VERIDIAN
CONNECTIONS

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May 31, 2012

By RESS and Courier

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
2300 Yonge Street
Suite 2700, P.O. Box 2319
Toronto, ON M4P 1E4

Dear Ms. Walli:

Re: Veridian Connections Inc., Final Disposition of Accounts 1555 and 1556 – Smart Meters
Board File No.: EB-2012-0247

Veridian Connection Inc. ("Veridian") is pleased to submit its stand-alone application for the final disposition of Accounts 1555 and 1556 – Smart Meters. Veridian has prepared this Application in accordance with G-2011-0001 Guidelines, Smart Meter Funding and Cost Recovery – Final Disposition issued December 15, 2011. The hard copy submission of the application includes two paper copies and a CD containing the material in searchable PDF and Microsoft Excel formats.

Veridian respectfully requests an order approving its proposed distribution rates with an effective date of November 1, 2012.

Please do not hesitate to contact me if you require further information. I can be reached at 905-427-9870, extension 2202 or by email at garmstrong@veridian.on.ca.

Yours truly,

Original signed by

George Armstrong
Vice President, Corporate Services

VERIDIAN CONNECTIONS INC.

FINAL DISPOSITION OF ACCOUNTS 1555 AND 1556 – SMART METERS

Rates Effective: November 1, 2012

EB-2012-0247

Submitted on: May 31, 2012

Veridian Connection Inc.
55 Taunton Rd E
Ajax, ON
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File Number:EB-2012-0247

Date Filed:May 31, 2012

Exhibit 1

FINAL DISPOSITION OF ACCOUNTS 1555 AND 1556 - SMART METERS

File Number:EB-2012-0247

Date Filed:May 31, 2012

Exhibit 1

Tab 1 of 2

Administration

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ONTARIO ENERGY BOARD

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

AND IN THE MATTER OF an application by Veridian Connections Inc. for an Order or Orders pursuant to section 78 of the *Ontario Energy Board Act, 1998* approving rate riders for the recovery of Smart Meter costs as of September 1st, 2012.

APPLICATION

The Applicant is Veridian Connections Inc. ("Veridian"). Veridian is a licensed electricity distributor operating pursuant to license ED-2002-0503. Veridian distributes electricity to approximately 114,200 customers in Ajax, Pickering, Belleville, Brock, Uxbridge, Scugog, Clarington, Port Hope and Gravenhurst.

Veridian hereby applies to the Ontario Energy Board (the "Board") for an order or orders made pursuant to Section 78 of the *Ontario Energy Board Act, 1998,* as amended, (the "OEB Act") for approval of Smart Meter rate riders to effect the recovery of Smart Meter costs effective November 1st, 2012.

Veridian has prepared this Application in accordance with G-2011-0001 Guideline, Smart Meter Funding and Cost Recovery – Final Disposition issued December 15, 2011 ("The Filing Guidelines").

Specifically, Veridian applies for:

a) The Board's determination that all Smart Meter capital ($7,730,561) and operating expenditures ($2,577,008) from January 1st, 2009 to December 31st, 2011 are prudent,

b) Addition of a Smart Meter Disposition Rate Rider effective November 1st, 2012 to April 30, 2013, to recover the deferred revenue requirement through October 31st, 2012 related to Smart Meters installed through December 31, 2011, net of Smart Meter Funding Adder revenues collected to April 30, 2012

c) Addition of a Smart Meter Incremental Revenue Requirement Rate Rider effective November 1st, 2012 to recover the annual revenue requirement associated with Smart Meters installed from January 1, 2009 to December 31, 2011. The SMIRR will be in place from November 1st 2012 until the implementation date for new rates as determined in Veridian's next Cost of Service Application, currently planned for April 30th, 2014

This Application is supported by written evidence. The written evidence will be pre-filed and 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:

The Applicant:

Mr. George Armstrong
Vice President, Corporate Services
Veridian Connections Inc.

Address for personal service:	55 Taunton Rd E Ajax, ON L1T 3V3
Mailing Address:	55 Taunton Rd E Ajax, ON L1T 3V3
Telephone:	(905)-427-9870, X2202
Fax:	
Email Address:	garmstrong@veridian.on.ca

DATED at Ajax, Ontario, this 31st day of May, 2012.

VERIDIAN CONNECTIONS INC.

George Armstrong

MANAGER'S SUMMARY

1.0 Introduction/Overview

Veridian Connections Inc. ("Veridian") is an electricity distributor as defined in the *Ontario Energy Board Act, 1998* (the "Act") and operates pursuant to license EB-2002-0503. Veridian distributes electricity to approximately 114,200 customers in Ajax, Pickering, Belleville, Brock, Uxbridge, Scugog, Clarington, Port Hope and Gravenhurst. Veridian has two distinct Tariffs of Rates and Charges; One for the Gravenhurst Service Area and another for "All Service Areas Except Gravenhurst". Although Veridian maintains two Tariffs, historically, Veridian has maintained common Rate Adders and Rate Riders associated with Smart Meter Costs across the two Tariff zones. Veridian continues this practice, and in this application is applying for a common Smart Meter Disposition Rate Rider (SMDR) and a common Smart Meter Incremental Revenue Requirement Rate Rider (SMIRR) for the two Tariff zones.

Veridian was one of the thirteen named distributors as identified in paragraph 6 of section 1(1) of O. Reg 427/06 and was included in the first group of utilities sanctioned to install smart meters pursuant to this regulation.

Veridian began its smart metering activities in 2007. Within its 2010 Cost of Service rate application (EB-2009-0140) Veridian proposed and the Board approved for inclusion within Veridian's rate base of Smart Meter capital expenditures up to December 31, 2008. In that same proceeding the Board approved disposition of the balances in Veridian's Smart Meter Variance Accounts 1555-Smart Meter Capital Variance and 1556-Smart Meter OM&A Variance to December 31, 2008 through a Smart Meter Cost Recovery Rate Rider effective May 1st, 2010. Subsequently, Veridian continued to record Smart Meter Capital and OM&A amounts within Accounts 1555 and 1556.

Veridian has received funding for its Smart Meter program through the collection of a funding adder (SMFA) over several years and through a Smart Meter Cost Recovery Rate Rider approved by the Board in Veridian's 2010 Cost of Service rates proceeding. These riders were charged monthly to metered customers.

Table 1 below summarizes the amounts and time periods for the various riders:

Table 1 – Smart Meter Funding 2006 - 2011

Year/Rider	Amount	Proceeding
2006-SMFA	$0.37- Veridian $0.40 – Scugog $0.39 – Gravenhurst	EB-2005-0422 – Cost of Service EB-2005-0246 – Cost of Service EB-2005-0368 – Cost of Service
2007-SMFA	$0.73 – All	EB-2007-0583 - IRM Harmonization of SMFA in 2007 rates
2008-SMFA	$0.73	EB-2007-0879 - IRM
2009-SMFA	$0.73	EB-2008-0214 - IRM
2010-SMFA	$1.00	EB-2009-0140 – Cost of Service
2010-SMCRR	$0.61	EB-2009-0140, Effective until April 30, 2011 (Smart Meter Cost Recovery Rate Rider)
2011-SMFA	$1.00	EB-2010-0117 - IRM

Note: SMFA revenues collected from 2006 through to December 31st, 2008 were included in the disposition of Veridian's Accounts 1555 and 1556 in EB-2009-0140.

At December 31, 2011 Veridian had completed smart meter installations for 99.7% of RPP-eligible residential customers and 99.2 % of its General Service less than 50 kW customers.

Veridian proposes to treat this Application as its request for final disposition of smart meter costs. The capital costs of the remaining meters to be installed after December

31st, 2011 will be treated as regular capital additions and included in rate base in the next cost of service rate application.

Within its 2012 IRM application (EB-2011-0199) Veridian did not request continuance of its SMFA on the basis that by December 31st, 2011 its smart meter program would be substantially complete. Veridian confirms that its current tariffs effective May 1st, 2012 do not include a SMFA.

In accordance with the Board's Guideline – Smart Meter Funding and Cost Recovery – Final Disposition (G-2011-0001) dated Dec 15, 2011 ("the Guideline") Veridian is requesting final disposition of Smart Meter Variance Accounts 1555 and 1556 for amounts recorded from January 1, 2009 to December 31, 2011.

Veridian hereby applies for approval of capital expenditures of $7,730,561 and operating costs of $3,909,071. Recoveries are proposed through:

- A Smart Meter Disposition Rider ("SMDR") charge by customer class over a 18 month period effective from November 1st,2012 to April 30th, 2014
- A Smart Meter Incremental Revenue Requirement ("SMIRR") charge by customer class effective from November 1st, 2012 until the implementation date for new rates as determined in Veridian's next Cost of Service Application, currently planned for April 30th, 2014

The SMDR is calculated using the Board's Smart Meter Model Version 2.17 ("the Model") issued on December 15, 2011. The completed model is provided as Appendix 1. The calculation of the SMDR includes actual SMFA collections for January to April 2012. Board approved cost of capital parameters are used for all years to calculate the deferred revenue requirement.

For purposes of the SMDR calculation, it is necessary to calculate the revenue requirement up to the effective date of the SMIRR which then provides the prospective revenue requirement associated with the approved smart meter investment and related incremental OM&A costs.

The Application proposes an effective date of November 1st, 2012 for the SMIRR rate rider. For purposes of the SMDR calculation, it is then necessary to calculate revenue requirement up to October 31st, 2012.

To determine the 2012 revenue requirement to October 31st, 2012, Veridian has calculated the revenue requirement for the 2012 fiscal year ended December 31st, 2012 and prorated this amount for the ten months to October 31st, 2012.

OM&A costs included in the SMDR are actual audited costs from January 1st, 2009 to December 31st, 2011 and the prorated costs for the ten months in 2012 until the proposed date of the SMIRR.

The proposed SMIRR will continue until the effective date of Veridian's next cost of service application, currently anticipated as May 1st, 2014.

Notes within the Model state that *"The Board expects that the majority (i.e. 90% or more) of costs for which the distributor is seeking will be audited."* Veridian confirms that 100% of the costs submitted for disposition are included within its audited financial statements to December 31, 2011.

All costs incurred within Veridian's Smart Meter Program have been prudently incurred. Veridian's average per meter capital cost is $138.40, which compares favourably to the per meter capital cost of $186.76 reported within the Board's "Sector Smart Meter Audit Review Report".

Table 2: Veridian Average Smart Meter Capital Costs

Time Period	Total Capital Costs	Total Installs	Per Meter Capital Costs
2007-2008	$7,819,148	70,869	110.33
2009-2011	$7,730,561	41,485	186.35
2007-2011	$15,549,709	112,354	$138.40

Veridian is not seeking recovery of stranded meter costs at this time and continues to include these costs in its rate base for rate-making purposes. This is in accordance with the Guidelines which state *"While it would be preferable, conceptually, to also deal with stranded meter costs in a non-cost of service (i.e. stand-alone) application, the Board recognizes the practical difficulties that arise since there is no restatement of the rate base and base rates. The Board therefore expects that stranded meter costs will be left in rate base until the distributor's next cost of service application."*

The SMDR and SMIRR will have monthly total bill impacts as follows:

- A typical 800 kWh per month Residential customer will have a net increase of $1.94 or 1.86%
- A typical GS < 50 kW customer with a monthly electricity consumption of 2,000 kWh will have a net increase of $4.91 or 1.92%

2.0 Smart Meter Program Status

As stated previously, as of December 31st, 2011, Veridian has completed Smart Meter installations for 99.7% of its residential customers and 99.2% of its GS < 50 kW customers.

During 2007 and 2008, Veridian's activities were focused on residential installations within its service area, excluding Gravenhurst (referred to as Veridian's "Main" tariff zone). Smart Meter implementations in Gravenhurst were completed in 2010 as a

discrete deployment as the topography and geography of the area presented unique challenges and considerations.

From 2009 to 2011, Veridian continued with residential installations within its Main tariff zone. As well, a further 6,856 meters were installed in the GS < 50 kW class. The deployment of Gravenhurst Smart Meters was completed in 2010 and 2011.

Table 3 – Smart Meter Installations by Year and Customer Class

Customer Class	Total RPP eligible customers	2007	2008	2009	2010	2011	% of completion
Residential	104,015	34,609	69,090	97,339	102,024	103,719	**99.7%**
GS < 50	8,705		1,779	3,112	7,728	8,635	**99.2%**
Total	112,720	34,609	70,869	100,451	109,752	112,354	
% comp		**30.7%**	**62.9%**	**89.1%**	**97.4%**	**99.7%**	

Within the remaining installations to be completed there are some installations that require repairs and/or upgrades to customer meter bases or other equipment in order to complete the installations. Veridian has estimated the cost for these repairs and/or modifications to be $70,000 and this cost has been included in the calculation of the 2012 revenue requirement.

There also remain a small number of installations that Veridian has been unable to complete due to customer refusal or lack of cooperation or response from customers. Veridian is working to complete these installations through continued communication efforts such as telephone calls, door hanger communications and letters including notification to customers that their account could be subject to disconnection of service. Veridian is undertaking best efforts to complete its Smart Meter Implementation Plan while continuing to work with these customers.

3.0 Procurement of Smart Meters and Installation Services

Veridian was one of the thirteen licensed distributors that were authorized by regulation to conduct smart meter activities. Those thirteen distributors participated in the Board's 2007 Combined Proceeding with respect to smart meters (EB-2007-0063 – "Combined Proceeding"). On page 1 of the Board's Decision in the Combined Proceeding, the Board explained the purpose of the proceeding as follows:

> *"In January of 2007, twelve licensed distributors authorized by Ontario Regulation 427/06 to conduct discretionary metering activities filed applications pursuant to section 78 of the Ontario Energy Board Act, 1998 for the approval of distribution rates. These applications included a Smart Metering Rate Adder to be effective as of May 1, 2007.*
> *The twelve distributors are Chatham-Kent Hydro Inc., Enersource Hydro Mississauga Inc., Horizon Utilities Corporation, Hydro One Brampton Networks Inc., Hydro One Networks Inc., Hydro Ottawa Limited, Middlesex Power Distribution Corporation, Milton Hydro Distribution Inc., PowerStream Inc., Tay Hydro Electric Distribution Co. Inc., Toronto Hydro-Electric System Limited, and Veridian Connections Inc.*
> *The Board issued a Notice of Combined Proceeding establishing this proceeding to determine the prudence and recovery of costs associated with Smart Metering activities for the twelve licensed distributors referred to above, and a thirteenth licensed distributor, Newmarket Hydro Limited, that has been authorized by regulation to conduct discretionary metering activities."*

In 2006, Veridian collaborated with the Coalition of Large Distributors ("CLD") to establish vendor selection options, which then led to a joint procurement process for key components of the Advanced Metering Infrastructure ("AMI"). In 2007, Veridian entered into contracts with Elster Metering ("Elster") to procure its Mesh Network AMI system. Veridian joined other CLD members who had also selected the Elster product to jointly negotiate smart meter supply contracts based on aggregate meter volumes, in order to achieve the most favourable pricing possible.

Veridian's implementation plan utilized a combination of internal staff and contractors for the installation/deployment of smart meters. Veridian took part in a Request for Proposal (RFP) with PowerStream, Tay Hydro Electric, Horizon Utilities and Newmarket Hydro to solicit proposals for meter installation services in their respective service areas.

Based on the results of that RFP process, Veridian contracted with Honeywell for installation services in 2007.

Veridian's procurement and purchasing decisions were reviewed by the Board as part of that proceeding. The Board found these procurement and purchasing decisions prudent as stated at page 20 of its Decision:

> *"In summary, the Board finds that the purchasing decisions of the thirteen utilities involved in this proceeding have been implemented with the necessary due diligence. The terms of contracts each has concluded with suppliers, including the pricing, are prudent."*

In Veridian's 2010 Cost of Service proceeding the Board approved $7,819,147 of smart meter related capital expenditures to December 31, 2008 for inclusion in rate base.

Through 2009 to 2011, Veridian continued to purchase smart meters from Elster under the same contract that was filed in confidence during the Combined Proceeding. Pricing was in Canadian dollars with quarterly adjustments in exchange rates to US dollars. The favourable trend in exchange rates over the period of January 2009 through December 2010 provided declining per meter capital costs.

In 2009 and 2010 the balance of the residential and GS < 50 meters installed within Veridian's Main tariff zone were completed using a combination of internal staff and contractors. In late 2007, the installation services contractor with Honeywell ended prior to completion of the first 40,000 meters as per the original RFP. A contract was entered into with another qualified vendor from the original 2007 RFP process; Olameter Metering Services.

In the summer of 2008 Veridian, with the assistance of Util-Assist, conducted another RFP for installation services. Olameter Metering Services was the successful bidder of this RFP.

Olameter's performance throughout 2008 and 2009 within the Veridian Main tariff zone had been very effective and efficient.

In 2010 as part of the Gravenhurst smart meter deployment, Veridian continued its contract with Olameter Metering Services for installation and appointment management services.

Supplier agreements for the procurement of meters and meter installation services are available and can be filed on a confidential basis pursuant to the OEB's *Practice Direction on Confidential Filings* if required.

4.0 Capital and OM&A Costs

In this Application, Veridian is seeking recovery of capital and operating costs related to the 41,485 smart meters installed from January 1, 2009 to December 31, 2011.

4.1 Capital Costs

Table 4 below provides a summary of capital costs for Veridian's smart meter implementation from 2007 through to 2011.

Table 4: Summary of Smart Meter Capital Costs

Capital Costs:		**Installed Meters**		**Cost per Meter**
Jan 1, 2007 to Dec 31, 2008 (previously approved)	$ 7,819,148	70,869	$	110.33
Jan 1, 2009 to Dec 31, 2011	$ 7,730,561	41,485	$	186.35
Total	**$ 15,549,709**	**112,354**	**$**	**138.40**

All capital costs are actual audited costs and included in Veridian's audited financial statements.

The capital costs included in Table 4 include all smart metering related capital costs including the full cost of the meters installed and all other capital costs such as communication devices, computers and software used in the Advanced Metering Infrastructure.

Veridian's final average per meter cost of $138.40 compares favourably to the industry average capital cost of $186.76 derived from the "Sector Smart Meter Audit Report" issued by the OEB Regulatory Audit and Accounting Group on March 31, 2010. It is expected that the industry average will increase as it is updated and will include a higher number of the higher costs GS < 50 kW installations.

As outlined previously, Veridian's 2007 and 2008 installations were primarily residential meters and per meter unit costs averaged $110.33.

Unit cost per installed meter increased during the period of 2009 and 2010 to $187.20.
Several factors contributed to higher per unit installation costs in 2009 and 2010.
In 2009 and 2010, Veridian completed proportionately more GS < 50 kW installations which use more expensive 3-phase meters.

In 2007 and 2008 Veridian had outsourced its computer controller aggregation function to a third party. In 2009 a decision was made to bring that function in-house as the cost effectiveness of having a third party provide this service decreased considerably as the number of meters and the amount of data increased. The hardware and software costs for this system were recorded in 2009, thus increasing the per unit costs in that period.

In 2010 Veridian completed smart meter installations in its Gravenhurst service area. The Gravenhurst service area is a rural, low density, heavily forested area with many lakes and rivers. There are many hard to access locations such as those on less travelled roads and on islands. The smart meter deployment in this service area presented unique

challenges. Installation costs were higher in this service area as travel time between locations was longer and a variety of vehicles and means of access (such as off-road vehicles and boats) were required.

Table 5 below provides the 2009-2011 capital costs by OEB category.

Table 5: 2009-2011 Capital Costs by OEB Category

	2009	2010	2011	Totals
Smart Meters	2,632,774	1,749,718	378,634	**4,761,126**
Installation Costs	670,117	625,512	378,282	**1,673,911**
Collectors (incl. installation)	113,073	455,102	52,549	**620,725**
Sub-Total	3,415,964	2,830,332	809,465	**7,055,762**
Computer Hardware/Software-AMCC	421,961	83,289	125,210	**630,459**
Other AMI Capital Costs	12,050	0	0	**12,050**
Total for Minimum Functionality	3,849,975	2,913,621	934,675	**7,698,271**
Beyond Minimum Functionality	32,290	0	0	**32,290**
Total Smart Meter Capital Costs	**3,882,265**	**2,913,621**	**934,675**	**7,730,561**

Veridian did not maintain detailed allocations of capital costs between smart meters and collectors from 2007 through 2009. In 2010, Veridian instituted new record keeping in an attempt to separate out these costs. As a result, there may be some distortion between the values recorded as smart meters and collectors when compared on a year over year basis. Veridian has done its best to identify those costs separately but unfortunately, due to inadequate source data, the actual values recorded may not be accurately split between the two types of assets. Veridian proposes that this allocation, while useful information, does not further the calculation of revenue requirement as the rate base treatment and useful lives for the two assets is the same.

Smart Meters and Collectors

From 2009 – 2011 the total capital cost for smart meters and collectors was $7,055,762 Based on 41,485 meters/collectors installed during that period, unit costs not including hardware and software and other capital costs were $170.08.

For earlier collector installations (2007 – 2008) leased and customer land phone lines ("POTS" – "plain, old telephone services") were used for communications to the AMCC. These installations were within Veridian's smaller service communities of Belleville, Port Hope, Clarington, Brock and Port Perry. The POTS solution was initially chosen as it was proven and reliable technology that could be deployed quickly. When evaluated for the more densely populated communities of Ajax and Pickering it was determined to be a less economical solution. Late in 2008, Veridian undertook a vendor selection process for the provision of a private Wide Area Network Solution ("WAN"), aided by Util-assist Consulting Services. Veridian sought a turnkey solution that would provide wireless communication and competitive pricing. Through this comprehensive RFP and evaluation process and detailed cost/benefit review of POTS vs WAN solution, a solution with National Wireless was chosen. This solution required a small capital investment of approximately $40,000 for modems to be deployed with the collector meters and annual operating costs were estimated at 50% of the cost of a POTS solution with the equivalent number of collectors.

Testing of the network began in April 2009 and implementation of the network was completed later in 2009 and through Q2 2010. Capital costs associated with the network are included in meter and collector costs.

In planning its final service area deployment of Gravenhurst, Veridian sought assurances from its wireless contractor of the feasibility of deploying the same technology in this rural area. Test results confirmed the feasibility and the private WAN was further

leveraged in Gravenhurst. This resulted in slightly higher capital costs per collector with the long term benefit of lower operating costs.

Veridian notes that installation costs as a percentage of meter capital costs were higher in 2010 and 2011 than in 2009. As previously mentioned, installation costs were significantly higher in Gravenhurst than in other Veridian service areas. Travel time between locations is significantly greater in the rural portions of Gravenhurst service area, often requiring access by boat to island properties and by quad vehicles over unpaved access roads, rather than by regular vehicles in urban service areas.

Other capital costs included in this category include workforce automation hardware and software totaling $64,134 such as handheld tablets for use by field staff to manage work orders for installations and the accompanying operational software.

Advanced Metering Control Computer (AMCC)

Capital costs for the AMCC totaled $630,459.

In 2007 and 2008 Veridian outsourced its computer controller aggregation function to a third party. Based on the resources available at that time and the expected costs with the installed number of units to date, that approach appeared to be the most economic solution in the short-term. However, after completing further analysis in 2008, Veridian decided to bring the meter data aggregation function in house in 2009. The cost effectiveness of having a third party provide this service decreased considerably as the number of meters and the amount of data increased. Having more control of this critical consumer function was a key consideration in this decision. Hardware costs totaled $80,340 and software licensing and configuration costs totaled approximately $281,000.

During 2009 - 2011 Veridian recognized the need for an additional business system to support its smart meter operations in the following areas:

- Providing IESO reports in a user friendly format

- AMCC account level file parsing and MDM/R interface
- Account level data edits and retransmission to MDM/R
- Satisfy Measurement Canada compliancy concerns in regards to register reads

Investment in an Operational Data Store ("ODS") began in 2009 and was enhanced through 2010 and 2011.

The Veridian AMI collects and provides raw metering data to the MDM/R on a daily basis. The MDM/R is responsible for services including data validation and billable data compilation to be used by utility's customer information system ("CIS"). However, real world problems regularly occur that neither the AMI nor the MDM/R nor the CIS are designed to handle exclusively on their own. These issues are caused by normal business operations including meter exchanges, meter removals, new services, disconnects/reconnects, and data estimations. The numerous types of MDM/R reports and total volumes necessitate automated support to accomplish critical data analysis and corrective action. Veridian's ODS facilitates these processes. The Veridian ODS does not replace the bill determinant creation process or actual data in the MDM/R, rather it brokers the relationship between the MDM/R reports and the meter data. Meter data adjustments necessary for accurate customer billing are performed within the ODS. These adjustments are automatically done prior to, concurrently, and after the normal billing process.

Total capital costs for the ODS were approximately $266,000. This includes hardware, software licensing and costs for configuration.

4.2 OM&A Costs

Table 6 below provides a summary of OM&A costs for Veridian's smart meter implementation from 2007 through to 2011 as well as a forecast of annual operating costs in 2012.

Table 6: Summary of Smart Meter OM&A Costs

OM&A Costs:			Cumulative Number of Meters Installed		Cost per Meter
Jan 1, 2007 to Dec 31, 2008 (previously approved)	$	604,961	70,869	$	8.54
Jan 1, 2009 to Dec 31, 2011	$	2,577,008	112,354	$	22.94
Total	**$**	**3,181,969**			
Cumulative Cost per Meter (2007 - 2011)				$	28.32
2012 Forecast OM&A Costs	$	727,102	112,354	$	6.47

Table 7 summarizes actual OM&A costs by OEB cost category for 2009 – 2011 and the annual forecast for 2012 costs.

Table 7: 2009-2012 OM&A costs by OEB Category

	2009-Actuals	2010-Actuals	2011-Actuals	2012-Forecast	Totals
Related to Minimum Functionality					
Smart Meter Maintenance	90,258	34,274	68,181	134,426	**327,140**
Collector Maintenance	29,555	46,798	41,541	68,848	**186,743**
Computer Software Maintenance	38,553	40,727	60,285	92,356	**231,922**
Other (Security Audit, Systems Operations)	45,272	90,394	99,366	202,337	**437,370**
WAN Maintenance	144,729	149,251	146,136	151,119	**591,236**
Business Process Redesign	294,536	123,772	3,394	-	**421,701**
Customer Communications	215,939	391,263	198,092	78,015	**883,309**
Change Management	64,220	-	-	-	
Total for Minimum	923,062	876,480	616,996	727,102	**3,143,640**
Beyond Minimum	160,469	-	-	-	160,469
Total Smart Meter OM&A Costs	**1,083,532**	**876,480**	**616,996**	**727,102**	**3,304,110**

Veridian completed transition of its eligible customers to TOU rates by November 5, 2010 in accordance with the Board's Final Determination to Mandate Time-of-Use Pricing (EB-2010-0218).

Smart meter and collector maintenance costs include approximately $192,000 for meter base repairs where retrofit or repair work was required on customers' equipment to enable smart meter installation.

Computer software maintenance costs are annual and ad hoc maintenance fees for the various software components of the AMCC such as the meter data aggregation software and the operational data store.

Other costs related to the AMCC include incremental labour for systems operations and completion of an AMI security audit.

There are significant ongoing telecommunication costs associated with the Wide Area Network. These costs are for both land lines and wireless data transmission from collectors through to the AMCC. Due to Veridian's non-contiguous and dispersed service area configuration, additional costs are incurred for long distance. Veridian confirms that the avoided costs of manual meter reading were removed from total operating costs within Veridian's Board approved 2010 COS revenue requirement.

In 2009 Veridian undertook the large project of documentation of all internal business processes impacted by smart meters and TOU implementation and staff education and training on new business processes. Veridian engaged an external firm to assist in this endeavour.

Smart meter implementation and all of the supporting systems for data collection, aggregation and management have required additional incremental human resources.

Two new permanent positions were required for the initial configuration of the systems and for their ongoing operations. These positions were created and staffed prior to 2010 but the cost for these resources was not included in within Veridian's Board approved 2010 COS revenue requirement. Veridian confirms that the costs associated with these resources and included within this application are entirely incremental to operating costs recovered within current base distribution rates.

Customer communication costs included both a TOU customer communications program and a call centre staffing strategy.

Veridian developed and implemented a call centre strategy in contemplation of anticipated call volumes resulting from the installation of smart meters and the deployment of TOU rates. Veridian based its strategy on industry assumptions and past experience from market opening and other significant customer related changes in billing practices. Veridian strategy was to contract full and part time staff. These staff supported higher call volumes and back filled regular staff during training and testing sessions through TOU implementation. This strategy allowed Veridian to maintain the standard of 65% of calls answered within 30 seconds as required by the OEB throughout the period of smart meter and TOU implementation.

Veridian's customer communication plan provided for educational materials on smart meters and TOU rates such as brochures and bill inserts, direct mail packages and door hanger packages distributed at the time of smart meter installation. Veridian also included regular updates on its smart metering initiatives on its company website and at community events where feasible.

Veridian's multi-faceted communication strategy has been very effective in educating customers on the benefits of smart metering and in facilitating customer acceptance of the industry changes related to smart meters and TOU rates.

5.0 Expenditures Beyond Minimum Functionality

Veridian has incurred capital costs of $32,290 and OM&A costs of $160,469 that meet the Board's criteria for being identified as expenditures beyond minimum functionality the total of which constitute only 1% of Veridian's total expenditures for its smart meter initiative. Veridian submits that these expenditures were necessary for the successful completion of its smart metering implementation and that the costs were prudently incurred. Veridian is requesting these amounts be approved for recovery and included within the calculations of smart meter revenue requirement provided in this application.

Capital Costs beyond Minimum Functionality

Minor modifications were required to Veridian's CIS for integration with the MDM/R and synchronization with Veridian's internal AMCC systems. The total costs for these modifications were $23,200.

In addition, custom programming was required to leverage existing web presentment software to facilitate the provision of meter data such as usage charts to those customers with smart meters. Web presentment is an important tool provided to Veridian's customers that has enabled education related to consumption patterns and a tool for understanding shifts in costs related to time of use pricing. The cost for this additional functionality was approximately $7,600.

OM&A Beyond Minimum Functionality

Veridian has incurred operating costs related to the implementation of TOU rates and integration with the MDM/R.

In 2009 Veridian began its work on testing and integration with the MDM/R. Veridian hired a third party, Sky Energy Consulting, to assist in the testing and execution of its MDM/R cutover preparation strategy. Veridian determined that a third party contract was

the most cost and time effective manner to meet its requirements relating to certification on integration. The cost for this four-month contract was approximately $160,000. While internal staff also worked on this project, those costs are not included for recovery in this application as they were not incremental to Veridian's existing revenue requirement. In November 2009, Veridian provided self-certification to the IESO on Cutover Readiness, certifying its readiness in the areas of MDM/R System and Business Process Requirements, Staff Training and Cutover Preparations. Veridian proposes that the costs incurred for integration with the MDM/R were necessary to meet the provincial mandate of TOU implementation.

6.0 Stranded Meter Costs

In accordance with the Board issued *Guideline G-2011-0001 Smart Meter Funding and Cost Recovery – Final Disposition* issued December 15, 2011, Veridian is not seeking disposition of the stranded costs of its conventional meters at this time.

Veridian continues to amortize the stranded meters over the remaining amortization period and charges this expense to account 5705 Amortization Expense. The net book value of remaining stranded meters will be brought forward for disposition a part of Veridian's net Cost of Service Application.

7.0 Smart Meter Disposition Rider

Table 8 below summarizes the difference between the smart meter revenue requirement and the smart meter funding adder revenues collected (including carrying costs on collections) for the period January 1st, 2009 to May 1st, 2012. The smart meter revenue requirement is that associated with Veridian's smart metering activities for the period of January 1st, 2009 to December 31st, 2011 and includes forecasted 2012 OM&A costs until November 1st, 2012; the proposed effective date of the SMIRR.

Details of the smart meter revenue requirement for each year, the funding adder collections and carrying costs are set out in the 2012 Smart Meter Cost Recovery Model ("the Model") in Appendix 1.

Table 8: Calculation of True-up amount for SMDR

Smart Meter Disposition Rider		Amount
Smart Meter Revenue Requirement-2009	$	1,343,790
Smart Meter Revenue Requirement-2010	$	1,657,426
Smart Meter Revenue Requirement-2011	$	1,755,576
Smart Meter Revenue Requirement-2012 (Jan 1st to Oct 31st)	$	1,584,579
Revenue Requirement Total	$	6,341,372
Smart Meter Rate Adder Collections	$	(4,091,833)
Carrying Costs	$	(47,489)
Smart Meter True-up	$	2,202,050

Note: 2012 is 10/12 of annualized requirement as proposed effective date of SMIRR is November 1st, 2012

As shown, the amount of $2,202,050 is that amount to be collected through a Smart Meter Disposition Rate Rider.

For purposes of the SMDR calculation, it is necessary to calculate the revenue requirement up to the effective date of the SMIRR which then provides the prospective revenue requirement associated with the approved smart meter investment and related incremental OM&A costs.

The Application proposes an effective date of November 1st, 2012 for the SMIRR rate rider. For purposes of the SMDR calculation, it is then necessary to calculate revenue requirement up to October 31st, 2012.

To determine the 2012 revenue requirement to October 31st, 2012, Veridian has calculated the revenue requirement for the 2012 fiscal year ended December 31st, 2012 and prorated this amount for the ten months to October 31st, 2012.

OM&A costs included in the SMDR are actual audited costs from January 1st, 2009 to December 31st, 2011 and the prorated costs for the ten months in 2012 until the proposed date of the SMIRR.

Veridian is proposing the amount to be collected from the two rate classes for which smart meters have been installed; Residential and GS < 50 kW, as a monthly fixed charge. The allocation to the rate classes is based on the same methodology as that is used to calculate the SMIRR rate rider. Please see Table 10 in the following section for a description of the methodology. Veridian proposes an 18 month recovery period beginning November 1st, 2012 to April 30th, 2014. The calculation of the rate riders for each class is provided in Table 9 below.

Table 9: Calculation of Smart Meter Disposition Rate Rider (SMDR)
Effective November 1st, 2012 to April 30, 2014 - 18 months

Customer Class	# of Active Metered Customers (average 2012)	SMIRR Allocation (%)	True-up Amount Allocation	Monthly Charge
Residential	104,494	82.7%	$ 1,821,080	$ 0.97
GS < 50 kW	8,650	17.3%	$ 380,970	$ 2.45
Total	113,144	100.0%	$ 2,202,050	

8.0 Smart Meter Incremental Revenue Requirement Rider (SMIRR)

Veridian is also seeking a SMIRR to recover the prospective annualized incremental revenue requirement. The proposed SMIRR would continue in rates until this revenue requirement is incorporated into base distribution rates within Veridian's next Cost of Service distribution rate application, April 30th, 2014.

Table 10 below provides the calculation of the amount to be recovered through the SMIRR.

Table 10: Calculation of Amount to be recovered through SMIRR

Smart Meter Incremental Revenue Requirement to be collected	Amount
Smart Meter Revenue Requirement-2012	$ 316,916
Smart Meter Revenue Requirement-2013	$ 1,901,495
Total Revenue Requirement to be collected	$ 2,218,411

Note: 2012 is 2/12 of annualized requirement as proposed effective date of SMIRR is November 1st, 2012

Veridian proposes that the smart meter incremental revenue requirement be allocated to the Residential and GS < 50 kW rate classes and recovered through a monthly fixed charge rate rider.

Table 11 below shows the allocation of the revenue requirement to the two classes.

Table 11 - Allocation of Revenue Requirement between Customer Classes

	# of Active Metered Customers (average 2012)	Total Capital	Return	Amort	OM&A	Subtotal	PILs	Total	% of Total
Res.	104,494	$ 5,858,867	$ 405,446	$ 536,032	$ 783,046	$ 1,724,523	$ 110,077	$ 1,834,600	82.7%
GS<50	8,650	$ 1,839,404	$ 127,290	$ 168,288	$ 65,192	$ 360,770	$ 23,028	$ 383,798	17.3%
Total	113,144	$ 7,730,561	$ 532,736	$ 704,320	$ 848,237	$ 2,085,293	$ 133,105	$ 2,218,398	100.0%

The revenue requirement has been allocated as follows:

- Return and amortization have been allocated on each class's percentage share of the total capital costs – Residential 76.1%, GS < 50 kW 23.9% - See table 12 below
- OM&A costs have been allocated on the basis of the total number of meters installed from 2007 – 2011 for each class – Residential 92.3%, GS < 50 kW 7.7% - See table 12 below

- PILs have been allocated based on the revenue requirement derived for each class before PILs – Residential 82.9%, GS < 50 kW 17.1%

Table 12: Capital Costs by Rate Class

	Installed Meter Capital Costs	Other Capital Costs	Total Capital Costs	Resulting Allocation Factor	Total Number of Meters installed from 2006-2011	Allocation Factor used for Other Capital Cost and OM&A
Customer Class						
Residential	4,692,719	1,166,148	5,858,867	76.1%	103,719	92.3%
GS < 50 kW	1,742,317	97,086	1,839,404	23.9%	8,635	7.7%

Installed meter costs were tracked separately by rate class and hence were directly identifiable. Other capital costs such as hardware and software expenditures for the AMCC benefit all customers for whom a smart meter has been installed. Veridian, therefore, proposes that it is appropriate to use total number of smart meter installed by class as of December 31st, 2011 (including those installed from 2007 – 2008 which were previously approved) as the allocator for these capital costs.

Table 13 below provides the calculation of the SMIRR by customer class, based on a monthly fixed charge rate rider. The monthly charge is derived by dividing the SMIRR by the average number of customers and further dividing by 12 months. The cost attributable to the Residential customers is substantially lower than the GS < 50 kW due to the lower installed cost per meter for this class.

Table 13: Calculation of Smart Meter Incremental Revenue Rider (SMIRR)
Effective November 1st, 2012 to April 30, 2014 - 18 months

Customer Class	# of Active Metered Customers (average 2012)	SMIRR Allocation (%)	Annual Revenue Requirement Allocation	Monthly Charge
Residential	104,494	82.7%	$ 1,834,600	$ 0.98
GS < 50 kW	8,650	17.3%	$ 383,798	$ 2.46
Total	113,144	100.0%	$ 2,218,398	

Table 14 below provides a reconciliation to show the total recoveries through both the SMDR and the SMIRR for the 18 month period of November 1st, 2012 to April 30th, 2014 as compared to the total to be recovered as calculated in the Smart Meter Model.

Table 14: Reconciliation of total recovery through SMDR and SMIRR from November 1st, 2012 to April 30, 2014

Customer Class	# of Active Metered Customers (average 2012)	# months Rate Rider in Effect	SMDR Rate Rider	SMIRR Rate Rider	SMDR Recovery	SMIRR Recovery	Total SMDR & SMIRR Recovery
Residential	104,494	18	$ 0.97	$ 0.98	$ 1,821,080	$1,834,600	$ 3,655,680
GS < 50 kW	8,650	18	$ 2.45	$ 2.46	$ 380,970	$ 383,798	$ 764,768
Total	113,144				$ 2,202,050	$2,218,398	$ 4,420,449

Total to be recovered as calculated from Smart Meter Model

Net Deferred Revenue Requirement to December 31, 2012 from Sheet 9.SMFA_SMDR_SMIRR	$ 2,518,966
Add 2013 Revenue Requirement	$ 1,901,495
	$ 4,420,461

9.0 Rate Change Summary and Bill Impacts

Table 15 below details the bill impacts resulting from the implementation of the SMDR and SMIRR.

Current total bill charges have been calculated using Veridian's current Tariff of Rates and Charges effective May 1st, 2012 which does not include the $1.00 SMFA previously being collected from these customers as Veridian's SMFA expired on April 30th, 2012.

Table 15: Summary of Bill Impacts

Rate Class	Monthly Volume kWh	Rate Rider Totals $/mo	Total Bill Charges Current	Total Bill Charges Proposed	Monthly Bill Impacts $	Monthly Bill Impacts %
Veridian Main						
Residential	800	1.94	$ 104.36	106.30	$1.94	1.86%
GS<50	2,000	4.91	$ 256.16	261.07	$4.91	1.92%
Veridian Gravenhurst						
Residential - Urban	800	1.9436	$ 117.27	119.21	$1.94	1.66%
Residential - Suburban	800	1.9436	$ 130.62	132.56	$1.94	1.49%
Residential - Seasonal	800	1.9436	$ 145.38	147.32	$1.94	1.34%
GS<50	2,000	4.9118	$ 277.77	282.68	$4.91	1.77%

Monthly bill impacts would be lower if total bill charges had been calculated including the previously applied SMFA of $1.00.

Veridian proposes that these bill impacts are reasonable and require no mitigation measures.

File Number:EB-2012-0247

Date Filed:May 31, 2012

Exhibit 1

Tab 2 of 2

Appendices

File Number:	EB-2012-0247
Exhibit:	1
Tab:	2
Schedule:	1
Date Filed:	May 31, 2012

Appendix 1 of 1

Veridian 2012 Smart Meter Cost Recovery Model

V 2.17

Ontario Energy Board

Smart Meter Model

Choose Your Utility:

Veridian Connections Inc.
Veridian Connections Inc. - Gravenhurst

Application Contact Information

Name:	Laurie McLorg
Title:	VP Financial Services & CFO
Phone Number:	905-427-9870 X2230
Email Address:	lmclorg@veridian.on.ca
We are applying for rates effective:	November 1st, 2012
Last COS Re-based Year	2010

Legend

DROP-DOWN MENU

INPUT FIELD

CALCULATION FIELD

Copyright

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

Ontario Energy Board

Smart Meter Model

#N/A

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

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

Smart Meter Capital Cost and Operational Expense Data

	2006	2007	2008	2009	2010	2011	2012 and later	Total
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	

Smart Meter Installation Plan

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

Residential				28,249	4,685	1,695		34629
General Service < 50 kW				1,333	4,616	907		6856
Actual/Planned number of Smart Meters installed (Residential and GS < 50 kW only)	0	0	0	29582	9301	2602	0	41485
Percentage of Residential and GS < 50 kW Smart Meter Installations Completed	0.00%	0.00%	0.00%	71.31%	93.73%	100.00%	0.00%	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	29582	9301	2602	0	41485

1 Capital Costs

1.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)

	Asset Type (Asset type must be selected to enable calculations)	2006 Audited Actual	2007 Audited Actual	2008 Audited Actual	2009 Audited Actual	2010 Audited Actual	2011 Audited Actual	2012 and later Forecast	Total
1.1.1 Smart Meters *(may include new meters and modules, etc.)*	Smart Meter				2,601,541	1,728,235	367,217		$ 4,696,992
1.1.2 Installation Costs *(may include socket kits, labour, vehicle, benefits, etc.)*	Smart Meter				670,117	625,512	378,282		$ 1,673,911
1.1.3a Workforce Automation Hardware *(may include fieldwork handhelds, barcode hardware, etc.)*	Smart Meter					17,759	6,816		$ 24,575
1.1.3b Workforce Automation Software *(may include fieldwork handhelds, barcode hardware, etc.)*	Smart Meter				31,233	3,724	4,601		$ 39,558
Total Advanced Metering Communications Devices (AMCD)		$ -	$ -	$ -	$ 3,302,891	$ 2,375,230	$ 756,916	$ -	$ 6,435,037

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

	Asset Type	2006 Audited Actual	2007 Audited Actual	2008 Audited Actual	2009 Audited Actual	2010 Audited Actual	2011 Audited Actual	2012 and later Forecast	Total
1.2.1 Collectors	Smart Meter				107,129	389,558	29,503		$ 526,191
1.2.2 Repeaters *(may include radio licence, etc.)*									$ -
1.2.3 Installation *(may include meter seals and rings, collector computer hardware, etc.)*	Smart Meter				5,944	65,544	23,046		$ 94,534
Total Advanced Metering Regional Collector (AMRC) (Includes LAN)		$ -	$ -	$ -	$ 113,073	$ 455,102	$ 52,549	$ -	$ 620,725

1.3 ADVANCED METERING CONTROL COMPUTER (AMCC)	Asset Type	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
1.3.1 Computer Hardware	Computer Hardware				74,840	5,500	11,410		$ 91,749
1.3.2 Computer Software	Computer Software				347,121	77,789	113,800		$ 538,710
1.3.3 Computer Software Licences & Installation (includes hardware and software) *(may include AS/400 disk space, backup and recovery computer, UPS, etc.)*									$ -
Total Advanced Metering Control Computer (AMCC)		$ -	$ -	$ -	$ 421,961	$ 83,289	$ 125,210	$ -	$ 630,459

1.4 WIDE AREA NETWORK (WAN)	Asset Type	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
1.4.1 Activiation Fees									$ -
Total Wide Area Network (WAN)		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

1.5 OTHER AMI CAPITAL COSTS RELATED TO MINIMUM FUNCTIONALITY	Asset Type	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
1.5.1 Customer Equipment *(including repair of damaged equipment)*									$ -
1.5.2 AMI Interface to CIS									$ -
1.5.3 Professional Fees	Smart Meter				12,050				$ 12,050
1.5.4 Integration									$ -
1.5.5 Program Management	Smart Meter				0	0			$ -
1.5.6 Other AMI Capital									$ -
Total Other AMI Capital Costs Related to Minimum Functionality		$ -	$ -	$ -	$ 12,050	$ -	$ -	$ -	$ 12,050
Total Capital Costs Related to Minimum Functionality		$ -	$ -	$ -	$ 3,849,975	$ 2,913,621	$ 934,675	$ -	$ 7,698,271

1.6 CAPITAL COSTS BEYOND MINIMUM FUNCTIONALITY *(Please provide a descriptive title and identify nature of beyond minimum functionality costs)*	Asset Type	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
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									$ -
1.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDM/R, etc.	Computer Software				32,290				$ 32,290
Total Capital Costs Beyond Minimum Functionality		$ -	$ -	$ -	$ 32,290	$ -	$ -	$ -	$ 32,290
Total Smart Meter Capital Costs		$ -	$ -	$ -	$ 3,882,265	$ 2,913,621	$ 934,675	$ -	$ 7,730,561

2 OM&A Expenses

2.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)		Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
2.1.1 Maintenance *(may include meter reverification costs, etc.)*					12,459	16,657	41,509	99,426	$ 170,051
2.1.2 Other *(please specify)*	Meter Base Repairs				77,799	17,618	26,672	35,000	$ 157,089
Total Incremental AMCD OM&A Costs		$ -	$ -	$ -	$ 90,258	$ 34,274	$ 68,181	$ 134,426	$ 327,140
2.2 ADVANCED METERING REGIONAL COLLECTOR (AMRC) (includes LAN)									
2.2.1 Maintenance					29,555	46,798	41,541	68,848	$ 186,743
2.2.2 Other *(please specify)*									$ -
Total Incremental AMRC OM&A Costs		$ -	$ -	$ -	$ 29,555	$ 46,798	$ 41,541	$ 68,848	$ 186,743
2.3 ADVANCED METERING CONTROL COMPUTER (AMCC)									
2.3.1 Hardware Maintenance *(may include server support, etc.)*									$ -
2.3.2 Software Maintenance *(may include maintenance support, etc.)*					38,553	40,727	60,285	92,356	$ 231,922
2.3.2 Other *(please specify)*	Software operations labour and AMI Security Audit				45,272	90,394	99,366	202,337	$ 437,370
Total Incremental AMCC OM&A Costs		$ -	$ -	$ -	$ 83,825	$ 131,121	$ 159,652	$ 294,693	$ 669,291
2.4 WIDE AREA NETWORK (WAN)									
2.4.1 WAN Maintenance					144,729	149,251	129,152	151,119	$ 574,252
2.4.2 Other *(please specify)*	WAN Security Audit						16,984		$ 16,984
Total Incremental AMRC OM&A Costs		$ -	$ -	$ -	$ 144,729	$ 149,251	$ 146,136	$ 151,119	$ 591,236
2.5 OTHER AMI OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY									
2.5.1 Business Process Redesign					294,536	123,772	3,394		$ 421,701
2.5.2 Customer Communication (may include project communication, etc.)					215,939	391,263	198,092	78,015	$ 883,309
2.5.3 Program Management									$ -
2.5.4 Change Management (may include training, etc.)					64,220				$ 64,220
2.5.5 Administration Costs									$ -
2.5.6 Other AMI Expenses *(please specify)*									$ -
Total Other AMI OM&A Costs Related to Minimum Functionality		$ -	$ -	$ -	$ 574,695	$ 515,035	$ 201,485	$ 78,015	$ 1,369,230
TOTAL OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY		$ -	$ -	$ -	$ 923,062	$ 876,480	$ 616,996	$ 727,102	$ 3,143,640
2.6 OM&A COSTS RELATED TO BEYOND MINIMUM FUNCTIONALITY *(Please provide a descriptive title and identify nature of beyond minimum functionality costs)*		Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual		
2.6.1 Costs related to technical capabilities in the smart meters or related communications infrastructure that exceed those specified in O.Reg 425/06									$ -
2.6.2 Costs for deployment of smart meters to customers other than residential and small general service									$ -
2.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDM/R, etc.					160,469	0	0		$ 160,469
Total OM&A Costs Beyond Minimum Functionality		$ -	$ -	$ -	$ 160,469	$ -	$ -	$ -	$ 160,469
Total Smart Meter OM&A Costs		$ -	$ -	$ -	$ 1,083,532	$ 876,480	$ 616,996	$ 727,102	$ 3,304,110

3 Aggregate Smart Meter Costs by Category

3.1	**Capital**										
3.1.1	Smart Meter	$ -	$ -	$ -	$ 3,428,014	$ 2,830,332	$ 809,465	$ -	$ 7,067,812		
3.1.2	Computer Hardware	$ -	$ -	$ -	$ 74,840	$ 5,500	$ 11,410	$ -	$ 91,749		
3.1.3	Computer Software	$ -	$ -	$ -	$ 379,411	$ 77,789	$ 113,800	$ -	$ 571,000		
3.1.4	Tools & Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
3.1.5	Other Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
3.1.6	Applications Software	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
3.1.7	**Total Capital Costs**	**$ -**	**$ -**	**$ -**	**$ 3,882,265**	**$ 2,913,621**	**$ 934,675**	**$ -**	**$ 7,730,561**		
3.2	**OM&A Costs**										
3.2.1	**Total OM&A Costs**	**$ -**	**$ -**	**$ -**	**$ 1,083,532**	**$ 876,480**	**$ 616,996**	**$ 727,102**	**$ 3,304,110**		

#N/A

	2006	2007
Cost of Capital		
Capital Structure[1]		
Deemed Short-term Debt Capitalization		
Deemed Long-term Debt Capitalization	55.0%	55.0%
Deemed Equity Capitalization	45.0%	45.0%
Preferred Shares		
Total	100.0%	100.0%
Cost of Capital Parameters		
Deemed Short-term Debt Rate		
Long-term Debt Rate (actual/embedded/deemed)[2]	7.11%	7.11%
Target Return on Equity (ROE)	9.0%	9.00%
Return on Preferred Shares		
WACC	7.96%	7.96%
Working Capital Allowance		
Working Capital Allowance Rate	15.0%	15.0%
(% of the sum of Cost of Power + controllable expenses)		
Taxes/PILs		
Aggregate Corporate Income Tax Rate	36.12%	36.12%
Capital Tax (until July 1st, 2010)	0.30%	0.225%
Depreciation Rates		
(expressed as expected useful life in years)		
Smart Meters - years		
- rate (%)	0.00%	0.00%
Computer Hardware - years		
- rate (%)	0.00%	0.00%
Computer Software - years		
- rate (%)	0.00%	0.00%

Tools & Equipment - years		
- rate (%)	0.00%	0.00%
Other Equipment - years		
- rate (%)	0.00%	0.00%

CCA Rates

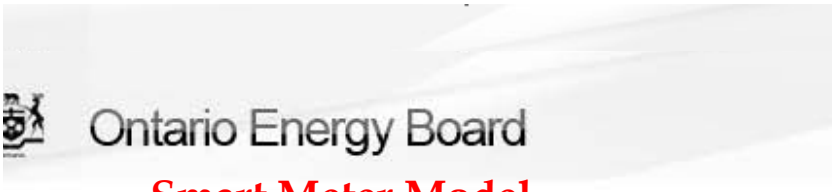
Smart Meters - CCA Class	47	47
Smart Meters - CCA Rate	8%	8%
Computer Equipment - CCA Class	50	50
Computer Equipment - CCA Rate	55%	55%
General Equipment - CCA Class	47	47
General Equipment - CCA Rate	8%	8%
Applications Software - CCA Class	12	12
Applications Software - CCA Rate	55%	55%

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 striaght line basis and has the "half-year" rule applied.*



Smart Meter Model

2008	2009	2010	2011	2012 and later
4.0%	4.0%	4.0%	4.0%	4.0%
53.5%	56.0%	56.0%	56.0%	56.0%
42.5%	40.0%	40.0%	40.0%	40.0%
100.0%	100.0%	100.0%	100.0%	100.0%
4.47%	4.47%	2.07%	2.07%	2.07%
7.11%	7.11%	5.57%	5.57%	5.57%
9.00%	9.00%	9.85%	9.85%	9.85%
7.81%	7.76%	7.14%	7.14%	7.14%
15.0%	15.0%	15.0%	15.0%	15.0%
33.50%	33.00%	31.00%	28.25%	26.50%
0.225%	0.225%	0.075%	0.00%	0.00%
	15	15	15	15
0.00%	6.67%	6.67%	6.67%	6.67%
	5	5	5	5
0.00%	20.00%	20.00%	20.00%	20.00%
	5	5	5	5
0.00%	20.00%	20.00%	20.00%	20.00%

	15	15	15	15
0.00%	6.67%	6.67%	6.67%	6.67%
0.00%	0.00%	0.00%	0.00%	0.00%
47	47	47	47	47
8%	8%	8%	8%	8%
50	52	52	45	45
55%	100%	100%	45%	45%
47	47	47	47	47
8%	8%	8%	8%	8%
12	12	12	12	12
55%	100%	100%	100%	100%

#N/A

	2006	2007	2008	2009	2010	2011	2012 and later
Net Fixed Assets - Smart Meters							
Gross Book Value							
Opening Balance		$ -	$ -	$ -	$ 3,428,014	$ 6,258,346	$ 7,067,812
Capital Additions during year (from Smart Meter Costs)	$ -	$ -	$ -	$ 3,428,014	$ 2,830,332	$ 809,465	$ -
Retirements/Removals (if applicable)							
Closing Balance	$ -	$ -	$ -	$ 3,428,014	$ 6,258,346	$ 7,067,812	$ 7,067,812
Accumulated Depreciation							
Opening Balance		$ -	$ -	$ -	-$ 114,267	-$ 437,146	-$ 881,351
Amortization expense during year	$ -	$ -	$ -	-$ 114,267	-$ 322,879	-$ 444,205	-$ 471,187
Retirements/Removals (if applicable)							
Closing Balance	$ -	$ -	$ -	-$ 114,267	-$ 437,146	-$ 881,351	-$ 1,352,539
Net Book Value							
Opening Balance	$ -	$ -	$ -	$ -	$ 3,313,747	$ 5,821,200	$ 6,186,460
Closing Balance	$ -	$ -	$ -	$ 3,313,747	$ 5,821,200	$ 6,186,460	$ 5,715,273
Average Net Book Value	$ -	$ -	$ -	$ 1,656,873	$ 4,567,474	$ 6,003,830	$ 5,950,867
Net Fixed Assets - Computer Hardware							
Gross Book Value							
Opening Balance		$ -	$ -	$ -	$ 74,840	$ 80,339	$ 91,749
Capital Additions during year (from Smart Meter Costs)	$ -	$ -	$ -	$ 74,840	$ 5,500	$ 11,410	$ -
Retirements/Removals (if applicable)							
Closing Balance	$ -	$ -	$ -	$ 74,840	$ 80,339	$ 91,749	$ 91,749
Accumulated Depreciation							
Opening Balance	$ -	$ -	$ -	$ -	-$ 7,484	-$ 23,002	-$ 40,211
Amortization expense during year	$ -	$ -	$ -	-$ 7,484	-$ 15,518	-$ 17,209	-$ 18,350
Retirements/Removals (if applicable)							
Closing Balance	$ -	$ -	$ -	-$ 7,484	-$ 23,002	-$ 40,211	-$ 58,561
Net Book Value							
Opening Balance	$ -	$ -	$ -	$ -	$ 67,356	$ 57,337	$ 51,539
Closing Balance	$ -	$ -	$ -	$ 67,356	$ 57,337	$ 51,539	$ 33,189
Average Net Book Value	$ -	$ -	$ -	$ 33,678	$ 62,347	$ 54,438	$ 42,364
Net Fixed Assets - Computer Software (including Applications Software)							
Gross Book Value							
Opening Balance		$ -	$ -	$ -	$ 379,411	$ 457,200	$ 571,000
Capital Additions during year (from Smart Meter Costs)	$ -	$ -	$ -	$ 379,411	$ 77,789	$ 113,800	$ -
Retirements/Removals (if applicable)							
Closing Balance	$ -	$ -	$ -	$ 379,411	$ 457,200	$ 571,000	$ 571,000
Accumulated Depreciation							
Opening Balance	$ -	$ -	$ -	$ -	-$ 37,941	-$ 121,602	-$ 224,422
Amortization expense during year	$ -	$ -	$ -	-$ 37,941	-$ 83,661	-$ 102,820	-$ 114,200
Retirements/Removals (if applicable)							
Closing Balance	$ -	$ -	$ -	-$ 37,941	-$ 121,602	-$ 224,422	-$ 338,622
Net Book Value							
Opening Balance	$ -	$ -	$ -	$ -	$ 341,470	$ 335,598	$ 346,578
Closing Balance	$ -	$ -	$ -	$ 341,470	$ 335,598	$ 346,578	$ 232,378
Average Net Book Value	$ -	$ -	$ -	$ 170,735	$ 338,534	$ 341,088	$ 289,478

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	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -


Ontario Energy Board

Smart Meter Model

#N/A

	2006	2007	2008	2009	2010	2011	2012 and Later
Average Net Fixed Asset Values (from Sheet 4)							
Smart Meters	$ -	$ -	$ -	$ 1,656,873	$ 4,567,474	$ 6,003,830	$ 5,950,867
Computer Hardware	$ -	$ -	$ -	$ 33,678	$ 62,347	$ 54,438	$ 42,364
Computer Software	$ -	$ -	$ -	$ 170,735	$ 338,534	$ 341,088	$ 289,478
Tools & Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Net Fixed Assets	**$ -**	**$ -**	**$ -**	**$ 1,861,286**	**$ 4,968,354**	**$ 6,399,357**	**$ 6,282,708**
Working Capital							
Operating Expenses (from Sheet 2)	$ -	$ -	$ -	$ 1,083,532	$ 876,480	$ 616,996	$ 727,102
Working Capital Factor (from Sheet 3)	15%	15%	15%	15%	15%	15%	15%
Working Capital Allowance	$ -	$ -	$ -	$ 162,530	$ 131,472	$ 92,549	$ 109,065
Incremental Smart Meter Rate Base	**$ -**	**$ -**	**$ -**	**$ 2,023,816**	**$ 5,099,827**	**$ 6,491,906**	**$ 6,391,774**
Return on Rate Base							
Capital Structure							
Deemed Short Term Debt	$ -	$ -	$ -	$ 80,953	$ 203,993	$ 259,676	$ 255,671
Deemed Long Term Debt	$ -	$ -	$ -	$ 1,133,337	$ 2,855,903	$ 3,635,467	$ 3,579,393
Equity	$ -	$ -	$ -	$ 809,526	$ 2,039,931	$ 2,596,762	$ 2,556,709
Preferred Shares	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Capitalization	$ -	$ -	$ -	$ 2,023,816	$ 5,099,827	$ 6,491,906	$ 6,391,774
Return on							
Deemed Short Term Debt	$ -	$ -	$ -	$ 3,619	$ 4,223	$ 5,375	$ 5,292
Deemed Long Term Debt	$ -	$ -	$ -	$ 80,580	$ 159,074	$ 202,496	$ 199,372
Equity	$ -	$ -	$ -	$ 72,857	$ 200,933	$ 255,781	$ 251,836
Preferred Shares	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Return on Capital	$ -	$ -	$ -	$ 157,056	$ 364,230	$ 463,652	$ 456,500
Operating Expenses	$ -	$ -	$ -	$ 1,083,532	$ 876,480	$ 616,996	$ 727,102
Amortization Expenses (from Sheet 4)							
Smart Meters	$ -	$ -	$ -	$ 114,267	$ 322,879	$ 444,205	$ 471,187
Computer Hardware	$ -	$ -	$ -	$ 7,484	$ 15,518	$ 17,209	$ 18,350
Computer Software	$ -	$ -	$ -	$ 37,941	$ 83,661	$ 102,820	$ 114,200
Tools & Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Amortization Expense in Year	$ -	$ -	$ -	$ 159,692	$ 422,058	$ 564,234	$ 603,737
Incremental Revenue Requirement before Taxes/PILs	$ -	$ -	$ -	$ 1,400,280	$ 1,662,768	$ 1,644,882	$ 1,787,340
Calculation of Taxable Income							
Incremental Operating Expenses	$ -	$ -	$ -	$ 1,083,532	$ 876,480	$ 616,996	$ 727,102
Amortization Expense	$ -	$ -	$ -	$ 159,692	$ 422,058	$ 564,234	$ 603,737
Interest Expense	$ -	$ -	$ -	$ 84,199	$ 163,296	$ 207,871	$ 204,665
Net Income for Taxes/PILs	$ -	$ -	$ -	$ 72,857	$ 200,933	$ 255,781	$ 251,836
Grossed-up Taxes/PILs (from Sheet 7)	$ -	$ -	$ -	-$ 56,489.66	-$ 5,341.93	$ 110,694.82	$ 114,155.31
Revenue Requirement, including Grossed-up Taxes/PILs	$ -	$ -	$ -	$ 1,343,790	$ 1,657,426	$ 1,755,576	$ 1,901,495

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 and later Forecast
Opening UCC	$ -	$ -	$ -	$ -	$ 3,290,893.41	$ 5,744,740.97	$ 6,062,248.30
Capital Additions	$ -	$ -	$ -	$ 3,428,013.97	$ 2,830,332.22	$ 809,465.22	$ -
Retirements/Removals (if applicable)							
UCC Before Half Year Rule	$ -	$ -	$ -	$ 3,428,013.97	$ 6,121,225.73	$ 6,554,206.19	$ 6,062,248.30
Half Year Rule (1/2 Additions - Disposals)	$ -	$ -	$ -	$ 1,714,006.99	$ 1,415,166.16	$ 404,732.61	$ -
Reduced UCC	$ -	$ -	$ -	$ 1,714,006.99	$ 4,706,059.57	$ 6,149,473.58	$ 6,062,248.30
CCA Rate Class	47	47	47	47	47	47	47
CCA Rate	8%	8%	8%	8%	8%	8%	8%
CCA	$ -	$ -	$ -	$ 137,120.56	$ 376,484.77	$ 491,957.89	$ 484,979.86
Closing UCC	$ -	$ -	$ -	$ 3,290,893.41	$ 5,744,740.97	$ 6,062,248.30	$ 5,577,268.44

UCC - Computer Equipment

	2006 Audited Actual	2007 Audited Actual	2008 Audited Actual	2009 Audited Actual	2010 Audited Actual	2011 Audited Actual	2012 and later Forecast
Opening UCC	$ -	$ -	$ -	$ -	$ 227,125.60	$ 41,644.29	$ 119,942.09
Capital Additions Computer Hardware	$ -	$ -	$ -	$ 74,839.71	$ 5,499.63	$ 11,410.09	$ -
Capital Additions Computer Software	$ -	$ -	$ -	$ 379,411.48	$ 77,788.94	$ 113,799.89	$ -
Retirements/Removals (if applicable)							
UCC Before Half Year Rule	$ -	$ -	$ -	$ 454,251.19	$ 310,414.17	$ 166,854.27	$ 119,942.09
Half Year Rule (1/2 Additions - Disposals)	$ -	$ -	$ -	$ 227,125.60	$ 41,644.29	$ 62,604.99	$ -
Reduced UCC	$ -	$ -	$ -	$ 227,125.60	$ 268,769.88	$ 104,249.28	$ 119,942.09
CCA Rate Class	50	50	50	52	52	45	45
CCA Rate	55%	55%	55%	100%	100%	45%	45%
CCA	$ -	$ -	$ -	$ 227,125.60	$ 268,769.88	$ 46,912.17	$ 53,973.94
Closing UCC	$ -	$ -	$ -	$ 227,125.60	$ 41,644.29	$ 119,942.09	$ 65,968.15

UCC - General Equipment

	2006 Audited Actual	2007 Audited Actual	2008 Audited Actual	2009 Audited Actual	2010 Audited Actual	2011 Audited Actual	2012 and later Forecast
Opening UCC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Capital Additions Tools & Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Capital Additions Other Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Retirements/Removals (if applicable)							
UCC Before Half Year Rule	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Half Year Rule (1/2 Additions - Disposals)	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Reduced UCC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
CCA Rate Class	47	47	47	47	47	47	47
CCA Rate	8%	8%	8%	8%	8%	8%	8%
CCA	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Closing UCC	$ -	$ -	$ -	$ -	$ -	$ -	$ -

PILs Calculation

	2006 Audited Actual	2007 Audited Actual	2008 Audited Actual	2009 Audited Actual	2010 Audited Actual	2011 Audited Actual	2012 and later Forecast
INCOME TAX							
Net Income	$ -	$ -	$ -	$ 72,857.38	$ 200,933.17	$ 255,781.09	$ 251,835.88
Amortization	$ -	$ -	$ -	$ 159,692.25	$ 422,057.77	$ 564,234.21	$ 603,737.38
CCA - Smart Meters	$ -	$ -	$ -	-$ 137,120.56	-$ 376,484.77	-$ 491,957.89	-$ 484,979.86
CCA - Computers	$ -	$ -	$ -	-$ 227,125.60	-$ 268,769.88	-$ 46,912.17	-$ 53,973.94
CCA - Applications Software	$ -	$ -	$ -	$ -	$ -	$ -	$ -
CCA - Other Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Change in taxable income	$ -	$ -	$ -	-$ 131,696.52	-$ 22,263.71	$ 281,145.24	$ 316,619.46
Tax Rate (from Sheet 3)	36.12%	36.12%	33.50%	33.00%	31.00%	28.25%	26.50%
Income Taxes Payable	$ -	$ -	$ -	-$ 43,459.85	-$ 6,901.75	$ 79,423.53	$ 83,904.16
ONTARIO CAPITAL TAX							
Smart Meters	$ -	$ -	$ -	$ 3,313,746.84	$ 5,821,200.48	$ 6,186,460.44	$ 5,715,273.01
Computer Hardware	$ -	$ -	$ -	$ 67,355.74	$ 57,337.46	$ 51,538.68	$ 33,188.79
Computer Software (Including Application Software)	$ -	$ -	$ -	$ 341,470.33	$ 335,598.08	$ 346,577.90	$ 232,377.84
Tools & Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Rate Base	$ -	$ -	$ -	$ 3,722,572.91	$ 6,214,136.03	$ 6,584,577.02	$ 5,980,839.64
Less: Exemption							
Deemed Taxable Capital	$ -	$ -	$ -	$ 3,722,572.91	$ 6,214,136.03	$ 6,584,577.02	$ 5,980,839.64
Ontario Capital Tax Rate (from Sheet 3)	0.300%	0.225%	0.225%	0.225%	0.075%	0.000%	0.000%
Net Amount (Taxable Capital x Rate)	$ -	$ -	$ -	$ 8,375.79	$ 4,660.60	$ -	$ -
Change in Income Taxes Payable	$ -	$ -	$ -	-$ 43,459.85	-$ 6,901.75	$ 79,423.53	$ 83,904.16
Change in OCT	$ -	$ -	$ -	$ 8,375.79	$ 4,660.60	$ -	$ -
PILs	$ -	$ -	$ -	-$ 35,084.06	-$ 2,241.15	$ 79,423.53	$ 83,904.16
Gross Up PILs							
Tax Rate	36.12%	36.12%	33.50%	33.00%	31.00%	28.25%	26.50%
Change in Income Taxes Payable	$ -	$ -	$ -	-$ 64,865.45	-$ 10,002.54	$ 110,694.82	$ 114,155.31
Change in OCT	$ -	$ -	$ -	$ 8,375.79	$ 4,660.60	$ -	$ -
PILs	$ -	$ -	$ -	-$ 56,489.66	-$ 5,341.93	$ 110,694.82	$ 114,155.31


Ontario Energy Board

Smart Meter Model

#N/A

This worksheet calculates the funding adder revenues.

Account 1555 - Sub-account Funding Adder Revenues

Interest Rates	Approved Deferral and Variance Accounts	CWIP	Date	Year	Quarter	Opening Balance (Principal)	Funding Adder Revenues	Interest Rate	Interest	Closing Balance	Annual amounts
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%	4.29%	Dec-07	2007	Q4	$ -		5.14%	$ -	$ -	$ -
2012 Q1	1.47%	4.29%	Jan-08	2008	Q1	$ -		5.14%	$ -	$ -	
2012 Q2	1.47%	4.29%	Feb-08	2008	Q1	$ -		5.14%	$ -	$ -	
2012 Q3	1.47%	4.29%	Mar-08	2008	Q1	$ -		5.14%	$ -	$ -	
2012 Q4	1.47%	4.29%	Apr-08	2008	Q2	$ -		4.08%	$ -	$ -	
			May-08	2008	Q2	$ -		4.08%	$ -	$ -	
			Jun-08	2008	Q2	$ -		4.08%	$ -	$ -	
			Jul-08	2008	Q3	$ -		3.35%	$ -	$ -	
			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	$ -	$ 75,365.94	2.45%	$ -	$ 75,365.94	
			Feb-09	2009	Q1	$ 75,365.94	$ 89,421.68	2.45%	$ 153.87	$ 164,941.49	
			Mar-09	2009	Q1	$ 164,787.62	$ 81,447.99	2.45%	$ 336.44	$ 246,572.05	
			Apr-09	2009	Q2	$ 246,235.61	$ 70,324.75	1.00%	$ 205.20	$ 316,765.56	
			May-09	2009	Q2	$ 316,560.36	$ 91,533.16	1.00%	$ 263.80	$ 408,357.32	
			Jun-09	2009	Q2	$ 408,093.52	$ 80,028.36	1.00%	$ 340.08	$ 488,461.96	
			Jul-09	2009	Q3	$ 488,121.88	$ 77,146.39	0.55%	$ 223.72	$ 565,491.99	
			Aug-09	2009	Q3	$ 565,268.27	$ 88,517.16	0.55%	$ 259.08	$ 654,044.51	
			Sep-09	2009	Q3	$ 653,785.43	$ 82,313.54	0.55%	$ 299.65	$ 736,398.62	
			Oct-09	2009	Q4	$ 736,098.97	$ 69,762.01	0.55%	$ 337.38	$ 806,198.36	
			Nov-09	2009	Q4	$ 805,860.98	$ 94,017.66	0.55%	$ 369.35	$ 900,247.99	
			Dec-09	2009	Q4	$ 899,878.64	$ 77,206.34	0.55%	$ 412.44	$ 977,497.42	$ 980,285.99
			Jan-10	2010	Q1	$ 977,084.98	$ 76,055.11	0.55%	$ 447.83	$ 1,053,587.92	
			Feb-10	2010	Q1	$ 1,053,140.09	$ 89,710.28	0.55%	$ 482.69	$ 1,143,333.06	
			Mar-10	2010	Q1	$ 1,142,850.37	$ 89,537.96	0.55%	$ 523.81	$ 1,232,912.14	
			Apr-10	2010	Q2	$ 1,232,388.33	$ 65,213.61	0.55%	$ 564.84	$ 1,298,166.78	
			May-10	2010	Q2	$ 1,297,601.94	$ 93,886.49	0.55%	$ 594.73	$ 1,392,083.16	
			Jun-10	2010	Q2	$ 1,391,488.43	$ 84,741.24	0.55%	$ 637.77	$ 1,476,867.44	
			Jul-10	2010	Q3	$ 1,476,229.67	$ 87,831.77	0.89%	$ 1,094.87	$ 1,565,156.31	
			Aug-10	2010	Q3	$ 1,564,061.44	$ 181,722.31	0.89%	$ 1,160.01	$ 1,746,943.76	
			Sep-10	2010	Q3	$ 1,745,783.75	$ 62,827.19	0.89%	$ 1,294.79	$ 1,809,905.73	
			Oct-10	2010	Q4	$ 1,808,610.94	$ 141,525.78	1.20%	$ 1,808.61	$ 1,951,945.33	
			Nov-10	2010	Q4	$ 1,950,136.72	$ 122,122.73	1.20%	$ 1,950.14	$ 2,074,209.59	
			Dec-10	2010	Q4	$ 2,072,259.45	$ 102,648.89	1.20%	$ 2,072.26	$ 2,176,980.60	$ 1,210,455.71
			Jan-11	2011	Q1	$ 2,174,908.34	$ 116,267.56	1.47%	$ 2,664.26	$ 2,293,840.16	
			Feb-11	2011	Q1	$ 2,291,175.90	$ 143,933.36	1.47%	$ 2,806.69	$ 2,437,915.95	
			Mar-11	2011	Q1	$ 2,435,109.26	$ 93,050.18	1.47%	$ 2,983.01	$ 2,531,142.45	
			Apr-11	2011	Q2	$ 2,528,159.44	$ 132,786.62	1.47%	$ 3,097.00	$ 2,664,043.06	
			May-11	2011	Q2	$ 2,660,946.06	$ 95,192.66	1.47%	$ 3,259.66	$ 2,759,398.38	
			Jun-11	2011	Q2	$ 2,756,138.72	$ 114,948.72	1.47%	$ 3,376.27	$ 2,874,463.71	
			Jul-11	2011	Q3	$ 2,871,087.44	$ 107,518.21	1.47%	$ 3,517.08	$ 2,982,122.73	
			Aug-11	2011	Q3	$ 2,978,605.65	$ 146,076.20	1.47%	$ 3,648.79	$ 3,128,330.64	
			Sep-11	2011	Q3	$ 3,124,681.85	$ 83,614.87	1.47%	$ 3,827.74	$ 3,212,124.46	

#N/A

This worksheet calculates the funding adder revenues.

Account 1555 - Sub-account Funding Adder Revenues

Interest Rates	Approved Deferral and Variance Accounts	CWIP	Date	Year	Quarter	Opening Balance (Principal)	Funding Adder Revenues	Interest Rate	Interest	Closing Balance	Annual amounts
			Oct-11	2011	Q4	$ 3,208,296.72	$ 136,597.19	1.47%	$ 3,930.16	$ 3,348,824.07	
			Nov-11	2011	Q4	$ 3,344,893.91	$ 94,667.20	1.47%	$ 4,097.50	$ 3,443,658.61	
			Dec-11	2011	Q4	$ 3,439,561.11	$ 128,448.25	1.47%	$ 4,213.46	$ 3,572,222.82	$ 1,434,522.64
			Jan-12	2012	Q1	$ 3,568,009.36	$ 122,209.64	1.47%	$ 4,370.81	$ 3,694,589.81	
			Feb-12	2012	Q1	$ 3,690,219.00	$ 110,019.63	1.47%	$ 4,520.52	$ 3,804,759.15	
			Mar-12	2012	Q1	$ 3,800,238.63	$ 115,807.57	1.47%	$ 4,655.29	$ 3,920,701.49	
			Apr-12	2012	Q2	$ 3,916,046.20	$ 175,786.56	1.47%	$ 4,797.16	$ 4,096,629.92	
			May-12	2012	Q2	$ 4,091,832.76		1.47%	$ 5,012.50	$ 4,096,845.26	
			Jun-12	2012	Q2	$ 4,091,832.76		1.47%	$ 5,012.50	$ 4,096,845.26	
			Jul-12	2012	Q3	$ 4,091,832.76		1.47%	$ 5,012.50	$ 4,096,845.26	
			Aug-12	2012	Q3	$ 4,091,832.76		1.47%	$ 5,012.50	$ 4,096,845.26	
			Sep-12	2012	Q3	$ 4,091,832.76		1.47%	$ 5,012.50	$ 4,096,845.26	
			Oct-12	2012	Q4	$ 4,091,832.76		1.47%	$ 5,012.50	$ 4,096,845.26	
			Nov-12	2012	Q4	$ 4,091,832.76		1.47%	$ 5,012.50	$ 4,096,845.26	
			Dec-12	2012	Q4	$ 4,091,832.76		1.47%	$ 5,012.50	$ 4,096,845.26	$ 582,267.18
			Total Funding Adder Revenues Collected				**$ 4,091,832.76**		**$ 115,698.76**	**$ 4,207,531.52**	**$ 4,207,531.52**

Board Approved Smart Meter Funding Adder (from Tariff)	
$	0.73
$	0.73
$	0.73
$	0.73
$	0.73
$	0.73
$	0.73
$	0.73
$	0.73
$	0.73
$	0.73
$	0.73
$	1.00
$	1.00
$	1.00
$	1.00
$	1.00
$	1.00
$	1.00
$	1.00
$	1.00
$	1.00
$	1.00
$	1.00
$	1.00
$	1.00
$	1.00
$	1.00
$	1.00
$	1.00
$	1.00
$	1.00

Board Approved Smart Meter Funding Adder (from Tariff)
$ 1.00
$ 1.00
$ 1.00
$ 1.00
$ 1.00
$ 1.00
$ 1.00

#N/A

This worksheet calculates the interest on OM&A and amortization/depr

Account 1556 - Su

Prescribed Interest Rates	Approved Deferral and Variance Accounts	CWIP		Date	Year	Quarter	Opening Balance (Principal)	
2006 Q1	0.00%	0.00%		Jan-06	2006	Q1	$	-
2006 Q2	4.14%	4.68%		Feb-06	2006	Q1		-
2006 Q3	4.59%	5.05%		Mar-06	2006	Q1		-
2006 Q4	4.59%	4.72%		Apr-06	2006	Q2		-
2007 Q1	4.59%	4.72%		May-06	2006	Q2		-
2007 Q2	4.59%	4.72%		Jun-06	2006	Q2		-
2007 Q3	4.59%	5.18%		Jul-06	2006	Q3		-
2007 Q4	5.14%	5.18%		Aug-06	2006	Q3		-
2008 Q1	5.14%	5.18%		Sep-06	2006	Q3		-
2008 Q2	4.08%	5.18%		Oct-06	2006	Q4		-
2008 Q3	3.35%	5.43%		Nov-06	2006	Q4		-
2008 Q4	3.35%	5.43%		Dec-06	2006	Q4		-
2009 Q1	2.45%	6.61%		Jan-07	2007	Q1		-
2009 Q2	1.00%	6.61%		Feb-07	2007	Q1		-
2009 Q3	0.55%	5.67%		Mar-07	2007	Q1		-
2009 Q4	0.55%	4.66%		Apr-07	2007	Q2		-
2010 Q1	0.55%	4.34%		May-07	2007	Q2		-
2010 Q2	0.55%	4.34%		Jun-07	2007	Q2		-
2010 Q3	0.89%	4.66%		Jul-07	2007	Q3		-
2010 Q4	1.20%	4.01%		Aug-07	2007	Q3		-
2011 Q1	1.47%	4.29%		Sep-07	2007	Q3		-
2011 Q2	1.47%	4.29%		Oct-07	2007	Q4		-
2011 Q3	1.47%	4.29%		Nov-07	2007	Q4		-

2011 Q4	1.47%	4.29%		Dec-07	*2007*	*Q4*	-
2012 Q1	1.47%	4.29%		Jan-08	*2008*	*Q1*	-
2012 Q2	1.47%	4.29%		Feb-08	*2008*	*Q1*	-
2012 Q3	1.47%	4.29%		Mar-08	*2008*	*Q1*	-
2012 Q4	1.47%	4.29%		Apr-08	*2008*	*Q2*	-
				May-08	*2008*	*Q2*	-
				Jun-08	*2008*	*Q2*	-
				Jul-08	*2008*	*Q3*	-
				Aug-08	*2008*	*Q3*	-
				Sep-08	*2008*	*Q3*	-
				Oct-08	*2008*	*Q4*	-
				Nov-08	*2008*	*Q4*	-
				Dec-08	*2008*	*Q4*	-
				Jan-09	*2009*	*Q1*	-
				Feb-09	*2009*	*Q1*	-
				Mar-09	*2009*	*Q1*	-
				Apr-09	*2009*	*Q2*	-
				May-09	*2009*	*Q2*	-
				Jun-09	*2009*	*Q2*	-
				Jul-09	*2009*	*Q3*	-
				Aug-09	*2009*	*Q3*	-
				Sep-09	*2009*	*Q3*	-
				Oct-09	*2009*	*Q4*	-
				Nov-09	*2009*	*Q4*	-
				Dec-09	*2009*	*Q4*	-
				Jan-10	*2010*	*Q1*	-
				Feb-10	*2010*	*Q1*	-
				Mar-10	*2010*	*Q1*	-
				Apr-10	*2010*	*Q2*	-
				May-10	*2010*	*Q2*	-
				Jun-10	*2010*	*Q2*	-
				Jul-10	*2010*	*Q3*	-
				Aug-10	*2010*	*Q3*	-
				Sep-10	*2010*	*Q3*	-
				Oct-10	*2010*	*Q4*	-
				Nov-10	*2010*	*Q4*	-
				Dec-10	*2010*	*Q4*	-
				Jan-11	*2011*	*Q1*	-
				Feb-11	*2011*	*Q1*	-
				Mar-11	*2011*	*Q1*	-
				Apr-11	*2011*	*Q2*	-
				May-11	*2011*	*Q2*	-
				Jun-11	*2011*	*Q2*	-
				Jul-11	*2011*	*Q3*	-
				Aug-11	*2011*	*Q3*	-
				Sep-11	*2011*	*Q3*	-
				Oct-11	*2011*	*Q4*	-
				Nov-11	*2011*	*Q4*	-
				Dec-11	*2011*	*Q4*	-

[redacted]	Jan-12	2012	Q1	-
	Feb-12	2012	Q1	-
	Mar-12	2012	Q1	-
	Apr-12	2012	Q2	-
	May-12	2012	Q2	-
	Jun-12	2012	Q2	-
	Jul-12	2012	Q3	-
	Aug-12	2012	Q3	-
	Sep-12	2012	Q3	-
	Oct-12	2012	Q4	-
	Nov-12	2012	Q4	-
	Dec-12	2012	Q4	-

reciation expense, based on monthly data.

b-accounts Operating Expenses, Amortization Expenses, Carrying Charges

OM&A Expenses	Amortization / Depreciation Expense	Closing Balance (Principal)	(Annual) Interest Rate	Interest (on opening balance)	Cumulative Interest
		-	0.00%	-	-
		-	0.00%	-	-
		-	0.00%	-	-
		-	4.14%	-	-
		-	4.14%	-	-
		-	4.14%	-	-
		-	4.59%	-	-
		-	4.59%	-	-
		-	4.59%	-	-
		-	4.59%	-	-
		-	4.59%	-	-
		-	4.59%	-	-
		-	4.59%	-	-
		-	4.59%	-	-
		-	4.59%	-	-
		-	4.59%	-	-
		-	4.59%	-	-
		-	4.59%	-	-
		-	4.59%	-	-
		-	4.59%	-	-
		-	4.59%	-	-
		-	4.59%	-	-
		-	5.14%	-	-
		-	5.14%	-	-

		-	5.14%	-	-
		-	5.14%	-	-
		-	5.14%	-	-
		-	5.14%	-	-
		-	4.08%	-	-
		-	4.08%	-	-
		-	4.08%	-	-
		-	3.35%	-	-
		-	3.35%	-	-
		-	3.35%	-	-
		-	3.35%	-	-
		-	3.35%	-	-
		-	3.35%	-	-
		-	2.45%	-	-
		-	2.45%	-	-
		-	2.45%	-	-
		-	1.00%	-	-
		-	1.00%	-	-
		-	1.00%	-	-
		-	0.55%	-	-
		-	0.55%	-	-
		-	0.55%	-	-
		-	0.55%	-	-
		-	0.55%	-	-
		-	0.55%	-	-
		-	0.55%	-	-
		-	0.55%	-	-
		-	0.55%	-	-
		-	0.55%	-	-
		-	0.55%	-	-
		-	0.55%	-	-
		-	0.89%	-	-
		-	0.89%	-	-
		-	0.89%	-	-
		-	1.20%	-	-
		-	1.20%	-	-
		-	1.20%	-	-
		-	1.47%	-	-
		-	1.47%	-	-
		-	1.47%	-	-
		-	1.47%	-	-
		-	1.47%	-	-
		-	1.47%	-	-
		-	1.47%	-	-
		-	1.47%	-	-
		-	1.47%	-	-
		-	1.47%	-	-
		-	1.47%	-	-
		-	1.47%	-	-

		-	1.47%	-	-
		-	1.47%	-	-
		-	1.47%	-	-
		-	1.47%	-	-
		-	1.47%	-	-
		-	1.47%	-	-
		-	1.47%	-	-
		-	1.47%	-	-
		-	1.47%	-	-
		-	1.47%	-	-
		-	1.47%	-	-
		-	1.47%	-	-
$ -	$ -	$ -			

#N/A

This worksheet calculates the interest on OM&A and amortization/depreciation expen

Year	OM&A (from Sheet 5)	Amortization Expense (from Sheet 5)	Cumulative OM&A and Amortization Expense
2006	$ -	$ -	$ -
2007	$ -	$ -	$ -
2008	$ -	$ -	$ -
2009	$ 1,083,531.66	$ 159,692.25	$ 1,243,223.91
2010	$ 876,480.44	$ 422,057.77	$ 2,541,762.12
2011	$ 616,995.53	$ 564,234.21	$ 3,722,991.86
2012	$ 727,102.06	$ 603,737.38	$ 5,053,831.31

Cumulative Interest to 2011
Cumulative Interest to 2012

ıse, in the absence of monthly data.

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
$ -	4.37%	$ -
$ -	4.73%	$ -
$ -	3.98%	$ -
$ 621,611.96	1.14%	$ 7,070.84
$ 1,892,493.02	0.80%	$ 15,092.63
$ 3,132,376.99	1.47%	$ 46,045.94
$ 4,388,411.59	1.47%	$ 64,509.65
		$ 68,209.41
		$ 132,719.06

Ontario Energy Board

Smart Meter Model

#N/A

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

Check if applicable		
	Smart Meter Funding Adder (SMFA)	
X	Smart Meter Disposition Rider (SMDR)	**The SMDR is calculated based on costs to December 31, 2011**
X	Smart Meter Incremental Revenue Requirement Rate Rider (SMIRR)	**The SMIRR is calculated based on the incremental revenue requirement associated with the recovery of capital related costs to December 31, 2012 and associated OM&A.**

	2006	2007	2008	2009	2010	2011	2012 and later	Total
Deferred and forecasted Smart Meter Incremental Revenue Requirement (from Sheet 5)	$ -	$ -	$ -	$ 1,343,790.48	$ 1,657,425.89	$ 1,755,576.47	$ 1,901,495.24	$ 6,658,288.08
Interest on Deferred and forecasted OM&A and Amortization Expense (Sheet 8A/8B)	$ -	$ -	$ -	$ 7,070.84	$ 15,092.63	$ 46,045.94		$ 68,209.41
(Check **one** of the boxes below)								
Sheet 8A (Interest calculated on monthly balances)								$ -
X Sheet 8B (Interest calculated on average annual balances)	$ -	$ -	$ -	$ 7,070.84	$ 15,092.63	$ 46,045.94		$ 68,209.41
SMFA Revenues (from Sheet 8)	$ -	$ -	$ -	$ 977,084.98	$ 1,197,823.36	$ 1,393,101.02	$ 523,823.40	$ 4,091,832.76
SMFA Interest (from Sheet 8)	$ -	$ -	$ -	$ 3,201.01	$ 12,632.35	$ 41,421.62	$ 58,443.78	$ 115,698.76
Net Deferred Revenue Requirement	$ -	$ -	$ -	$ 370,575.33	$ 462,062.81	$ 367,099.77	$ 1,319,228.06	$ 2,518,965.97
Number of Metered Customers (average for 2012 test year)							113920	

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

Years for collection or refunding	1.5	
Deferred Incremental Revenue Requirement from 2006 to December 31, 2011 plus Interest on OM&A and Amortization	$ 4,825,002.25	
SMFA Revenues collected from 2006 to 2012 test year (inclusive) Plus Simple Interest on SMFA Revenues	$ 4,207,531.52	
Net Deferred Revenue Requirement	$ 617,470.73	
SMDR November 1st, 2012 to April 30th, 2014	$ 0.30	Match
Check: Forecasted SMDR Revenues	$ 615,168.00	

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

Incremental Revenue Requirement for 2012	$ 1,901,495.24	
SMIRR	$ 1.39	Match

Check: Forecasted SMIRR Revenues	$	1,900,185.60

Funding and Cost Recovery Mechanisms

The following table provides a summary of the three mechanisms for smart meter funding and cost recovery that the Board has established and that can be calculated by this model. The Smart Meter Funding Adder ("SMFA") was described in Guideline G-2008-0002. The Smart Meter Disposition Rider ("SMDR") and Smart Meter Incremental Revenue Requirement Rate Rider ("SMIRR") were defined by the Board in the Decision for PowerStream Inc.'s application for Smart Meter disposition [EB-2010-0209], October 1, 2010.

Title	Acronym	Description
Smart Meter Funding Adder	SMFA	• Mechanism to provide funding before and during smart meter deployment and acts to smooth the rate increases due to smart meter implementation. • First implemented in rates for May 1, 2006. • Initially established at a level of about $0.26/month per metered customer for most distributors; some utilities have had unique SMFA rates due to initial Smart Meter Implementation Plans. Distributors could subsequently apply for a standard SMFA of $1.00 per metered customer per month or a utility-specific SMFA. • SMFA revenues are tracked in a sub-account of Account 1555. Upon disposition, the SMFA revenues and simple interest are used to offset the deferred historical revenue requirement of installed smart meters plus interest on the OM&A and amortization/depreciation expenses, with the variance recovered or refunded through the SMDR. • In many 2011 EDR applications, the Board capped the SMFA at $2.50/month per metered customer. Further, the Board indicated that the SMFA would cease by April 30, 2012.
Smart Meter Disposition Rider	SMDR	• The SMDR recovers, over a specified time period, the variance between: 1) the deferred revenue requirement for the installed smart meters up to the time of disposition and interest on OM&A and depreciation/amortization expenses; and 2) the SMFA revenues collected and associated interest. • The SMDR should be calculated as a fixed monthly charge. The capital (smart meter, AMI, systems hardware and software) and operating expenses are largely fixed costs and invariant to a customer's demand, and hence should be recovered largely through fixed charges. • In many cases the SMDR has been recovered on an equal basis from all metered customer classes, although more recent decisions have dealt with class-specific disposition riders. The distributor should determine and support its proposed allocation, based on principles of cost causality and practicality.
Smart Meter Incremental Revenue Requirement Rate Rider	SMIRR	• When smart meter disposition occurs in a stand-alone application, a SMIRR is calculated as the proxy for the incremental change in the distribution rates that would have occurred if the assets and operating expenses were incorporated into the rate base and the revenue requirement. • The SMIRR is calculated as the annualized revenue requirement for the test year for the capital and operating costs for smart meters. • The SMIRR should be calculated as a fixed monthly charge, similar to the SMDR. • The allocation for the SMIRR should generally be the same as for the SMDR. • The SMIRR ceases at the time of the utility's next cost of service application when smart meter capital and operating costs are explicitly incorporated into the rate base and revenue requirement.

Cost of Service Applications

The recovery of smart meter capital and operating costs is normally approved (or denied) following a review for prudence and disposition in a cost of service proceeding. A smart meter disposition rate rider (SMDR) is used to recover the residual revenue requirement that is made up of smart meter costs up to the time of disposition plus interest on OM&A and depreciation/amortization expenses, less amounts collected through the SMFA and associated interest. The approved gross book value and accumulated depreciation of installed smart meters are then added to rate base, and the test period operating expenses are added to OM&A. This ensures the recovery of the incremental revenue requirement on a going-forward basis through base rates. Further, smart meter capital and operating costs should be reflected in the cost allocation study to ensure an appropriate allocation of costs to the various customer classes.[1]

If a distributor seeks approval for costs related to 100% smart meter deployment, any capital and operating costs for smart meters that are installed beyond the (2012) test year (i.e. for new customers) should not be recorded in Accounts 1555 and 1556.

The Board considers that rates will be fully compensatory when smart meter costs are either incorporated into base rates or recovered by means of the SMIRR. When smart meters are installed for new customers, these customers will pay rates that reflect the recovery of smart meter costs. The costs of these additional smart meter costs should be reflected in normal capital and operating accounts, akin to other normal distribution assets and costs.

Stand-alone Applications

As per *Chapter 3 of the Filing Requirements for Transmission and Distribution Applications*, issued June 22, 2011, the Board expects those distributors that are scheduled to remain on IRM to file a stand-alone application with the Board seeking final approval for smart meter related costs. When rates are adjusted in a stand-alone application, there is no re-evaluation of rate base or of the revenue requirement for the purpose of setting distribution rates. Where the Board approves smart meter capital and operating costs outside of a cost of service proceeding, a SMDR is still required. In addition, a smart meter incremental revenue requirement rate rider (SMIRR) is established to recover the prospective annualized incremental revenue requirement for the approved smart meters, until the distributor's next cost of service application. The SMIRR continues until the effective date of the distributor's next cost of service rate order, at which time assets and costs are incorporated into the rate base and revenue requirement and recovered on a going-forward basis through base rates.

As in a cost of service application, when smart meter costs are approved for 100% deployment, capital and operating costs for smart meters on a going-forward basis are no longer recorded in Accounts 1555 and 1556; instead the costs are recorded in the applicable capital or operating expense account (e.g. Account 1860 – Meters for smart meter capital assets).

Evidence to be Filed in Support of Smart Meter Cost Recovery in a Cost of Service or Stand-Alone Application

The purpose of this model is to calculate a smart meter revenue requirement from a distributor's capital and OM&A costs, and to provide one methodology for the determination of associated riders and/or adders. In addition to filing this model, distributors must provide in any application for cost recovery detailed descriptions of all costs incurred. The onus is on the distributor to support its case, and the distributor should provide any additional information necessary to understand the distributor's costs in light of its circumstances. In considering the recovery of smart meter costs, the Board also expects that a distributor will provide evidence on any operational efficiencies and cost savings that result from smart meter implementation. As an example, meter reading expenses may be reduced with the activation of remote meter reading through the AMI network for residential and small general service customers.

When applying for the recovery of smart meter costs, a distributor should ensure that historical cost information has been audited including the smart meter-related deferral account balances up to the distributor's last Audited Financial Statements. A distributor may also include historical costs that are not audited and estimated costs, corresponding to a stub period or to a forecast for the test rate year. The Board expects that the majority (i.e. 90% or more) of costs for which the distributor is seeking recovery will be audited. In all cases, the Board expects that the distributor will document and explain any differences between unaudited or forecasted amounts and audited costs.

Costs Beyond Minimum Functionality

While authorized smart meter deployment must meet the requirements for minimum functionality, a distributor may incur costs that are beyond the "minimum functionality". To date, the Board has reviewed three types of costs that are "beyond minimum functionality":

A. Costs for technical capabilities in the smart meters or related communications infrastructure that exceed those specified in O.Reg 425/06;

B. Costs for deployment of smart meters to customers other than residential and small general service (i.e. Residential and GS < 50 kW customers); and

C. Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDM/R, etc.

Costs beyond minimum functionality for which recovery is sought must be recorded in the Smart Meter Costs tab of the model in these three categories, and appropriate supporting evidence for each cost type must be provided in the application. Further comments on each of these cost types are provided below.

A. Costs for technical capabilities in the smart meters or related communications infrastructure that exceed those specified in O.Reg. 425/06

O.Reg. 425/06 specifies that costs that exceed minimum functionality may be approved by the Board for recovery. In deciding whether technical capabilities of installed smart meters or associated communications or other infrastructure that exceed minimum functionality are recoverable, the Board will consider the benefits of the added technical features and the prudence of these costs. Any distributor seeking recovery for these additional capabilities should provide documentation of the additional technical capabilities, the reasons for them and a detailed cost/benefit analysis.

Technical functionality beyond minimum functionality was dealt with by the Board with respect to Hydro One Networks' 2008 cost of service application, regarding the costs and benefits of super-capacitors in the smart meters and AMI collectors. In its Decision and Order on that application (EB-2007-0681), issued December 18, 2008, the Board approved the recovery of the incremental costs.

B. Costs for deployment of smart meters to customers other than residential and small general service

O.Reg. 425/06 defines smart meter deployment as pertaining to residential and small general service customers. The Functional Specification sets the required minimum level of functionality for the AMI to be "for residential and small general service consumers where the metering of demand is not required." As such, minimum functionality has been defined as customers in the residential and general service ("GS") < 50 kW classes.

While some customers in other metered customer classes (GS > 50 kW, Intermediate, Large Use) have interval meters that measure peak demand in a time interval, some distributors may have customers in these classes that have conventional meters and are not eligible for the regulated price plan ("RPP") and therefore are subject to the weighted average spot market price.

A distributor may, as part of its smart meter deployment program, decide to install smart meters for these customers. This could be on the basis that these customers will have higher demand than will typical residential and GS < 50 kW customers, and providing them with better information on how much and when they consume electricity may provide these customers with opportunities for more energy conservation and load shifting. While such meter conversions may generally appear to be logical, they are outside of the regulation and hence are beyond minimum functionality. In other instances, a distributor may convert the meters of interval-metered customers upon repair or re-sealing to "smart" meters that communicate using the AMI infrastructure that the distributor has installed, replacing the existing communications systems for these meters. Again, as these are for meters for customers other than residential and small general service, they are outside of the regulation and hence beyond minimum functionality.

The Board, as part of the Combined Proceeding (EB-2007-0063, December 13, 2007), approved cost recovery for meter conversions for GS > 50 kW customers for both Toronto Hydro Electric System Limited ("Toronto Hydro") and Hydro Ottawa Limited. However the Board stated:

"*The Board is explicitly not finding that the costs associated with these meters fall into the minimum functionality costs. The Board approval of these costs is ancillary to the smart meter decision."*

With respect to Toronto Hydro, the Board subsequently approved the recovery of these costs for smart meter installation/conversion for GS > 50 kW customers in Toronto Hydro's 2008-2009 [EB-2007-0681] and 2011 [EB-2010-0142] cost of service rate applications.

Some distributors may be doing "smart meter" conversions for General Service > 50 kW customers upon repair or resealing to enable meter data collection through the AMI infrastructure. While it is recognized that these smart meter installations and conversions are "beyond minimum functionality", a distributor may apply for the recovery of such costs. The application should document the nature, the justification and the cost per meter separately from those for the residential and GS < 50 kW customers.

C. Costs for TOU rate implementation, CIS system upgrades, web presentation, etc.

Costs for CIS systems, TOU rate implementation, etc., are beyond minimum functionality as established by the Board in the Combined Proceeding. However, such costs may be recoverable. In its application, a distributor should show how these costs are required for its smart meter program. Further, a distributor should document how these costs are incremental. For example, if a distributor has a normal budget for maintenance of its billing and CIS systems, costs claimed for system maintenance and upgrades must be shown to be incremental to the normal budget that is already recovered in base rates.

All costs beyond minimum functionality should be clearly identified and supported. Costs that are for meter data functions that will be the responsibility of the Smart Metering Entity will not be recoverable, unless already allowed for as per O.Reg. 426/06. Costs for other matters such as CIS changes or TOU bill presentment may be recoverable, but the distributor will have to support these costs and will have to demonstrate how they are required for the smart meter deployment program and that they are incremental to the distributor's normal operating costs.

Cost recovery for ongoing costs of the Smart Metering Entity should not be included in any smart meter cost recovery application, until such time as the Board establishes a cost recovery mechanism. To date, the Board has disallowed requests for either cost recovery or the establishment of a deferral account to track these costs.

Cost Allocation

The model does not deal with allocations between customer rate classes. In calculating the SMDR and SMIRR, the Board has approved, in some applications, the recovery of amounts from certain applicable customer classes based on the availability of detailed data at the customer class level and on principles of cost causality.

If a distributor does not have sufficient information to support an allocation to the applicable classes, a distributor may choose to propose a recovery on the basis of all metered customers resulting in one uniform rate rider for all metered customer classes. The model calculates the SMFA, SMIRR and SMDR on this basis.

Whichever method is adopted, the Board is of the view that any cost allocation approach should be consistent between the SMDR and the SMIRR when disposition is sought in a stand-alone application. The Board will entertain proposals supported by analysis for SMDRs and SMIRRs based on principles of cost causality and where the distributor has the necessary historical and forecasted data. Distributors should refer to the PowerStream application considered under EB-2010-0209 for a practical approach. However, if a distributor decides to adopt this approach in its application, it will have to adjust it to its own circumstances.[2] Further, adoption of this approach will not predetermine its approval by the Board in an individual application.

Stranded Meters

The model does not address the recovery of stranded meter costs. Distributors filing Cost of Service applications should refer to *Chapter 2 of the Filing Requirements for Transmission and Distribution Applications*, issued June 22, 2011 (Section 2.5.1.5).

While it would be preferable, conceptually, to also deal with stranded meter costs in a non-cost of service application, the Board recognizes that practical difficulties would arise since there is no restatement of rate base and rates. The Board therefore expects that stranded meter costs will be left in rate base until the distributor's next cost of service application.

The Stranded Meter Rate Rider to recover the residual Net Book Value of stranded (i.e. replaced conventional) meters is separate from any SMDR or SMIRR. In other words, a distributor must calculate (and should show its derivation) the Stranded Meter Rate Rider on a stand-alone basis.

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[1] See Section 2.10 – Cost Allocation of Chapter 2 of the Filing Requirements for Transmission and Distribution Applications, issued June 22, 2011.

[2] For example, if a distributor has deployed smart meters to classes other than Residential and GS < 50 kW, it will have to reflect the additional classes in any cost allocation proposal.