advanced Metering Control Computer (AMCC)	\$ 12,060	\$ 10,785	\$ 10,259	\$ 10,259	\$ 43,364
2.4 Wide Area Network (WAN)	\$ 4,232	\$ 1,284			\$ 5,516
2.5 Other AMI OM&A Related to Minimum Functionality	\$ 25,504	\$ 34,366	\$ 15,090	\$ 12,000	\$ 86,960
2.6 OM&A Beyond Minimum Functionality	\$ 66,662	\$ 37,534	\$ 61,195	\$ 12,369	\$ 177,761
<b>Total</b>	<b>\$ 116,447</b>	<b>\$ 90,602</b>	<b>\$ 86,544</b>	<b>\$ 34,628</b>	<b>\$ 328,222</b>

Including the estimate for 2013 expense, the total unaudited costs included in this application are now \$121,173.

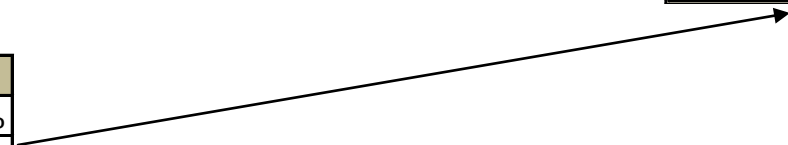
Smart Meter Cost Claim Summary	
Capital Costs	\$ 904,335
OM&A Costs	\$ 328,222
<b>Total</b>	<b>\$ 1,232,557</b>

Audited (2010 and 2011)	<b>\$ 1,111,384</b>	90.2%
Un-Audited (2012 and 2013)	<b>\$ 121,173</b>	9.8%
<b>Total</b>	<b>\$ 1,232,557</b>	100.0%

Summary of Table 15 Revisions and updated allocation of OM&A to Residential and GS<50 rate classes.

Smart Meter OM&A 2010 - 2013														
Category	Shared Costs		% Allocation			Residential			GS< 50			GRAND TOTAL	Res	GS<50
	2010-2012	2013	Total	Res	GS<50	2010-2012	2013	Total	2010-2012	2013	Total		%	%
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
						(A*D) (Shared Costs)	(B*D) (Shared Costs)	(F+G) (Shared Costs)	(A*E) (Shared Costs)	(B*E) (Shared Costs)	(I+J) (Shared Costs)	(H+K)	(H/L)	(K/L)
2.1.1 Direct Costs						\$ 2,111		\$ 2,111	\$ 1,502	\$ -	\$ 1,502	\$ 3,612		
2.5.6 Direct Costs						\$ 904		\$ 904	\$ 310	\$ -	\$ 310	\$ 1,214		
						\$ -		\$ -	\$ -		\$ -			
2.2.1 Shared Costs	\$ 11,009		\$ 11,009	92.05%	7.95%	\$ 10,134	\$ -	\$ 10,134	\$ 875	\$ -	\$ 875	\$ 11,009		
2.3.2 Shared Costs	\$ 33,104	\$ 10,259	\$ 43,364	92.05%	7.95%	\$ 30,473	\$ 9,444	\$ 39,916	\$ 2,632	\$ 816	\$ 3,448	\$ 43,364		
2.4.1 Shared Costs	\$ 5,516		\$ 5,516	92.05%	7.95%	\$ 5,077	\$ -	\$ 5,077	\$ 439	\$ -	\$ 439	\$ 5,516		
2.5.2 Shared Costs	\$ 14,481		\$ 14,481	92.05%	7.95%	\$ 13,330	\$ -	\$ 13,330	\$ 1,151	\$ -	\$ 1,151	\$ 14,481		
2.5.5 Shared Costs	\$ 500		\$ 500	92.05%	7.95%	\$ 460	\$ -	\$ 460	\$ 40	\$ -	\$ 40	\$ 500		
2.5.6 Shared Costs	\$ 58,765	\$ 12,000	\$ 70,765	92.05%	7.95%	\$ 54,093	\$ 11,046	\$ 65,139	\$ 4,672	\$ 954	\$ 5,626	\$ 70,765		
2.6.3 Shared Costs	\$ 165,392	\$ 12,369	\$ 177,761	92.05%	7.95%	\$ 152,242	\$ 11,386	\$ 163,628	\$ 13,149	\$ 983	\$ 14,133	\$ 177,761		
Grand Total	\$ 288,767	\$ 34,628	\$ 323,395			\$ 268,824	\$ 31,875	\$ 300,699	\$ 24,769	\$ 2,753	\$ 27,522	\$ 328,222	91.61%	8.39%
												Original	91.56%	8.44%

	Residential %	GS<50 %	Total
Original % Table 15	91.56%	8.44%	100.00%
Revised % Table 15	91.61%	8.39%	100.00%
Net Change	0.05%	-0.05%	



As noted on page 39 of the Application, WHSI had entered 13,786, or 91.56% of total smart meters for the residential rate class, and 1,270 or 8.44% for the GS<50 kW rate class in cells T33 and V33 on Tab 10A. Cost Alloc SMDR.

Including the estimated 2013 expenses in the smart meter model, the overall percentage allocation of OM&A costs originally included in Table 15 have changed to from 91.56% residential and 8.44% GS<50, to 91.61% residential, and 8.39% for GS<50. These values have been updated in the Smart Meter Model.

Table 19 has been updated to include 2013 estimated expense

Updated to include 2013 Expense	% of OM&A per Rate Class per Table 14	Input Values for Tab 10A	% of Actual Meters per Rate Class	Actual Meters per Rate Class
Residential	<b>91.61%</b>	<b>13,794</b>	92.05%	13,859
GS<50	<b>8.39%</b>	<b>1,262</b>	7.95%	1,197
	<b>100.00%</b>	<b>15,056</b>	100.00%	15,056

b) Estimates for 2013 depreciation expense and OM&A for each month have been included on sheet 8A of the Smart Meter Model. The total estimated 2013 depreciation and OM&A expense is \$78,635 and \$34,628, respectively.

c) n/a.

**4. Ref: OM&A Costs 2010-2012, Manager's Summary, Page 31 – 37**

Woodstock Hydro has indicated \$131,483 of Professional Fees related to TOU/MDMR implementation.

- a) Please provide a further breakdown of this cost by year and by service.
- b) Please provide further explanation of the products or services received for which these costs have been incurred.

**Response:**

- a) Professional services were provided for MDM/R Training and Integration, and TOU/MDM/R Implementation. More specifically, these professional services related to formalized/centralized training opportunities, and on-site assistance with business process design, strategic planning, general project management, vendor liaison and issue escalation support, MDM/R system testing, and system optimization support.

Year	MDMR Training	TOU/MDMR Implementation/Integration
2010	\$ 7,327	\$ 58,585
2011	\$ 672	\$ 33,801
2012	\$ -	\$ 39,097
<b>Total</b>	<b>\$ 7,999</b>	<b>\$ 131,483</b>

- b) In 2010, WHSI participated in 3 training MDM/R training sessions in conjunction with its CIS vendor and Utilassist. The incremental fees and expenses for these sessions were \$7,327.

In 2010, Professional services for TOU/MDMR Implementation /Integration provided by Utilassist included AMI vendor contract negotiation (common contract for all Elster sites working with UtilAssist), implementation of the operational-data store which is used for long-term meter-data storage and meter-data resubmission to the MDM/R, AMI vendor issue-resolution (optimizing and stabilizing AMI network performance, investigating and troubleshooting AMI data-quality issues, etc.), implementation and updates to the AMI head-end system (AMCC), business-process design, assistance with MDM/R



enrolment, Connectivity Testing and preparations for Unit Testing, SIT and QT. UtilAssist organized and participated in regular project-management conference calls with the AMI vendor and operator of the smart-meter system throughout 2010.

Incremental System Acceptance Testing (SAT) training expense was \$672 in 2011.

In 2011, Professional services for TOU/MDMR Implementation were provided by Utilassist at a cost of \$33,801. The primary areas where support was provided were the 1<sup>st</sup> year of the Elster-consortium security audit, and training, testing and business process design for integration with the MDM/R (Unit Testing, SIT, QT) and the eventual rollout of time-of-use billing in Fall 2011.

WHSI's participated in a consortium-based AMI security audit in 2011 and 2012 with other UtilAssist LDC clients. UtilAssist was instrumental and played a centralized role in the design of the RFP, the procurement of an audit partner, and for the ongoing coordination and project management of the 1<sup>st</sup> and 2<sup>nd</sup> years of the 2-year audit plan. They have taken an active role in managing both the audit partner and Elster in ensuring that action items such as remediation, documentation and training are occurring in a timely fashion. UtilAssist continues to work collaboratively with its clients and with AMI vendors (Elster in our case) to ensure that we are receiving the appropriate levels of communication and support to operate our AMI system effectively.

In 2012, Professional services for \$39,097 for TOU/MDMR Implementation provided by Utilassist include the 2<sup>nd</sup> year of the Elster-consortium security audit, upgrading the EAMS software (AMI head-end system (AMCC)), testing and business process design for Release 7.2 of the MDM/R's Energy IP software. Business process design continued in the wake of these system changes, and AMI network optimization and data-quality investigations continue to be an ongoing focus.

**5. Ref: Smart Meter Model – Sheet 2 – Cost of Capital**

In its 2006 EDR rates application [RP-2005-0020/EB-2005-0436], Woodstock Hydro, was approved a debt rate of 6.76% and a Return on Equity (“ROE”) of 9.00%.

In Woodstock Hydro’s 2011 cost of service application [EB-2011-0145], Woodstock Hydro had a deemed short-term debt rate of 2.46%, an average weighted long-term debt rate of 5.02% and an ROE of 9.58% approved.

Woodstock Hydro has input the following cost of capital parameters in its Smart Meter Model on sheet 3:

Year	2006	2007	2008	2009	2010	2011	2012	2013
Short-term debt						2.46%	2.46%	2.46%
Long-term Debt	6.76%	6.76%	6.31%	4.98%	4.43%	5.02%	5.02%	5.02%
ROE	9.00%	9.00%	9.00%	9.00%	9.85%	9.58%	9.58%	9.58%

The Board’s standard approach is that the cost of capital parameters approved in a cost of service application continues to apply until rates are next rebased through a cost of service application. The parameter inputs for the years 2006, 2007, 2011, 2012 and 2013 are consistent with those approved in the aforementioned cost of service application decisions.

- a) Please explain the cost of capital parameters input by Woodstock Hydro for 2008, 2009 and 2010, as these differ from what was approved in Woodstock Hydro’s 2006 EDR application.
- b) If necessary, please update the Smart Meter Model to reflect the approved cost of capital parameters that would be applicable for these years.

**Response:**

- a) The cost of capital parameters originally input by WHSI for 2008, 2009, and 2010 were the effective rates included WHSI’s 2011 initial cost of service application. (Woodstock 2011\_Revenue\_Requirement\_Model\_20101028 , Tab “Return on Capital” cells Q8, W8, and AC8.)

b) WHSI has updated the long term debt rate for 2008, 2009, and 2010 to 6.76% in the Smart Meter Model

**Cost of Capital Parameters**

Deemed Short-term Debt Rate						2.46%	2.46%	2.46%
Long-term Debt Rate (actual/embedded/deemed) <sup>2</sup>	6.76%	6.76%	6.76%	6.76%	6.76%	5.02%	5.02%	5.02%
Target Return on Equity (ROE)	9.0%	9.00%	9.00%	9.00%	9.85%	9.58%	9.58%	9.58%
Return on Preferred Shares								
<b>WACC</b>	7.88%	7.88%	7.81%	7.73%	8.00%	6.74%	6.74%	6.74%

## 6. Ref: Smart Meter Model

If Woodstock Hydro has made changes as a result of responses to interrogatories to Board staff or other parties, please provide an updated Smart Meter Model Version 3.0, reflecting all such changes and resulting in updated class-specific SMDRs and SMIRRs as calculated on sheets 10A and 10B respectively.

### Response:

WHSI has provided an updated Smart Meter Model Version 3.0 that includes the following changes

#### Tab 2.Smart Meter Costs

- The removal of the \$4,033\* credit from the smart meter installation cost, Category 1.1.2 ( cells O44 and Q44) (- Ref IRR # 2)

	Original	Updated	Change
2010	\$ 124,031	\$ 127,744	\$ 3,713
2011	\$ 12,639	\$ 12,960	\$ 321
Category 1.1.2	\$ 136,671	\$ 140,704	\$ 4,033

- Reclassification of residential smart meter installation costs from category 1.1.1 to category 1.1.2, and of smart meter costs from the residential class to GS<50 class (Ref VECC IRR # 1a)

Category	Rate Class	Original*	Revised	Variance
1.1.1	Residential	\$ 409,043	\$ 268,884	\$ (140,159)
1.1.2	Residential	\$ 64,228	\$ 111,502	\$ 47,274
1.1.1	GS<50	\$ 220,957	\$ 282,310	\$ 61,353
1.1.2	GS<50	\$ 76,476	\$ 108,007	\$ 31,531
Total		\$ 770,703	\$ 770,703	\$ (0)
1.1.1	All	\$ 629,999	\$ 551,194	\$ (78,805)
1.1.2*	All	\$ 140,704	\$ 219,509	\$ 78,805
		\$ 770,703	\$ 770,703	\$ -

\* 1.1.2 Original reflects the removal of the \$4,033 credit

- \$10,259 added for 2013 estimated expense for Category 2.3.2, cell U132
- \$12,000 added for 2013 estimated expense for Category 2.5.6, cell U158
- \$12,369 added for 2013 estimated expense for Category 2.6.3, cell U170  
(Ref: IRR # 3)

Tab 3. Cost of Service Parameters (Ref IRR # 5)

- Cost of capital parameters for 2008, 2009, and 2010 updated to 6.76% , cells K30, M30, O30

Tab 8A/Opex Interest monthly (Ref IRR # 3)

- 2013 estimated monthly OM&A expense added, \$2885.70/month, \$34,628 total, cells K109 to K120
- 2013 estimated monthly depreciation expense added, \$6552.93/month, \$78,635.14 total, cells L109 to L120

Tab 10A. Cost Alloc SMDR (Ref IRR # 3)

- Allocation percentages for capital costs have been updated to 55.66% for (Residential) and 44.34% (GS <50), cells T25 and V25.
- Allocation of number of Residential (13,794) and GS<50 (1,262) customers to accurately prorate the revised costs by rate class

An updated Smart Meter Model Version 3 has been submitted and is provided as Appendix A.

As a result of these changes, the SMDR and the SMIRR are updated as follows:

Proposed Smart Meter Rate Riders						
	Residential			GS < 50		
	Original	Revised	Change	Original	Revised	Change
Smart Meter Disposition Rate Rider (SMDR)	\$ 0.29	\$ 0.12	\$ (0.17)	\$ 6.47	\$ 8.91	\$ 2.44
Smart Meter Incremental Revenue Requirement Rate Rider (SMIRR)	\$ 0.52	\$ 0.64	\$ 0.12	\$ 3.15	\$ 4.24	\$ 1.09
<b>Total</b>	<b>\$ 0.81</b>	<b>\$ 0.76</b>	<b>\$ (0.05)</b>	<b>\$ 9.62</b>	<b>\$ 13.15</b>	<b>\$ 3.53</b>

As a result of these changes, the average cost per meter has also changed as shown in updated Table 10 and Table 11.

Table 10 (Updated)

Average Cost Per Meter - Minimum Functionality					
	EB-2012-0178	EB-2010-0145		TOTAL COSTS BY CLASS	
	2010-2013	2009	TOTAL	Residential	GS<50
Number of Smart Meters Installed	3,764	11,292	15,056	13,859	1,197
Smart Meter Capital Costs	\$ 904,335	\$ 1,442,731	\$ 2,347,067	\$ 1,807,397	\$ 539,669
Less: Capital Costs Exceeding Minimum Functionality	\$ (9,750)	\$ (8,100)	\$ (17,850)	\$ (16,431)	\$ (1,419)
Total Capital Costs (Minimum Functionality)	\$ 894,585	\$ 1,434,631	\$ 2,329,217	\$ 1,790,966	\$ 538,250
<b>Updated Average Capital Cost Per Meter (Min. Functionality)</b>	<b>\$237.67</b>	<b>\$127.05</b>	<b>\$154.70</b>	<b>\$129.23</b>	<b>\$449.67</b>
<b>Original Average Capital Cost Per Meter (Min. Functionality)</b>			<b>\$154.44</b>		
<b>Sector Smart Meter Audit Review Report Cost Per Meter</b>			<b>\$186.76</b>		
Smart Meter OM&A Costs	\$ 328,222	\$ 82,910	\$ 411,132	\$ 350,227	\$ 26,276
Less: OM&A Costs Exceeding Minimum Functionality	\$ (177,761)	\$ -	\$ (177,761)	\$ (152,242)	\$ (13,149)
Total OM&A (Minimum Functionality)	\$ 150,461	\$ 82,910	\$ 233,371	\$ 197,985	\$ 13,127
<b>Updated Average OM&amp;A Per Meter (Min. Functionality)</b>	<b>\$ 39.97</b>	<b>\$ 7.34</b>	<b>\$ 15.50</b>	<b>\$ 14.29</b>	<b>\$ 10.97</b>
<b>Original Average OM&amp;A Per Meter (Min. Functionality)</b>			<b>\$ 14.02</b>		
<b>Sector Smart Meter Audit Review Report Cost Per Meter</b>			<b>\$ 20.61</b>		
Total Cost (Minimum Functionality)	\$ 1,045,046	\$ 1,517,541	\$ 2,562,588	\$ 1,988,951	\$ 551,377
<b>Updated Average Total Cost Per Meter (Min. Functionality)</b>	<b>\$277.64</b>	<b>\$134.39</b>	<b>\$170.20</b>	<b>\$143.51</b>	<b>\$460.63</b>
<b>Original Average Total Cost Per Meter (Min. Functionality)</b>			<b>\$168.46</b>		
<b>Sector Smart Meter Audit Review Report Cost Per Meter</b>			<b>\$207.37</b>		

Table 11 (Updated)

Average Cost Per Meter - All Costs					
	EB-2012-0178	EB-2010-0145		TOTAL COSTS BY CLASS	
	2010-2013	2009	TOTAL	Residential	GS<50
Number of Smart Meters Installed	3,764	11,292	15,056	13,859	1,197
All Smart Meter Capital Costs	\$904,335	\$1,442,731	\$2,347,067	\$1,807,397	\$539,669
<b>Updated Average Capital Cost Per Meter</b>	<b>\$240.26</b>	<b>\$127.77</b>	<b>\$155.89</b>	<b>\$130.41</b>	<b>\$450.85</b>
<b>Original Average Capital Cost Per Meter</b>			<b>\$155.62</b>		
All Smart Meter OM&A Costs	\$328,222	\$82,910	\$411,132	\$350,227	\$ 26,276
<b>Updated Average OM&amp;A Per Meter</b>	<b>\$ 87.20</b>	<b>\$ 7.34</b>	<b>\$ 27.31</b>	<b>\$ 25.27</b>	<b>\$ 21.95</b>
<b>Original Average OM&amp;A Per Meter</b>			<b>\$ 25.01</b>		
Total Costs	\$1,232,557	\$1,525,641	\$2,758,198	\$2,157,624	\$565,945
<b>Updated Average Total Cost Per Meter</b>	<b>\$327.46</b>	<b>\$135.11</b>	<b>\$183.20</b>	<b>\$155.68</b>	<b>\$472.80</b>
<b>Original Average Total Cost Per Meter</b>	<b>\$317.19</b>	<b>\$135.11</b>	<b>\$180.63</b>	<b>\$164.09</b>	<b>\$372.13</b>

APPENDIX A  
REVISED SMART METER MODEL VERSION 3.0  
NOVEMBER 7 2012



## Smart Meter Model for Electricity Distributors (2013 Filers)

Version 3.00

Utility Name	Woodstock Hydro Services Inc.
Assigned EB Number	EB-2012-0178
Name and Title	Patti Eitel, Manager of Accounting and Regulatory Affairs
Phone Number	519-537-7172 ext 240
Email Address	peitel@woodstockhydro.com
Date	November 7 2012
Last COS Re-based Year	2011

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

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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.





## Smart Meter Model for Electricity Distributors (2013 Filers)

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.

### 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				10,760	2,940	159			13859
General Service < 50 kW				532	640	25			1197
Actual/Planned number of Smart Meters installed (Residential and GS < 50 kW only)	0	0	0	11292	3580	184	0	0	15056
Percentage of Residential and GS < 50 kW Smart Meter Installations Completed	0.00%	0.00%	0.00%	75.00%	98.78%	100.00%	0.00%	100.00%	100.00%
Actual/Planned number of GS > 50 kW meters installed									0
Other (please identify)									0
Total Number of Smart Meters installed or planned to be installed	0	0	0	11292	3580	184	0	0	15056

### 1 Capital Costs

#### 1.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)

	Asset Type Asset type must be selected to enable calculations	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	Forecast	
1.1.1 Smart Meters (may include new meters and modules, etc.)	Smart Meter					521,163	30,031			\$ 551,194
1.1.2 Installation Costs (may include socket kits, labour, vehicle, benefits, etc.)	Smart Meter					206,802	12,707			\$ 219,509
1.1.3a Workforce Automation Hardware (may include fieldwork handhelds, barcode hardware, etc.)	Computer Hardware									\$ -
1.1.3b Workforce Automation Software (may include fieldwork handhelds, barcode hardware, etc.)	Computer Software									\$ -
Total Advanced Metering Communications Devices (AMCD)		\$ -	\$ -	\$ -	\$ -	\$ 727,965	\$ 42,738	\$ -	\$ -	\$ 770,703

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

	Asset Type	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	Forecast	
1.2.1 Collectors	Smart Meter									\$ -
1.2.2 Repeaters (may include radio licence, etc.)	Smart Meter					2,056	1,596			\$ 3,652
1.2.3 Installation (may include meter seals and rings, collector computer hardware, etc.)	Smart Meter					3,923	255			\$ 4,178
Total Advanced Metering Regional Collector (AMRC) (includes LAN)		\$ -	\$ -	\$ -	\$ -	\$ 5,980	\$ 1,851	\$ -	\$ -	\$ 7,830



## Smart Meter Model for Electricity Distributors (2013 Filers)

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.

### Smart Meter Capital Cost and Operational Expense Data

	2006	2007	2008	2009	2010	2011	2012	2013	Total
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	Forecast	
<b>Asset Type</b>	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	Forecast	
<b>1.3 ADVANCED METERING CONTROL COMPUTER (AMCC)</b>									
1.3.1 Computer Hardware	Computer Hardware				972				\$ 972
1.3.2 Computer Software	Computer Software				75,121	21,445			\$ 96,566
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>	Computer Software								\$ -
<b>Total Advanced Metering Control Computer (AMCC)</b>	\$ -	\$ -	\$ -	\$ -	\$ 76,093	\$ 21,445	\$ -	\$ -	\$ 97,538
<b>Asset Type</b>	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	Forecast	
<b>1.4 WIDE AREA NETWORK (WAN)</b>									
1.4.1 Activation Fees	Computer Software								\$ -
<b>Total Wide Area Network (WAN)</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Asset Type</b>	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	Forecast	
<b>1.5 OTHER AMI CAPITAL COSTS RELATED TO MINIMUM FUNCTIONALITY</b>									
1.5.1 Customer Equipment <i>(including repair of damaged equipment)</i>	Other Equipment								\$ -
1.5.2 AMI Interface to CIS	Computer Software				9,700				\$ 9,700
1.5.3 Professional Fees	Smart Meter				4,029	4,785			\$ 8,813
1.5.4 Integration	Computer Software								\$ -
1.5.5 Program Management	Smart Meter								\$ -
1.5.6 Other AMI Capital	Smart Meter								\$ -
<b>Total Other AMI Capital Costs Related to Minimum Functionality</b>	\$ -	\$ -	\$ -	\$ -	\$ 13,729	\$ 4,785	\$ -	\$ -	\$ 18,513
<b>Total Capital Costs Related to Minimum Functionality</b>	\$ -	\$ -	\$ -	\$ -	\$ 823,766	\$ 70,819	\$ -	\$ -	\$ 894,585
<b>Asset Type</b>	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	Forecast	
<b>1.6 CAPITAL COSTS BEYOND MINIMUM FUNCTIONALITY</b> <i>(Please provide a descriptive title and identify nature of 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	Computer Software								\$ -
1.6.2 Costs for deployment of smart meters to customers other than residential and small general service	Computer Software								\$ -
1.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDM/R, etc.	Computer Software				6,000	3,750			\$ 9,750
<b>Total Capital Costs Beyond Minimum Functionality</b>	\$ -	\$ -	\$ -	\$ -	\$ 6,000	\$ 3,750	\$ -	\$ -	\$ 9,750
<b>Total Smart Meter Capital Costs</b>	\$ -	\$ -	\$ -	\$ -	\$ 829,766	\$ 74,569	\$ -	\$ -	\$ 904,335



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.

## 2 OM&A Expenses

[illegible]



## Smart Meter Model for Electricity Distributors (2013 Filers)

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.

### Smart Meter Capital Cost and Operational Expense Data

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

Total Smart Meter OM&A Costs

2006	2007	2008	2009	2010	2011	2012	2013	Total
Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	Forecast	
				66,662	37,534	61,195	12,369	\$ 177,761
\$ -	\$ -	\$ -	\$ -	\$ 66,662	\$ 37,534	\$ 61,195	\$ 12,369	\$ 177,761
\$ -	\$ -	\$ -	\$ -	\$ 116,447	\$ 90,602	\$ 86,544	\$ 34,628	\$ 328,222



## Smart Meter Model for Electricity Distributors (2013 Filers)

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.

### Smart Meter Capital Cost and Operational Expense Data

#### 3 Aggregate Smart Meter Costs by Category

		2006	2007	2008	2009	2010	2011	2012	2013	Total
		Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	Forecast	
3.1	Capital									
3.1.1	Smart Meter	\$ -	\$ -	\$ -	\$ -	\$ 737,973	\$ 49,374	\$ -	\$ -	\$ 787,347
3.1.2	Computer Hardware	\$ -	\$ -	\$ -	\$ -	\$ 972	\$ -	\$ -	\$ -	\$ 972
3.1.3	Computer Software	\$ -	\$ -	\$ -	\$ -	\$ 90,821	\$ 25,195	\$ -	\$ -	\$ 116,016
3.1.4	Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1.5	Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1.6	Applications Software	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1.7	Total Capital Costs	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 829,766</u>	<u>\$ 74,569</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 904,335</u>
3.2	OM&A Costs									
3.2.1	Total OM&A Costs	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 116,447</u>	<u>\$ 90,602</u>	<u>\$ 86,544</u>	<u>\$ 34,628</u>	<u>\$ 328,222</u>



## Smart Meter Model for Electricity Distributors (2013 Filers)

	2006	2007	2008	2009	2010	2011	2012	2013
<b>Cost of Capital</b>								
<b>Capital Structure<sup>1</sup></b>								
Deemed Short-term Debt Capitalization						4.0%	4.0%	4.0%
Deemed Long-term Debt Capitalization	50.0%	50.0%	53.3%	56.7%	60.0%	56.0%	56.0%	56.0%
Deemed Equity Capitalization	50.0%	50.0%	46.7%	43.3%	40.0%	40.0%	40.0%	40.0%
Preferred Shares								
<b>Total</b>	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<b>Cost of Capital Parameters</b>								
Deemed Short-term Debt Rate						2.46%	2.46%	2.46%
Long-term Debt Rate (actual/embedded/deemed) <sup>2</sup>	6.76%	6.76%	6.76%	6.76%	6.76%	5.02%	5.02%	5.02%
Target Return on Equity (ROE)	9.0%	9.00%	9.00%	9.00%	9.85%	9.58%	9.58%	9.58%
Return on Preferred Shares								
<b>WACC</b>	7.88%	7.88%	7.81%	7.73%	8.00%	6.74%	6.74%	6.74%
<b>Working Capital Allowance</b>								
Working Capital Allowance Rate	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
<i>(% of the sum of Cost of Power + controllable expenses)</i>								
<b>Taxes/PILs</b>								
Aggregate Corporate Income Tax Rate	36.12%	36.12%	33.50%	33.00%	31.00%	24.92%	23.12%	23.29%
Capital Tax (until July 1st, 2010)	0.30%	0.225%	0.225%	0.225%	0.075%	0.00%	0.00%	0.00%



## Smart Meter Model for Electricity Distributors (2013 Filers)

### Depreciation Rates

(expressed as expected useful life in years)

Smart Meters - years  
- rate (%)

Computer Hardware - years  
- rate (%)

Computer Software - years  
- rate (%)

Tools & Equipment - years  
- rate (%)

Other Equipment - years  
- rate (%)

2006	2007	2008	2009	2010	2011	2012	2013
			15	15	15	15	15
0.00%	0.00%	0.00%	6.67%	6.67%	6.67%	6.67%	6.67%
			5	5	5	5	5
0.00%	0.00%	0.00%	20.00%	20.00%	20.00%	20.00%	20.00%
			5	5	5	5	5
0.00%	0.00%	0.00%	20.00%	20.00%	20.00%	20.00%	20.00%
			10	10	10	10	10
0.00%	0.00%	0.00%	10.00%	10.00%	10.00%	10.00%	10.00%
			15	15	15	15	15
0.00%	0.00%	0.00%	6.67%	6.67%	6.67%	6.67%	6.67%

### CCA Rates

Smart Meters - CCA Class  
Smart Meters - CCA Rate

Computer Equipment - CCA Class  
Computer Equipment - CCA Rate

General Equipment - CCA Class  
General Equipment - CCA Rate

Applications Software - CCA Class  
Applications Software - CCA Rate

			47	47	47	47	47
			8%	8%	8%	8%	8%
			52	52	50	50	50
			100%	100%	55%	55%	55%
			8	8	8	8	8
			20%	20%	20%	20%	20%
			12	12	12	12	12
			100%	100%	100%	100%	100%

### Assumptions

<sup>1</sup> Planned smart meter installations occur evenly throughout the year.

<sup>2</sup> Fiscal calendar year (January 1 to December 31) used.

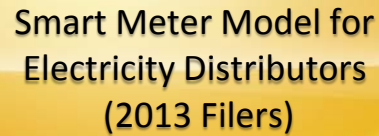
<sup>3</sup> Amortization is done on a straight line basis and has the "half-year" rule applied.



## Smart Meter Model for Electricity Distributors (2013 Filers)

	2006	2007	2008	2009	2010	2011	2012	2013
<b>Net Fixed Assets - Smart Meters</b>								
<b>Gross Book Value</b>								
Opening Balance		\$ -	\$ -	\$ -	\$ -	\$ 737,973	\$ 787,347	\$ 787,347
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ -	\$ 737,973	\$ 49,374	\$ -	\$ -
Retirements/Removals (if applicable)								
Closing Balance	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 737,973</u>	<u>\$ 787,347</u>	<u>\$ 787,347</u>	<u>\$ 787,347</u>
<b>Accumulated Depreciation</b>								
Opening Balance		\$ -	\$ -	\$ -	\$ -	-\$ 24,599	-\$ 75,443	-\$ 127,933
Amortization expense during year	\$ -	\$ -	\$ -	\$ -	-\$ 24,599	-\$ 50,844	-\$ 52,490	-\$ 52,490
Retirements/Removals (if applicable)								
Closing Balance	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>-\$ 24,599</u>	<u>-\$ 75,443</u>	<u>-\$ 127,933</u>	<u>-\$ 180,423</u>
<b>Net Book Value</b>								
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 713,374	\$ 711,904	\$ 659,414
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ 713,374	\$ 711,904	\$ 659,414	\$ 606,924
Average Net Book Value	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 356,687</u>	<u>\$ 712,639</u>	<u>\$ 685,659</u>	<u>\$ 633,169</u>
<b>Net Fixed Assets - Computer Hardware</b>								
<b>Gross Book Value</b>								
Opening Balance		\$ -	\$ -	\$ -	\$ -	\$ 972	\$ 972	\$ 972
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ -	\$ 972	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)								
Closing Balance	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 972</u>	<u>\$ 972</u>	<u>\$ 972</u>	<u>\$ 972</u>
<b>Accumulated Depreciation</b>								
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	-\$ 97	-\$ 292	-\$ 486
Amortization expense during year	\$ -	\$ -	\$ -	\$ -	-\$ 97	-\$ 194	-\$ 194	-\$ 194
Retirements/Removals (if applicable)								
Closing Balance	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>-\$ 97</u>	<u>-\$ 292</u>	<u>-\$ 486</u>	<u>-\$ 680</u>
<b>Net Book Value</b>								
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 875	\$ 680	\$ 486
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ 875	\$ 680	\$ 486	\$ 292
Average Net Book Value	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 437</u>	<u>\$ 778</u>	<u>\$ 583</u>	<u>\$ 389</u>



[illegible]



## Smart Meter Model for Electricity Distributors (2013 Filers)

	2006	2007	2008	2009	2010	2011	2012	2013
<b>Average Net Fixed Asset Values (from Sheet 4)</b>								
Smart Meters	\$ -	\$ -	\$ -	\$ -	\$ 356,687	\$ 712,639	\$ 685,659	\$ 633,169
Computer Hardware	\$ -	\$ -	\$ -	\$ -	\$ 437	\$ 778	\$ 583	\$ 389
Computer Software	\$ -	\$ -	\$ -	\$ -	\$ 40,869	\$ 83,995	\$ 74,649	\$ 51,446
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total Net Fixed Assets</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 397,994</b>	<b>\$ 797,411</b>	<b>\$ 760,891</b>	<b>\$ 685,003</b>
<b>Working Capital</b>								
Operating Expenses (from Sheet 2)	\$ -	\$ -	\$ -	\$ -	\$ 116,447	\$ 90,602	\$ 86,544	\$ 34,628
Working Capital Factor (from Sheet 3)	15%	15%	15%	15%	15%	15%	15%	15%
Working Capital Allowance	\$ -	\$ -	\$ -	\$ -	\$ 17,467	\$ 13,590	\$ 12,982	\$ 5,194
<b>Incremental Smart Meter Rate Base</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 415,461</b>	<b>\$ 811,002</b>	<b>\$ 773,873</b>	<b>\$ 690,198</b>
<b>Return on Rate Base</b>								
<b>Capital Structure</b>								
Deemed Short Term Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 32,440	\$ 30,955	\$ 27,608
Deemed Long Term Debt	\$ -	\$ -	\$ -	\$ -	\$ 249,277	\$ 454,161	\$ 433,369	\$ 386,511
Equity	\$ -	\$ -	\$ -	\$ -	\$ 166,184	\$ 324,401	\$ 309,549	\$ 276,079
Preferred Shares	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total Capitalization</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 415,461</b>	<b>\$ 811,002</b>	<b>\$ 773,873</b>	<b>\$ 690,198</b>
<b>Return on</b>								
Deemed Short Term Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 798	\$ 761	\$ 679
Deemed Long Term Debt	\$ -	\$ -	\$ -	\$ -	\$ 16,851	\$ 22,799	\$ 21,755	\$ 19,403
Equity	\$ -	\$ -	\$ -	\$ -	\$ 16,369	\$ 31,078	\$ 29,655	\$ 26,448
Preferred Shares	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total Return on Capital</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 33,220</b>	<b>\$ 54,674</b>	<b>\$ 52,171</b>	<b>\$ 46,530</b>
<b>Operating Expenses</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 116,447</b>	<b>\$ 90,602</b>	<b>\$ 86,544</b>	<b>\$ 34,628</b>
<b>Amortization Expenses (from Sheet 4)</b>								
Smart Meters	\$ -	\$ -	\$ -	\$ -	\$ 24,599	\$ 50,844	\$ 52,490	\$ 52,490
Computer Hardware	\$ -	\$ -	\$ -	\$ -	\$ 97	\$ 194	\$ 194	\$ 194
Computer Software	\$ -	\$ -	\$ -	\$ -	\$ 9,082	\$ 20,684	\$ 23,203	\$ 23,203
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total Amortization Expense in Year</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 33,778</b>	<b>\$ 71,722</b>	<b>\$ 75,887</b>	<b>\$ 75,887</b>
<b>Incremental Revenue Requirement before Taxes/PILs</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 183,445</b>	<b>\$ 216,999</b>	<b>\$ 214,603</b>	<b>\$ 157,046</b>
<b>Calculation of Taxable Income</b>								
Incremental Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ 116,447	\$ 90,602	\$ 86,544	\$ 34,628
Amortization Expense	\$ -	\$ -	\$ -	\$ -	\$ 33,778	\$ 71,722	\$ 75,887	\$ 75,887
Interest Expense	\$ -	\$ -	\$ -	\$ -	\$ 16,851	\$ 23,597	\$ 22,517	\$ 20,082
<b>Net Income for Taxes/PILs</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 16,369</b>	<b>\$ 31,078</b>	<b>\$ 29,655</b>	<b>\$ 26,448</b>
<b>Grossed-up Taxes/PILs (from Sheet 7)</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 10,755.22</b>	<b>\$ 3,975.20</b>	<b>\$ 8,481.17</b>	<b>\$ 12,522.04</b>
<b>Revenue Requirement, including Grossed-up Taxes/PILs</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 172,690</b>	<b>\$ 220,974</b>	<b>\$ 223,084</b>	<b>\$ 169,568</b>



## Smart Meter Model for Electricity Distributors (2013 Filers)

### For PILs Calculation

#### UCC - Smart Meters

	2006 Audited Actual	2007 Audited Actual	2008 Audited Actual	2009 Audited Actual	2010 Audited Actual	2011 Audited Actual	2012 Forecast	2013 Forecast
Opening UCC	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 708,454.40	\$ 699,176.63	\$ 643,242.50
Capital Additions	\$ -	\$ -	\$ -	\$ -	\$ 737,973.33	\$ 49,373.53	\$ -	\$ -
Retirements/Removals (if applicable)								
UCC Before Half Year Rule	\$ -	\$ -	\$ -	\$ -	\$ 737,973.33	\$ 757,827.93	\$ 699,176.63	\$ 643,242.50
Half Year Rule (1/2 Additions - Disposals)	\$ -	\$ -	\$ -	\$ -	\$ 368,986.67	\$ 24,686.77	\$ -	\$ -
Reduced UCC	\$ -	\$ -	\$ -	\$ -	\$ 368,986.67	\$ 733,141.16	\$ 699,176.63	\$ 643,242.50
CCA Rate Class	0	0	0	47	47	47	47	47
CCA Rate	0%	0%	0%	8%	8%	8%	8%	8%
CCA	\$ -	\$ -	\$ -	\$ -	\$ 29,518.93	\$ 58,651.29	\$ 55,934.13	\$ 51,459.40
Closing UCC	\$ -	\$ -	\$ -	\$ -	\$ 708,454.40	\$ 699,176.63	\$ 643,242.50	\$ 591,783.10

#### UCC - Computer Equipment

	2006 Audited Actual	2007 Audited Actual	2008 Audited Actual	2009 Audited Actual	2010 Audited Actual	2011 Audited Actual	2012 Forecast	2013 Forecast
Opening UCC	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 45,896.47	\$ 38,920.02	\$ 17,514.01
Capital Additions Computer Hardware	\$ -	\$ -	\$ -	\$ -	\$ 972.00	\$ -	\$ -	\$ -
Capital Additions Computer Software	\$ -	\$ -	\$ -	\$ -	\$ 90,820.93	\$ 25,195.32	\$ -	\$ -
Retirements/Removals (if applicable)								
UCC Before Half Year Rule	\$ -	\$ -	\$ -	\$ -	\$ 91,792.93	\$ 71,091.79	\$ 38,920.02	\$ 17,514.01
Half Year Rule (1/2 Additions - Disposals)	\$ -	\$ -	\$ -	\$ -	\$ 45,896.47	\$ 12,597.66	\$ -	\$ -
Reduced UCC	\$ -	\$ -	\$ -	\$ -	\$ 45,896.47	\$ 58,494.13	\$ 38,920.02	\$ 17,514.01
CCA Rate Class	0	0	0	52	52	50	50	50
CCA Rate	0%	0%	0%	100%	100%	55%	55%	55%
CCA	\$ -	\$ -	\$ -	\$ -	\$ 45,896.47	\$ 32,171.77	\$ 21,406.01	\$ 9,632.70
Closing UCC	\$ -	\$ -	\$ -	\$ -	\$ 45,896.47	\$ 38,920.02	\$ 17,514.01	\$ 7,881.30

[illegible]



## 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
<b>INCOME TAX</b>								
Net Income	\$ -	\$ -	\$ -	\$ -	\$ 16,369.16	\$ 31,077.58	\$ 29,654.79	\$ 26,448.38
Amortization	\$ -	\$ -	\$ -	\$ -	\$ 33,778.40	\$ 71,722.12	\$ 75,887.44	\$ 75,887.44
CCA - Smart Meters	\$ -	\$ -	\$ -	\$ -	\$ 29,518.93	\$ 58,651.29	\$ 55,934.13	\$ 51,459.40
CCA - Computers	\$ -	\$ -	\$ -	\$ -	\$ 45,896.47	\$ 32,171.77	\$ 21,406.01	\$ 9,632.70
CCA - Applications Software	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CCA - Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Change in taxable income	\$ -	\$ -	\$ -	\$ -	\$ 25,267.83	\$ 11,976.64	\$ 28,202.10	\$ 41,243.71
Tax Rate (from Sheet 3)	36.12%	36.12%	33.50%	33.00%	31.00%	24.92%	23.12%	23.29%
Income Taxes Payable	\$ -	\$ -	\$ -	\$ -	\$ 7,833.03	\$ 2,984.58	\$ 6,520.32	\$ 9,605.66
<b>ONTARIO CAPITAL TAX</b>								
Smart Meters	\$ -	\$ -	\$ -	\$ -	\$ 713,374.22	\$ 711,903.74	\$ 659,413.95	\$ 606,924.16
Computer Hardware	\$ -	\$ -	\$ -	\$ -	\$ 874.80	\$ 680.40	\$ 486.00	\$ 291.60
Computer Software (Including Application Software)	\$ -	\$ -	\$ -	\$ -	\$ 81,738.84	\$ 86,250.44	\$ 63,047.19	\$ 39,843.94
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Rate Base	\$ -	\$ -	\$ -	\$ -	\$ 795,987.86	\$ 798,834.58	\$ 722,947.14	\$ 647,059.70
Less: Exemption								
Deemed Taxable Capital	\$ -	\$ -	\$ -	\$ -	\$ 795,987.86	\$ 798,834.58	\$ 722,947.14	\$ 647,059.70
Ontario Capital Tax Rate (from Sheet 3)	0.300%	0.225%	0.225%	0.225%	0.075%	0.000%	0.000%	0.000%
Net Amount (Taxable Capital x Rate)	\$ -	\$ -	\$ -	\$ -	\$ 596.99	\$ -	\$ -	\$ -
Change in Income Taxes Payable	\$ -	\$ -	\$ -	\$ -	\$ 7,833.03	\$ 2,984.58	\$ 6,520.32	\$ 9,605.66
Change in OCT	\$ -	\$ -	\$ -	\$ -	\$ 596.99	\$ -	\$ -	\$ -
PILs	\$ -	\$ -	\$ -	\$ -	\$ 7,236.04	\$ 2,984.58	\$ 6,520.32	\$ 9,605.66
<b>Gross Up PILs</b>								
Tax Rate	36.12%	36.12%	33.50%	33.00%	31.00%	24.92%	23.12%	23.29%
Change in Income Taxes Payable	\$ -	\$ -	\$ -	\$ -	\$ 11,352.22	\$ 3,975.20	\$ 8,481.17	\$ 12,522.04
Change in OCT	\$ -	\$ -	\$ -	\$ -	\$ 596.99	\$ -	\$ -	\$ -
PILs	\$ -	\$ -	\$ -	\$ -	\$ 10,755.22	\$ 3,975.20	\$ 8,481.17	\$ 12,522.04



## Smart Meter Model for Electricity Distributors (2013 Filers)

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
2006 Q1			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%		Mar-08	2008	Q1	\$ -		5.14%	\$ -	\$ -		
2012 Q4	1.47%		Apr-08	2008	Q2	\$ -		4.08%	\$ -	\$ -		
2013 Q1	1.47%		May-08	2008	Q2	\$ -		4.08%	\$ -	\$ -		
2013 Q2	1.47%		Jun-08	2008	Q2	\$ -		4.08%	\$ -	\$ -		
2013 Q3			Jul-08	2008	Q3	\$ -		3.35%	\$ -	\$ -		
2013 Q4			Aug-08	2008	Q3	\$ -		3.35%	\$ -	\$ -		



## Smart Meter Model for Electricity Distributors (2013 Filers)

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
			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%	\$ -	\$ -		
			Mar-09	2009	Q1	\$ -		2.45%	\$ -	\$ -		
			Apr-09	2009	Q2	\$ -		1.00%	\$ -	\$ -		
			May-09	2009	Q2	\$ -		1.00%	\$ -	\$ -		
			Jun-09	2009	Q2	\$ -		1.00%	\$ -	\$ -		
			Jul-09	2009	Q3	\$ -		0.55%	\$ -	\$ -		
			Aug-09	2009	Q3	\$ -		0.55%	\$ -	\$ -		
			Sep-09	2009	Q3	\$ -		0.55%	\$ -	\$ -		
			Oct-09	2009	Q4	\$ -		0.55%	\$ -	\$ -		
			Nov-09	2009	Q4	\$ -		0.55%	\$ -	\$ -		
			Dec-09	2009	Q4	\$ -		0.55%	\$ -	\$ -	\$ -	
			Jan-10	2010	Q1	\$ -	\$ 15,066.55	0.55%	\$ -	\$ 15,066.55		\$ 1.00
			Feb-10	2010	Q1	\$ 15,066.55	\$ 15,646.69	0.55%	\$ 6.91	\$ 30,720.15		\$ 1.00
			Mar-10	2010	Q1	\$ 30,713.24	\$ 13,787.90	0.55%	\$ 14.08	\$ 44,515.22		\$ 1.00
			Apr-10	2010	Q2	\$ 44,501.14	\$ 14,957.18	0.55%	\$ 20.40	\$ 59,478.72		\$ 1.00
			May-10	2010	Q2	\$ 59,458.32	\$ 16,476.79	0.55%	\$ 27.25	\$ 75,962.36		\$ 1.00
			Jun-10	2010	Q2	\$ 75,935.11	\$ 21,171.98	0.55%	\$ 34.80	\$ 97,141.89		\$ 1.63
			Jul-10	2010	Q3	\$ 97,107.09	\$ 25,334.71	0.89%	\$ 72.02	\$ 122,513.82		\$ 1.63
			Aug-10	2010	Q3	\$ 122,441.80	\$ 24,396.84	0.89%	\$ 90.81	\$ 146,929.45		\$ 1.63
			Sep-10	2010	Q3	\$ 146,838.64	\$ 24,962.37	0.89%	\$ 108.91	\$ 171,909.92		\$ 1.63
			Oct-10	2010	Q4	\$ 171,801.01	\$ 24,589.68	1.20%	\$ 171.80	\$ 196,562.49		\$ 1.63
			Nov-10	2010	Q4	\$ 196,390.69	\$ 24,354.14	1.20%	\$ 196.39	\$ 220,941.22		\$ 1.63
			Dec-10	2010	Q4	\$ 220,744.83	\$ 24,983.27	1.20%	\$ 220.74	\$ 245,948.84	\$ 246,692.21	\$ 1.63
			Jan-11	2011	Q1	\$ 245,728.10	\$ 24,002.68	1.47%	\$ 301.02	\$ 270,031.80		\$ 1.63
			Feb-11	2011	Q1	\$ 269,730.78	\$ 26,852.04	1.47%	\$ 330.42	\$ 296,913.24		\$ 1.63
			Mar-11	2011	Q1	\$ 296,582.82	\$ 22,901.80	1.47%	\$ 363.31	\$ 319,847.93		\$ 1.63
			Apr-11	2011	Q2	\$ 319,484.62	\$ 24,251.67	1.47%	\$ 391.37	\$ 344,127.66		\$ 1.63
			May-11	2011	Q2	\$ 343,736.29	\$ 24,547.91	1.47%	\$ 421.08	\$ 368,705.28		\$ 1.63





## Smart Meter Model for Electricity Distributors (2013 Filers)

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
			Jun-11	2011	Q2	\$ 368,284.20	\$ 12,275.56	1.47%	\$ 451.15	\$ 381,010.91		\$ 1.63
			Jul-11	2011	Q3	\$ 380,559.76	\$ 7,383.14	1.47%	\$ 466.19	\$ 388,409.09		\$ 0.47
			Aug-11	2011	Q3	\$ 387,942.90	\$ 7,038.04	1.47%	\$ 475.23	\$ 395,456.17		\$ 0.47
			Sep-11	2011	Q3	\$ 394,980.94	\$ 7,355.84	1.47%	\$ 483.85	\$ 402,820.63		\$ 0.47
			Oct-11	2011	Q4	\$ 402,336.78	\$ 7,406.22	1.47%	\$ 492.86	\$ 410,235.86		\$ 0.47
			Nov-11	2011	Q4	\$ 409,743.00	\$ 6,893.10	1.47%	\$ 501.94	\$ 417,138.04		\$ 0.47
			Dec-11	2011	Q4	\$ 416,636.10	\$ 7,204.97	1.47%	\$ 510.38	\$ 424,351.45	\$ 183,301.77	\$ 0.47
			Jan-12	2012	Q1	\$ 423,841.07	\$ 7,086.68	1.47%	\$ 519.21	\$ 431,446.96		\$ 0.47
			Feb-12	2012	Q1	\$ 430,927.75	\$ 7,450.32	1.47%	\$ 527.89	\$ 438,905.96		\$ 0.47
			Mar-12	2012	Q1	\$ 438,378.07	\$ 7,143.79	1.47%	\$ 537.01	\$ 446,058.87		\$ 0.47
			Apr-12	2012	Q2	\$ 445,521.86	\$ 16,417.94	1.47%	\$ 545.76	\$ 462,485.56		\$ 0.47
			May-12	2012	Q2	\$ 461,939.80		1.47%	\$ 565.88	\$ 462,505.68		
			Jun-12	2012	Q2	\$ 461,939.80		1.47%	\$ 565.88	\$ 462,505.68		
			Jul-12	2012	Q3	\$ 461,939.80		1.47%	\$ 565.88	\$ 462,505.68		
			Aug-12	2012	Q3	\$ 461,939.80		1.47%	\$ 565.88	\$ 462,505.68		
			Sep-12	2012	Q3	\$ 461,939.80		1.47%	\$ 565.88	\$ 462,505.68		
			Oct-12	2012	Q4	\$ 461,939.80		1.47%	\$ 565.88	\$ 462,505.68		
			Nov-12	2012	Q4	\$ 461,939.80		1.47%	\$ 565.88	\$ 462,505.68		
			Dec-12	2012	Q4	\$ 461,939.80		1.47%	\$ 565.88	\$ 462,505.68	\$ 44,755.64	
			Jan-13	2013	Q1	\$ 461,939.80		1.47%	\$ 565.88	\$ 462,505.68		
			Feb-13	2013	Q1	\$ 461,939.80		1.47%	\$ 565.88	\$ 462,505.68		
			Mar-13	2013	Q1	\$ 461,939.80		1.47%	\$ 565.88	\$ 462,505.68		
			Apr-13	2013	Q2	\$ 461,939.80		1.47%	\$ 565.88	\$ 462,505.68		
			May-13	2013	Q2	\$ 461,939.80		0.00%	\$ -	\$ 461,939.80		
			Jun-13	2013	Q2	\$ 461,939.80		0.00%	\$ -	\$ 461,939.80		
			Jul-13	2013	Q3	\$ 461,939.80		0.00%	\$ -	\$ 461,939.80		
			Aug-13	2013	Q3	\$ 461,939.80		0.00%	\$ -	\$ 461,939.80		
			Sep-13	2013	Q3	\$ 461,939.80		0.00%	\$ -	\$ 461,939.80		
			Oct-13	2013	Q4	\$ 461,939.80		0.00%	\$ -	\$ 461,939.80		
			Nov-13	2013	Q4	\$ 461,939.80		0.00%	\$ -	\$ 461,939.80		
			Dec-13	2013	Q4	\$ 461,939.80		0.00%	\$ -	\$ 461,939.80	\$ 2,263.52	
<b>Total Funding Adder Revenues Collected</b>						<b>\$ 461,939.80</b>			<b>\$ 12,809.82</b>	<b>\$ 474,749.62</b>	<b>\$ 474,749.62</b>	





## 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%	0.00%	Mar-08	2008	Q1	-			-	5.14%	-	-
2012 Q4	1.47%	0.00%	Apr-08	2008	Q2	-			-	4.08%	-	-
2013 Q1	1.47%	0.00%	May-08	2008	Q2	-			-	4.08%	-	-
2013 Q2	1.47%	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%	-	-



## 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
			Dec-08	2008	Q4	-			-	3.35%	-	-
			Jan-09	2009	Q1	-			-	2.45%	-	-
			Feb-09	2009	Q1	-			-	2.45%	-	-
			Mar-09	2009	Q1	-			-	2.45%	-	-
			Apr-09	2009	Q2	-			-	1.00%	-	-
			May-09	2009	Q2	-			-	1.00%	-	-
			Jun-09	2009	Q2	-			-	1.00%	-	-
			Jul-09	2009	Q3	-			-	0.55%	-	-
			Aug-09	2009	Q3	-			-	0.55%	-	-
			Sep-09	2009	Q3	-			-	0.55%	-	-
			Oct-09	2009	Q4	-			-	0.55%	-	-
			Nov-09	2009	Q4	-			-	0.55%	-	-
			Dec-09	2009	Q4	-			-	0.55%	-	-
			Jan-10	2010	Q1	-	\$ 614.25	\$ 5,602.25	6,216.50	0.55%	-	-
			Feb-10	2010	Q1	6,216.50	\$ 4,688.94	\$ 5,602.25	16,507.69	0.55%	2.85	2.85
			Mar-10	2010	Q1	16,507.69	\$ 3,827.93	\$ 5,602.25	25,937.87	0.55%	7.57	10.42
			Apr-10	2010	Q2	25,937.87	\$ 4,127.62	\$ 5,602.25	35,667.74	0.55%	11.89	22.30
			May-10	2010	Q2	35,667.74	\$ 1,071.59	\$ 5,602.25	42,341.58	0.55%	16.35	38.65
			Jun-10	2010	Q2	42,341.58	\$ 5,001.23	\$ 5,602.25	52,945.06	0.55%	19.41	58.06
			Jul-10	2010	Q3	52,945.06	\$ 3,739.98	\$ 5,602.25	62,287.29	0.89%	39.27	97.33
			Aug-10	2010	Q3	62,287.29	\$ 6,074.89	\$ 5,602.25	73,964.43	0.89%	46.20	143.52
			Sep-10	2010	Q3	73,964.43	\$ 3,212.17	\$ 5,602.25	82,778.85	0.89%	54.86	198.38
			Oct-10	2010	Q4	82,778.85	\$ 317.37	\$ 5,602.25	88,698.47	1.20%	82.78	281.16
			Nov-10	2010	Q4	88,698.47	\$ 12,898.34	\$ 5,602.25	107,199.06	1.20%	88.70	369.86
			Dec-10	2010	Q4	107,199.06	\$ 70,872.33	\$ 5,602.25	183,673.64	1.20%	107.20	477.06
			Jan-11	2011	Q1	183,673.64	\$ 3,459.01	\$ 6,552.93	193,685.58	1.47%	225.00	702.06
			Feb-11	2011	Q1	193,685.58	\$ 7,575.92	\$ 6,552.93	207,814.43	1.47%	237.26	939.32
			Mar-11	2011	Q1	207,814.43	\$ 19,528.43	\$ 6,552.93	233,895.79	1.47%	254.57	1,193.89
			Apr-11	2011	Q2	233,895.79	\$ 16,513.14	\$ 6,552.93	256,961.86	1.47%	286.52	1,480.42
			May-11	2011	Q2	256,961.86	\$ 8,821.90	\$ 6,552.93	272,336.69	1.47%	314.78	1,795.19
			Jun-11	2011	Q2	272,336.69	\$ 4,362.35	\$ 6,552.93	283,251.97	1.47%	333.61	2,128.81
			Jul-11	2011	Q3	283,251.97	\$ 4,704.09	\$ 6,552.93	294,508.99	1.47%	346.98	2,475.79
			Aug-11	2011	Q3	294,508.99	\$ 4,716.36	\$ 6,552.93	305,778.28	1.47%	360.77	2,836.56
			Sep-11	2011	Q3	305,778.28	\$ 9,412.46	\$ 6,552.93	321,743.67	1.47%	374.58	3,211.14
			Oct-11	2011	Q4	321,743.67	\$ 6,288.90	\$ 6,552.93	334,585.50	1.47%	394.14	3,605.28



## 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

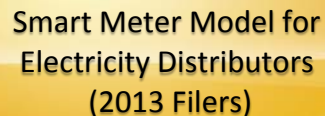
Prescribed Interest Rates	Approved Deferral and Variance Accounts	CWIP	Date	Year	Quarter	Opening Balance (Principal)	OM&A Expenses	Amortization / Depreciation Expense	Closing Balance (Principal)	(Annual) Interest Rate	Interest (on opening balance)	Cumulative Interest
			Nov-11	2011	Q4	334,585.50	\$ 4,938.66	\$ 6,552.93	346,077.09	1.47%	409.87	4,015.14
			Dec-11	2011	Q4	346,077.09	\$ 281.01	\$ 6,552.93	352,911.03	1.47%	423.94	4,439.09
			Jan-12	2012	Q1	352,911.03	\$ 7,247.97	\$ 6,552.93	366,711.93	1.47%	432.32	4,871.41
			Feb-12	2012	Q1	366,711.93	\$ 7,247.98	\$ 6,552.93	380,512.84	1.47%	449.22	5,320.63
			Mar-12	2012	Q1	380,512.84	\$ 7,247.98	\$ 6,552.93	394,313.75	1.47%	466.13	5,786.76
			Apr-12	2012	Q2	394,313.75	\$ 7,247.98	\$ 6,552.93	408,114.66	1.47%	483.03	6,269.79
			May-12	2012	Q2	408,114.66	\$ 7,247.98	\$ 6,552.93	421,915.57	1.47%	499.94	6,769.73
			Jun-12	2012	Q2	421,915.57	\$ 7,874.72	\$ 6,552.93	436,343.22	1.47%	516.85	7,286.58
			Jul-12	2012	Q3	436,343.22	\$ 6,846.92	\$ 6,552.93	449,743.07	1.47%	534.52	7,821.10
			Aug-12	2012	Q3	449,743.07	\$ 6,846.92	\$ 6,552.93	463,142.92	1.47%	550.94	8,372.03
			Sep-12	2012	Q3	463,142.92	\$ 6,846.92	\$ 6,552.93	476,542.77	1.47%	567.35	8,939.38
			Oct-12	2012	Q4	476,542.77	\$ 8,195.16	\$ 6,552.93	491,290.86	1.47%	583.76	9,523.15
			Nov-12	2012	Q4	491,290.86	\$ 6,846.91	\$ 6,552.93	504,690.70	1.47%	601.83	10,124.98
			Dec-12	2012	Q4	504,690.70	\$ 6,846.89	\$ 6,552.93	518,090.52	1.47%	618.25	10,743.22
			Jan-13	2013	Q1	518,090.52	\$ 2,885.70	\$ 6,552.93	527,529.15	1.47%	634.66	11,377.89
			Feb-13	2013	Q1	527,529.15	\$ 2,885.70	\$ 6,552.93	536,967.78	1.47%	646.22	12,024.11
			Mar-13	2013	Q1	536,967.78	\$ 2,885.70	\$ 6,552.93	546,406.41	1.47%	657.79	12,681.89
			Apr-13	2013	Q2	546,406.41	\$ 2,885.70	\$ 6,552.93	555,845.04	1.47%	669.35	13,351.24
			May-13	2013	Q2	555,845.04	\$ 2,885.70	\$ 6,552.93	565,283.67	0.00%	-	13,351.24
			Jun-13	2013	Q2	565,283.67	\$ 2,885.70	\$ 6,552.93	574,722.30	0.00%	-	13,351.24
			Jul-13	2013	Q3	574,722.30	\$ 2,885.70	\$ 6,552.93	584,160.93	0.00%	-	13,351.24
			Aug-13	2013	Q3	584,160.93	\$ 2,885.70	\$ 6,552.93	593,599.56	0.00%	-	13,351.24
			Sep-13	2013	Q3	593,599.56	\$ 2,885.70	\$ 6,552.93	603,038.19	0.00%	-	13,351.24
			Oct-13	2013	Q4	603,038.19	\$ 2,885.70	\$ 6,552.93	612,476.82	0.00%	-	13,351.24
			Nov-13	2013	Q4	612,476.82	\$ 2,885.70	\$ 6,552.93	621,915.45	0.00%	-	13,351.24
			Dec-13	2013	Q4	621,915.45	\$ 2,885.70	\$ 6,552.93	631,354.08	0.00%	-	13,351.24
							\$ 293,593.20	\$ 224,497.32	\$ 518,090.52			



## Smart Meter Model for Electricity Distributors (2013 Filers)

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	\$ -	\$ -	\$ -	\$ -	4.37%	\$ -
2007	\$ -	\$ -	\$ -	\$ -	4.73%	\$ -
2008	\$ -	\$ -	\$ -	\$ -	3.98%	\$ -
2009	\$ -	\$ -	\$ -	\$ -	1.14%	\$ -
2010	\$ 116,446.64	\$ 33,778.40	\$ 150,225.04	\$ 75,112.52	0.80%	\$ 599.02
2011	\$ 90,602.23	\$ 71,722.12	\$ 312,549.40	\$ 231,387.22	1.47%	\$ 3,401.39
2012	\$ 86,544.32	\$ 75,887.44	\$ 474,981.16	\$ 393,765.28	1.47%	\$ 5,788.35
2013	\$ 34,628.40	\$ 75,887.44	\$ 585,497.00	\$ 530,239.08	0.49%	\$ 2,598.17
<b>Cumulative Interest to 2011</b>						\$ 4,000.41
<b>Cumulative Interest to 2012</b>						\$ 9,788.76
<b>Cumulative Interest to 2013</b>						\$ 12,386.94



Check if applicable

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

	2006	2007	2008	2009	2010	2011	2012	2013	Total
Deferred and forecasted Smart Meter Incremental Revenue Requirement (from Sheet 5)	\$ -	\$ -	\$ -	\$ -	\$ 172,690.08	\$ 220,974.03	\$ 223,084.32	\$ 169,568.25	\$ 616,748.43
Interest on Deferred and forecasted OM&A and Amortization Expense (Sheet 8A/8B) (Check <b>one</b> of the boxes below)	\$ -	\$ -	\$ -	\$ -	\$ 477.06	\$ 3,962.03	\$ 6,304.14		\$ 10,743.22
<input checked="" type="checkbox"/> Sheet 8A (Interest calculated on monthly balances)	\$ -	\$ -	\$ -	\$ -	\$ 477.06	\$ 3,962.03	\$ 6,304.14	\$ 2,608.02	\$ 10,743.22
<input type="checkbox"/> Sheet 8B (Interest calculated on average annual balances)									
SMFA Revenues (from Sheet 8)	\$ -	\$ -	\$ -	\$ -	\$ 245,728.10	\$ 178,112.97	\$ 38,098.73	\$ -	\$ 461,939.80
SMFA Interest (from Sheet 8)	\$ -	\$ -	\$ -	\$ -	\$ 964.11	\$ 5,188.80	\$ 6,656.91	\$ 2,263.52	\$ 15,073.34
Net Deferred Revenue Requirement	\$ -	\$ -	\$ -	\$ -	\$ 73,525.08	\$ 41,634.30	\$ 184,632.82	\$ 167,304.73	\$ 150,478.51

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 4999 kW for which interval meters were upgraded to utilize AMI and ODS assets)

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## 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 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.

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

Years for collection or refunding	1		
Deferred Incremental Revenue Requirement from 2006 to December 31, 2012 plus Interest on OM&A and Amortization	\$	627,491.65	
SMFA Revenues collected from 2006 to 2013 test year (inclusive) Plus Simple Interest on SMFA Revenues	\$	477,013.14	
Net Deferred Revenue Requirement	\$	150,478.51	
SMDR	May 1, 2013 to April 30, 2014	\$	0.82
Check: Forecasted SMDR Revenues	\$	150,374.88	Match

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

Incremental Revenue Requirement for 2013	\$	169,568.25	
SMIRR	\$	0.92	
Check: Forecasted SMIRR Revenues	\$	168,713.28	Match



## 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.

### Class-specific SMDRs

Revenue Requirement for Historical Years	2006	2007	2008	2009	2010	2011	2012	Total 2006 to 2012	Explanation / Allocator Check Row if SMDR/SMIRR apply to class	Residential	GS < 50 kW	GS 50 to 4999 kW
										X	X	
										%	%	%
Return on Capital	\$ -	\$ -	\$ -	\$ -	\$ 33,220.26	\$ 54,674.48	\$ 52,171.39	\$ 140,066.13	Weighted Meter Cost - Capital Allocated per class	55.66%	44.34%	
										\$ 77,960.81	\$ 62,105.32	\$ -
Depreciation/Amortization expense and related interest	\$ -	\$ -	\$ -	\$ -	\$ 33,778.40	\$ 71,722.12	\$ 75,887.44		Weighted Meter Cost - Capital Allocated per class	56%	44%	0%
	\$ -	\$ -	\$ -	\$ -	\$ 107.27	\$ 1,750.60	\$ 2,945.27	\$ 186,191.10		\$ 103,633.97	\$ 82,557.14	\$ -
Operating Expenses and related interest	\$ -	\$ -	\$ -	\$ -	\$ 116,446.64	\$ 90,602.23	\$ 86,544.32		Number of Smart Meters installed by Class	# 13,794	# 1,262	#
	\$ -	\$ -	\$ -	\$ -	\$ 369.79	\$ 2,211.43	\$ 3,358.87	\$ 299,533.28	Allocated per class	\$ 274,426.28	\$ 25,107.00	\$ 0
Revenue Requirement before Taxes/PILs					\$ 116,816.43	\$ 92,813.66	\$ 89,903.19	\$ 625,790.51		\$ 456,021.05	\$ 169,769.46	\$ -
									Revenue Requirement before PILs	72.87%	27.13%	0.00%
Grossed-up Taxes/PILs	\$ -	\$ -	\$ -	\$ -	\$ 10,755.22	\$ 3,975.20	\$ 8,481.17	\$ 1,701.15		\$ 1,239.65	\$ 461.50	\$ -
Total Revenue Requirement plus interest on OM&A and depreciation expense								\$ 627,491.65	Percentage of costs allocated to each class:	\$ 457,260.70	\$ 170,230.96	\$ -
								\$ -	Percentage of costs for classes with SMDR/SMIRR	72.87%	27.13%	0.00%
										72.87%	27.13%	0.00%
										72.87%	27.13%	0.00%
									SMFA Revenues directly attributable to class	%	%	%
										90.86%	7.88%	1.26%
									Residual SMFA Revenues (from other metered classes) attributed evenly	90.86%	7.88%	0.00%
										0.63%	0.63%	0.00%
									Total	91.49%	8.51%	1.26%
SMFA Revenues plus interest expense								\$ 477,013.14		\$ 436,419.32	\$ 40,593.82	\$ 6,010.37
Net Deferred Revenue Requirement to be recovered via SMDR								\$ 150,478.51		\$ 20,841.38	\$ 129,637.14	\$ -
Average number of metered customers by class (2013)									Average number of customers (2013)	14020	1213	188
Number of Years for SMDR recovery								1 years		1	1	1
Smart Meter Disposition Rider (\$/month per metered customer in the customer class)										\$ 0.12	\$ 8.91	
Estimated SMDR Revenues								\$ 149,882.76		\$ 20,188.80	\$ 129,693.96	\$ -
								\$ 595.75				



## 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 Check Row if SMDR/SMIRR apply to class	Residential	GS < 50 kW	GS 50 to 4999 kW
			X	X	
			%	%	%
Return on Capital	\$ 46,530.37	Weighted Meter Cost - Capital Allocated per class	55.66% \$ 25,898.80	44.34% \$ 20,631.56	0.00% -
Depreciation/Amortization expense	\$ 75,887.44	Weighted Meter Cost - Capital Allocated per class	55.66% \$ 42,238.95	44.34% \$ 33,648.49	0.00% -
Operating Expenses	\$ 34,628.40				
		Number of Smart Meters installed by Class	# 13,794	# 1,262	# -
	\$ 34,628.40	Allocated per class	\$ 31,725.83	\$ 2,902.57	\$ -
Revenue Requirement before Taxes/PILs	\$ 157,046.21		\$ 99,863.59	\$ 57,182.62	\$ -
		Revenue Requirement before PILs	63.59%	36.41%	0.00%
Grossed-up Taxes/PILs	\$ 12,522.04		\$ 7,962.60	\$ 4,559.44	\$ -
Total Revenue Requirement for 2013	\$ 169,568.25		\$ 107,826.19	\$ 61,742.07	\$ -
	\$ -	Percentage of costs allocated to each class	63.59%	36.41%	0.00%
		Percentage of costs for classes with SMDR/SMIRR	63.59%	36.41%	0.00%
Average number of metered customers by class (2013)			14,020	1,213	188
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
Smart Meter Incremental Revenue Requirement Rate Rider (\$/month per metered customer in the customer class)			\$ 0.64	\$ 4.24	
Estimated SMIRR Revenues	\$ 169,391.04		\$ 107,673.60	\$ 61,717.44	\$ -
	-\$ 177.21				