Oakville Hydro
Electricity Distribution Inc.
P. O. Box 1900
861 Redwood Square
Oakville ON L6J 5E3
Telephone: 905-825-9400
Fax: 905-825-5831
email: hydro@oakvillehydro.com
www.oakvillehydro.com

June 15, 2012

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

Dear Ms. Walli:

Re: Oakville Hydro Electricity Distribution Inc.
Application for 2012 Smart Meter Cost Recovery effective
May1, 2012, OEB File No. EB-2012-0193

Please find enclosed, Oakville Hydro Electricity Distribution Inc.'s responses to Board Staff's interrogatories in the above noted proceeding.

Should there be any questions, please do not hesitate to contact me.

Respectfully submitted,

Maryanne Wilson

Maryanne Wilson
Manager, Regulatory Affairs
Oakville Hydro Electricity Distribution Inc.
861 Redwood Square
Oakville, ON L6K 0C7
Telephone: (905) 825-4422
Email: mwilson@oakvillehydro.com

IN THE MATTER of the *Ontario Energy Board Act 1998*, Schedule B to the *Energy Competition Act*, 1998, S.O. 1998, c.15;

AND IN THE MATTER OF an Application by Oakville Hydro Electricity Distribution Inc. for an Order or Orders approving or fixing just and reasonable rates with respect to Smart Meters as of May 1, 2012.

Oakville Hydro Electricity Distribution Inc. (OHEDI)
Responses to Interrogatories
Ontario Energy Board Staff (Board Staff)
EB-2012-0193
Filed: June 15, 2012

Contents

Oakville Hydro Electricity Distribution Inc. ("Oakville Hydro")
2012 Smart Meter Cost Disposition and Recovery
EB-2012-0193

Board staff Interrogatories

General

1. Responses to Letters of Comment

Following publication of the Notice of Application, the Board has, to date, received no letters of comment. Please confirm whether Oakville Hydro has received any letters of comment. If so, please file a copy of any letters of comment. Please ensure that the author's contact information, except for the name, is redacted. For each, please confirm whether a reply was sent from Oakville Hydro to the author of the letter. If confirmed, please file that reply with the Board. If not confirmed, please explain why a response was not sent and confirm if Oakville Hydro intends to respond.

RESPONSE:

Following the publication of the Notice of Application, Oakville Hydro has not received any letters of comment.

Application

2. Ref: Application, page 24 – Stranded Meter Costs

On page 24 of its application, Oakville Hydro states that it is not requesting approval for recovery of its stranded meter costs at this time, and that stranded meter costs will be addressed in its next cost of service application (scheduled for 2014 rates). Please provide Oakville Hydro's estimate of the net book value of the stranded meters as of December 31, 2013.

RESPONSE:

Oakville Hydro transferred its stranded meters to the deferral sub account 1555 May 2010. The net book value is $6,145,034 which is expected to remain unchanged through to December 31, 2013.

3. Ref: Application, pages 5-6 – Smart Meter Pilot Project

On pages 5-6 of its Application, Oakville Hydro states:

On October 24, 2006, Oakville Hydro submitted a proposal for approval to implement a pilot project involving Time-of-Use (TOU) electricity prices and eligible TOU meters for certain condominium residents that had recently changed from bulk metering to individual metering (EB-2006-0306). The proposal included an independent evaluation of the project results as well as a commitment to share the results of the proposed pilot project with the Board. The Board approved the pilot on December 1, 2006 on the condition that Oakville Hydro consult Board staff before the independent analysis was carried out in order to ensure consistency with the analytical approach being used by the Board and that Oakville Hydro agree to share the results from the proposed pilot project.

Over the course of the pilot, residents in three condominium buildings in Oakville changed from bulk metering with billing based on the overall building consumption to individual metering and billing under RPP tiered prices and subsequently to individual metering and billing under RPP TOU prices. In total across the three buildings, 286 residents participated in the pilot.

In November 2007, Oakville Hydro engaged the services of Navigant Consulting to conduct an independent review of the smart meter pilot project. The report summarized the design, operation and outcomes of the Oakville Smart Metering and TOU pricing pilot study undertaken from January 2006 through the end of October 2007. On April 3, 2008, Oakville Hydro filed the Navigant report with the Board. The costs associated with this study are included in this Application.

a) Please provide a table that breaks down the capital and OM&A costs associated with Oakville Hydro's smart meter pilot project that are included in this application.

RESPONSE:

The costs associated with the pilot project that are included in this application are as follows:

Capital -$0 (costs were part of the third Tranche of the Market Adjusted Revenue Requirement (MARR) as approved by the Board in EB-2005-0208 and EB-2007-0033).

OM&A- $24,041 – The third party Navigant Study prepared in 2008. In its Decision on Oakville Hydro's proposed TOU pricing pilot, the Board approved the TOU pilot subject to a few conditions, including the requirement to consult with Board staff before conducting an independent analysis of the results of the pilot and to share those results with the Board. Since the cost of this study was directly related the Smart Meter technology, Oakville Hydro recorded the costs the Smart Meter OM&A variance account. Oakville Hydro is now seeking approval for the recovery of those costs.

b) In the Board's Decision on Oakville Hydro's TOU pricing pilot proposal (EB-2006-0306), the Board approved the pilot subject to four conditions. One condition was that "Oakville Hydro is required to consult Board staff before the independent analysis referenced above is carried out in order to ensure consistency with the analytical approach being used by the Board and Newmarket Hydro in relation to their pilot projects." Please provide a summary of discussions with Board staff related to the Smart Meter Pilot Project, subsequent to the Board's approval on December 1, 2006.

RESPONSE:

Unfortunately, the regulatory staffs that were key contacts for the discussions of this pilot project with Board staff are no longer with the Oakville Hydro. Reference is made to Oakville Hydro's submission to the Board on April 3, 2008, "Oakville Hydro has consulted Board staff before the independent analysis referenced above was carried out in order to ensure consistency with the analytical approach being used by the Board" in support of the existence of such discussions, however, a summary is not available.

c) Oakville Hydro rebased its rates through a cost of service application for the 2010 rate year (EB-2009-0271).

i. Please explain how the capital costs for the individual suite meters and ongoing operating costs for these customers were addressed in Oakville Hydro's 2010 rates application. Were these treated as individually metered Residential customers with costs reflected in the revenue requirement and recovered through distribution rates?

RESPONSE:

In Oakville Hydro's 2010 cost of service application, the on-going operating and capital costs for the individual suite meters were recovered through distribution rates. The individual suite metered customers are included in the residential customer class in the 2010 Cost of Service application.

ii. Please confirm that the costs related to Oakville Hydro's Smart Meter Pilot Project for which Oakville Hydro is seeking recovery of in this Application have not been addressed for recovery in any other proceeding.

RESPONSE:

Oakville Hydro is solely requesting recovery of the Navigant Study performed for the pilot project as part of this application and has not addressed this cost in any other proceeding.

4. Ref: Application, page 6-7 and Smart Meter Model, Sheet 2 – OM&A Expenses

On pages 6 and 7 of its Application, Oakville Hydro explains that its became authorized for smart meter deployment through compliance with the London Hydro RFP process, and that it successfully negotiated agreements for procurement and deployment smart meter and related systems in 2009. This corresponds with capital costs shown on Sheet 2 of the Smart Meter Model, which begin in 2009.

However, Oakville Hydro shows OM&A expenses related to Software Maintenance for Total Incremental AMCC (Advanced Metering Control Computer) (row 2.3.2) of $76,232 in 2007 and $20,811 for 2008. Similarly, Oakville Hydro shows OM&A expenses related to WAN (Wide Area Network) Maintenance (row 2.4.1) of $13,601 in 2007 and $43,148.

Please explain:

a) the nature of the work done for these expensed costs incurred prior to Oakville Hydro becoming authorized and commencing its smart meter deployment;

RESPONSE:

Prior to the mass deployment of smart meters, Oakville Hydro introduced a policy making the installation of smart meters mandatory for all new residential construction in Oakville Hydro's service area. The purpose was to test communications technology and remote reading functionalities. Resolving the communications issues proved to be difficult and Oakville Hydro reassigned a meter technician to the smart meter project in order to collect and analyze smart meter data for these smart meters and hired a new meter technician to fill the vacant position. By the end of 2007, the communications network had been established and the costs of this employee were no longer recorded in the smart meter OM&A variance account.

Oakville Hydro also hired a new employee in its Information Technology Department to conduct research and prototype the data communications for the reading and billing of smart meters. The portion of this employee's salary related to this research was recorded in the smart meter OM&A account. This preliminary research was necessary to guide Oakville Hydro in its selection of smart meter technology.

The costs related to the Wide Area Network (WAN) in 2007 and 2008 were for the communications network for the meters discussed above.

b) why these costs are expensed rather than capitalized; and

RESPONSE:

These costs are considered research, testing and development which are not considered capital in nature and not a future benefit, but rather part of operating the business and therefore were included in OM&A.

c) whether or not these costs were necessary for and integral to the implementation of Oakville Hydro's smart meter program and do not replace operating expenses for legacy distribution operations whose costs are reflected in Oakville Hydro's normal revenue requirement and recoverable through base distribution rates.

RESPONSE:

These costs were necessary and integral to the implementation of Oakville Hydro's smart meter program. These costs are incremental to operating expenses reflected in Oakville Hydro's approved revenue requirement and recoverable through base distribution rates. The development of the smart meter prototype provided valuable information that was used in the mass deployment of smart meter that was critical to the success of Oakville Hydro's overall smart meter implementation project.

5. Ref: Application, page 10 – Security Audit

On page 10 of the application, Oakville Hydro provides a description of its annual security audit as well as the procurement process used to select an audit partner. Oakville Hydro states:

> Oakville Hydro partnered with a consortium of LDCs to complete an end-to-end security audit of its Sensus Advanced Metering Infrastructure (AMI) system in July 2010. The consortium completed an RFP in October of 2010, whereby the group selected its preferred auditor. The audit is intended to span two full years and evaluate the security of the Sensus AMI system from meter to Advanced Meter Collector Computer (AMCC). Oakville Hydro is working with the auditor, Sensus, and the consortium to address any security concerns raised through the audit process.

Please provide the budgeted amount for the annual security audit for 2011 (if applicable) and 2012. Please confirm whether or not the budgeted amounts have been included as part of the costs reported in the Smart Meter Model.

RESPONSE:

The actual amount for 2011 was $12,239 and the 2012 forecasted amount is $6,120. Oakville Hydro confirms that the actual amount for the 2011 security audit and the forecasted amount for 2012 have been included in the costs reported in the Smart Meter Model.

6. Ref: Application, page 10 and Smart Meter Model, Sheet 2 – 2012 Capital Costs

Oakville Hydro states that it expects to incur $200,000 in capital costs in 2012, and these are shown on Sheet 2 under Computer Software, as being related to TOU implementation, Customer Information System (CIS) upgrades, web presentment, integration with the MDM/R, etc. (row 1.6.3). Please provide further explanation of the $200,000 of capitalized software costs forecasted for 2012. Please also document what portion of these forecasted costs have been incurred to date.

RESPONSE:

Oakville Hydro forecasted $200,000 of capitalized software costs and has updated the forecast to $206,700 based on more recent costing. Please see the table below for details.

Description	Amount
Database upgrade	$ 31,500
Customer and CIS Connect	42,000
Northstar 6.4 Upgrade	88,700
TOU bill print modifications	40,000
Work Force Management	4,500
Total	**$ 206,700**

In 2012, Oakville Hydro began the process of upgrading its CIS. The first component of the CIS improvements included an upgrade of the backend server from Informix to SQL. The server will provide the CIS with enhanced security, greater efficiencies, and increased reliability – all of which have become vital due to the increased amount of data management and systems integration resulting from the smart meter deployment.

In the remainder of 2012, Oakville Hydro expects to complete a CIS upgrade. This upgrade is required, as there have been a number of enhancements to the CIS since the

introduction of smart meters and TOU billing. These enhancements are directly attributed to the introduction of smart meters, interval (TOU) meter data, and integration with the provincial MDM/R.

Along with the CIS upgrade, Oakville Hydro will be looking to install a number of modules to its CIS, which will serve to enhance the efficiencies of the system. These tools will provide querying capabilities within the CIS, specific to smart meters and TOU data.

Finally, Oakville Hydro has yet to modify its bill print program since the introduction of TOU rates. In order to provide customers with an easier way to track and manage their TOU consumption, we will be working with our bill print vendor to modify the bill print program and physical bill print.

To date, of the capital costs outlined above, the database upgrade has been implemented at a cost of $31,500. The remainder of the projects are scheduled over 2012.

7. Ref: Application, page 15 and Smart Meter Model, Sheet 2 – OM&A Costs Beyond Minimum Functionality

In Table 6 on page 15, Oakville Hydro documents that it has incurred $305,410 in OM&A expenses to December 31, 2011 for beyond minimum functionality. This corresponds with row 2.6.3 of Sheet 2 of the Smart Meter Model, where Oakville Hydro documents $147,811 in 2010, $157,599 for 2011 and then $58,250 for 2012.

a) Please provide explanation of the activities for which these costs were incurred in 2010 and 2011, and which are forecasted to be incurred in 2012.

RESPONSE:

As detailed on pages 21 through 23 or Oakville Hydro's Application, $77,486 relates to TOU billing, integration with the MDM/R and enhancements to Oakville Hydro's Customer Information System ("CIS"). The remaining $227,924 relates to incremental costs related to TOU customer communications. The following table provides additional details by year and category.

OM&A Costs Above Minimum Functionality

Description	2010	2011	Total
CIS System Enhancements	$ 16,189	$ 1,668	$ 17,857
MDMR Integration	33,925	25,704	59,630
Sub-Total	**50,114**	**27,372**	**77,486**
Customer Communications	97,697	130,227	227,924
Total	**$147,811**	**$157,599**	**$305,410**

b) Please provide explanation as to why these are expensed costs rather than being capitalized.

RESPONSE:

The majority of these costs are related to communications and education for the customer on TOU rates. Costs relating to the CIS and MDM/R integration are considered smart meter specific maintenance for on-going operation and not considered to qualify as capital asset as there are no future expected benefits.

8. Ref: Application, pages 15-16 – Smart Meter Implementation

On pages 15 and 16, Oakville Hydro documents staffing and expenses related to its smart meter deployment. It notes that it had to do additional beta testing for customer data encryption in response to a customer enquiry filed with the Information and Privacy Commissioner's office. Oakville Hydro states:

> Being the first distributor to implement full encryption, additional software testing was required. Oakville Hydro did not incur additional costs from its vendor for implementation of encryption however, this placed an increased burden on Oakville Hydro's staff to conduct the software testing.

a) Please provide Oakville Hydro's additional internal costs related to software testing for full encryption of customer data as included in this Application.

RESPONSE:

Oakville Hydro did not incur additional internal costs that can be directly attributed to the software testing for full encryption of customer data, although there were additional challenges and burdens placed on staff. The AMI Analyst was able to test the software for full encryption of customer data however, it may have contributed to some delays in Oakville Hydro's implementation time schedule.

b) Please explain whether these costs are incremental (e.g. resulted in additional overtime costs) beyond the normal operating expenses reflected in Oakville Hydro's revenue requirement and recovered in distribution rates.

RESPONSE:

Please see response to interrogatory number 8(a).

9. Ref: Application, page 16 – OM&A Costs for Regional Collectors and WAN

Oakville Hydro states:

> Oakville Hydro has incurred incremental OM&A costs of $214,094 for third party support for its collectors and incremental costs $116,526 for new data and phone lines required to monitor and capture reads for the smart meters. These costs will be ongoing.

Based on the 63,734 Residential and GS < 50 kW customers served by Oakville Hydro, this works out to over $3.00 per customer per year for third party support for regional collectors, and just under $2.00 per customer per year for data and phone lines.

Please provide explanation of:

a) what these costs are for, and justification for the levels of these costs; and

RESPONSE:

Oakville Hydro has incurred monthly charges associated with its AMCC and ODS vendors to perform hosting, maintenance, communication and operational support for the new AMI infrastructure. Specifically, Oakville's AMI vendor will provide:

- All required licensing including Flexnet proprietary software licenses
- Ongoing maintenance services for all hardware, software, and operating systems related to AMC and Regional Collectors
- Proprietary software updates and software maintenance and any other necessary yearly ongoing support
- Preventative maintenance monitoring

- Regional Collector monitoring and phone support
- Annual training

b) why these costs are expected to be ongoing at these levels.

RESPONSE:

The costs for these services are expected to continue at these levels because of the Regional Collectors (Collectors) that were required and the maintenance associated with these Collectors. The addition of two Collectors increased the costs for maintenance and support.

10. Ref: Application, page 17 – OM&A Costs for AMCC

Oakville Hydro states:

Oakville Hydro incurred incremental OM&A costs of $237,171 for the setup and testing of its AMCC. The majority of the OM&A costs recorded in this category relate to incremental employee costs.

Please provide explanation of:

a) what these costs were incurred for;

RESPONSE:

As discussed in response to Board Staff interrogatory number 4, the costs in 2007 and 2008 relate to incremental staff required to test communication technologies and remote reading functionalities for the installation of smart meters. The costs in 2009, 2010 and 2011 relate to the portion of time that the incremental staff which held the position of AMI Analyst and Project Manager spent setting up and testing the AMCC and coordinating the rollout of the smart meters. There was also a charge of $1,772 for an escrow agreement.

b) why these costs were expensed rather than capitalized; and

RESPONSE:

These costs were expensed as they relate to testing of data which is considered required as part of the normal course of business, so that data integrity is maintained, and therefore operating in nature.

c) what does Oakville Hydro mean when it states: [t]he majority of the OM&A costs recorded in this category relate to incremental employee costs."

RESPONSE:

Oakville Hydro stated that the majority of the OM&A costs in this category relate to incremental employee costs since, of the $237,171, only the $1,772 associated with the escrow agreement related to an external party. These costs include the costs for incremental staff who were not included in Oakville Hydro's 2010 cost of service application and, with the exception of the escrow costs, not third party costs.

11. Ref: Application, pages 19, 20, 21 and 23 – OM&A Expenses for Contract Positions

On pages 19, 20, 21 and 23 of the application, Oakville Hydro mentions staffing costs for smart meter deployment activities (e.g. Communications Coordinator, AMI Analyst, etc.). In many cases, Oakville Hydro has expensed the costs.

a) Please provide a table summarizing the capital and OM&A expenses, by year, for staffing resources. Please separate the expenses by project function (e.g. communications, software testing, etc.).

RESPONSE:

The following tables summarizes the Capital and OM&A expenses by year for staffing resources.

Capital Expenses for Staffing Resources

	2010	Total
Installation Metering Communications Devices	$16,355	$16,355
Total Capital Costs	$16,355	$16,355

OM&A Expenses for Staffing Resources

	2007	2008	2009	2010	2011	2012	Total
Advanced Metering Control Maintenance	$76,232	$20,811	$50,169	$ 38,153	$ 50,034	$121,416	$ 356,815
Business Process Redesign	-	-	-	763	4,096	63,480	68,339
Customer Communication	-	-	2,036	-		-	2,036
Program Management	-	-	6,785	17,814	8,084	-	32,684
Change Management	-	-	-	3,238	-	-	3,238
Other AMI Costs	-	-	3,393	18,870	12,509	-	34,771
OM&A Costs Related to Minimum Functionality	76,232	20,811	62,383	78,839	74,723	184,896	497,883
OM&A Above Minimum Functionality	-	-	-	50,114	62,441	13,250	125,806
Total OM&A Costs	$76,232	$20,811	$62,383	$128,953	$137,165	$198,146	$ 623,689

b) Please provide further explanation as to how the staffing costs are incremental (i.e., beyond the staffing complement factored into Oakville Hydro's revenue requirement in its 2010 cost of service application).

RESPONSE:

Advanced Metering Infrastructure

- AMI Analyst: As explained in response to Board staff interrogatory number 4, Oakville Hydro hired an AMI Analyst in 2008 to conduct research and testing of the data communications for the reading and billing of smart meters and therefore this was an incremental position. In accordance with the Boards guidelines, Oakville Hydro excluded the costs of this staff member in its 2010 cost of service application.

- Project Consultant: In 2012, Oakville Hydro created a contract position of Project Consultant to assist in administering the AMI system, along with other Company requirements. Twenty five per cent of this staff member's costs have been included in this application. This staff member will also assist with the Business Process Redesign process discussed below. This is a one-time

period cost which has been amortized over two years.

- IT Contract Position: Oakville Hydro will create a contract position in its Information Technology department to assist in resolving some of the technical issues that have arisen as a result of the smart meter implementation project. This is a one-time period cost which has been amortized over two years.

Communications

- TOU Communications Co-ordinator: In May 2011, just prior to the role out of TOU pricing, Oakville Hydro hired a TOU Communications Co-ordinator on a contractual basis to assist with the roll-out of its TOU communications plan. This was a new incremental position and the total costs associated with this employee were recorded in the Smart Meter OM&A variance account in 2011. In 2012, this employee will devote only a portion of their time of TOU communications as Oakville Hydro continues to communicate with its customers on TOU pricing. Therefore, twenty-five per cent of this employee's wages have been included in the forecasted smart meter OM&A costs in 2012 and onwards.

Project Management

- Project Manager: This employee was hired as a full-time employee and assigned to the position of project manager for the smart meter implementation project. This cost was not included in Oakville Hydro's 2010 revenue requirement.

- Steering Committee Member: An employee of Oakville Hydro's affiliate, Golden Horseshoe Metering with advanced metering knowledge, was an integral part of the project management team and invoiced Oakville Hydro for

this service in 2009. This employee was involved in the London RFP for the Smart Meter selection. Due to a retirement in 2010, this employee was transferred to Oakville Hydro as the Director of Metering and CDM. Part of the assigned duties included continued involvement in the Smart Meter implementation project although the employee was not fully devoted to the project. Only 25 per cent of the incremental costs between the Director of Metering and CDM and the Meter Supervisor included in the 2010 Cost of Service Application, (i.e. the salary differential between the new employee and the employee that retired), are recorded in the Smart Meter OM&A variance account.

Business Process Redesign

As discussed on page 19 and 20 of the application, Oakville Hydro will implement its Business Process Redesign project in 2012. This project will involve internal resources across the organization. Where Oakville Hydro has incurred incremental costs, these costs have been included in the forecasted 2012 OM&A costs. The incremental costs are as follows:

- Process Reengineering Manager: An experienced internal staff member was assigned to this position and two current employees were assigned additional duties on an acting management basis to provide coverage for the staff member's responsibilities. Only the incremental costs of the acting management positions are included in the 2012 forecasted OM&A costs.

- Smart Meter Project Manager: The smart meter project manager identified in the preceding page has been reassigned as a key member of the Business Process Redesign team and fifty per cent of the incremental costs have been included in the 2012 forecasted OM&A.

- Process Mapping Expert: An internal staff member, who has previous process

mapping experience, has been assigned to the Business Process Redesign project and an external consultant has been contracted to perform their duties on an interim basis. This is a one-time cost which has been amortized over two years.

c) Please provide the rationale for recovering the staffing costs as either capital or OM&A expenses.

RESPONSE:

Staffing costs were capitalized for incremental costs that were directly attributable to the roll-out and installation of smart meters. For example, the internal staff working overtime to install some smart meters that were not installed by the third party contractor.

On the other hand, staffing costs were expensed as OM&A for incremental costs that were providing a more operating or on-going service. For example, testing of data, fine-tuning and communications roll-out which cannot be directly attributed to installing the smart meter asset.

d) Please indicate which staffing resources Oakville Hydro anticipates will be temporary and which it expects will be required going forward.

RESPONSE:

The following incremental positions will be required going forward:

- AMI Analyst
- Communications Coordinator (25%)
- Project Manager (to be assigned new duties)

The following temporary positions will be eliminated and existing internal staff will return to their previous duties.

- Steering Committee Member
- Process Mapping Expert
- Process Reengineering Manager

The following temporary contract position will be eliminated:

- IT Contract Position
- Project Consultant

12. Ref: Guideline G-2011-0001, page 19
Ref: Application, page 23 – Reduced Operating Costs

On page 19 of the Board's Guideline: Smart Meter Funding and Cost Recovery – Final Disposition (G-2011-0001), the Board states:

> 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.

On page 23 of the application, Oakville Hydro states:

> In its 2010 cost of service process, Oakville Hydro anticipated and budgeted operational savings related to the reduction of traditional, home to home, meter reading expenses with the activation of remote meter reading through the AMI network. However, the tuning process took longer than anticipated and Oakville Hydro continued to incur a portion of those costs to read the smart meters manually.

In most smart meter cost recovery applications currently before the Board, the distributor has noted meter reading savings as a result of the smart meter deployment.

a) Has Oakville Hydro included any costs for the manual reading of smart meters in its application? If so, please provide a table outlining the amounts per year of the smart meter deployment program. Please indicate any manual meter reading costs projected for 2012 and beyond, if applicable.

RESPONSE:

Oakville Hydro has not included any historical or future manual readings costs of smart meters in this application. Manual reading costs incurred are included in OM&A account 5310.

b) Please provide Oakville Hydro's best estimate of when it expects the manual reads of smart meters, with the exceptions of special reads (e.g. final reads related to a customer moving out), to cease.

RESPONSE:

Oakville Hydro has discontinued manual reads for most of its Residential and General Service < 50 kW smart meters with the exception of meters which are in areas with minimal Radio frequency (Rf) coverage or in locations restricting RF coverage. For General Service <50 kW customers that require a demand read, these meters will be manually read until Oakville Hydro has upgraded its Advanced Metering Control Computer (AMCC) software to enable demand reads. The software is expected to be released in fourth quarter 2012 and implemented by second quarter 2013. Therefore, Oakville Hydro estimates that it will be required to obtain manual reads for some of its General Service <50 kW meters until the end of the second quarter 2013.

c) Please explain how the budgeted operational savings from Oakville Hydro's 2010 cost of service application have been accounted for in this application. Please provide the amount budgeted for operational savings in Oakville Hydro's 2010 cost of service application.

RESPONSE:

In its original 2010 cost of service application, Oakville Hydro provided for $20,381 in operational savings in the meter reading costs from $568,820 in 2009

to $548,439 in the 2010 test year. However, as part of the settlement agreement in in Oakville Hydro's 2010 cost of service application, the parties agreed to a general lump sum reduction of $1.2 million in OM&A expenses. This reduction was reflected in Oakville Hydro's 2010 rate calculation. When the lump sum reduction was allocated to various OM&A accounts, Oakville Hydro reduced the amount allocated to meter reading costs by an additional $276,000.

13. Ref: Application, Tab 1, Schedule 2, pages 17 and 19 – Business Process Redesign

On page 17 of the Application, Oakville Hydro states:

> Oakville Hydro incurred incremental costs of $28,909 in relation to business process redesign. In 2011, Oakville Hydro contracted a third party to assist with a review of its meter-to-cash process, concentrating mainly on its Metering Solutions Department post smart meter implementation. Some of the findings of the review recommended that Oakville Hydro initiate a process improvement project to improve its processes, ensure data integrity and recover lost efficiencies as a result of the smart meter implementation. Oakville Hydro is undertaking to complete this project in 2012.

On page 19 of the Application, Oakville Hydro states:

> It is estimated that Oakville Hydro will incur incremental costs of $143,480 for the implementation of Oakville Hydro's Business Process Redesign project in 2012. It was Oakville Hydro's position that a process review would be completed once the implementation of the Smart Meters was completed, and it had sufficient opportunity to develop an understanding of the requirements as a direct result of this implementation. In 2011, Oakville Hydro's initial step to the business process redesign was to have a third party assist in a review of its business processes with respect to post smart meter implementation. The smart meter initiative presents an opportunity for processes to be improved by reducing manual effort and inefficiencies which were implemented to fill the gaps created by the initial implementation process. Currently additional time, effort and resources are required to address problems and issues which arose from the requirement to make the new systems (i.e. AMI, MDM/R), fit into the existing framework. The

many manual work-arounds required to support the AMI that [sic] have created lost efficiencies rather than eliminating them.

a) On page 17, what is meant by "recover[ing] lost efficiencies as a result of the smart meter implementation"?

RESPONSE:

Since the introduction of TOU billing, Oakville Hydro has discovered limitations with its systems and the ability to integrate new CIS billing functions with its existing business processes. These limitations have resulted in the increased need for excessive numerous manual processes and inefficient workarounds, resulting in these systems not being used to their full capabilities. These manual processes are no longer an adequate or viable way to deal with TOU billing with the large amounts of data and validation now required, hence are inefficient and there is a need of redesign.

Oakville Hydro has approached its CIS vendor and both parties are working diligently towards solutions that will eliminate a majority of this manual work. The solution will reside within CIS patches, CIS upgrades, improved integration with other AMI systems, and business process redesign.

b) Please explain how this business process redesign is related to and necessary for the deployment of smart meters and TOU implementation.

RESPONSE:

Due to the introduction of smart meters and TOU billing, the technology has greatly changed the landscape of the meter to bill process. As a mandate of the smart meter implementation project, Oakville Hydro must now integrate its CIS system with various other AMI systems including the AMCC, ODS, and

MDM/R. These systems have introduced additional complexities into this business, along with the requirement to manage the vast amount of data that accompanies smart meters. With the stabilization of Oakville Hydro's AMI systems nearing completion, Oakville Hydro began the business process redesign project in an effort to resolve the manual inefficiencies that have arisen as a result of smart meters and TOU billing.

c) Please explain the realized or expected benefits to Oakville Hydro's ratepayers as a result of this project.

RESPONSE:

Oakville Hydro expects to see an improvement in the integration of its smart meter systems. By examining the current processes and existing technologies within Oakville Hydro's AMI systems the current processes will be improved and manual workarounds will be reduced and/or eliminated. Oakville Hydro will be able to avoid significant staffing increases to process the existing levels of data and allow the integration of potential future growth in the numbers of ratepayers over the coming few years. This will assist in controlling ratepayer costs for the future. The changes will result in improved timeliness and consistency of billing.

d) Please explain why all of the costs for this are expensed.

RESPONSE:

The costs mentioned above are attributed to mapping, evaluating business process and integrating new process for the numerous changes that both the smart meter technology and TOU rates have placed on the LDC. These soft costs are intangible and are not capital in nature. The associated costs of computer and system upgrades have been included in the capital forecast. (2012 - $200,000)

e) Why does Oakville Hydro believe that the business process redesign should be dealt with here, rather than in its next cost of service application, where both the costs and benefits can be addressed?

RESPONSE:

Oakville Hydro believes that the business process redesign project should be dealt with here, prior to its next cost of service application, as it is critical to complete the full implementation of the Smart Meter project to ensure accurate, timely metering and billing. As a direct result of smart meter implementation and the TOU rollout, these processes needed to be examined and altered. Subsequent to the rollout, Oakville Hydro has obtained experience in the billing process and therefore the knowledge to improve internal business processes. Oakville Hydro decided to embark on this project subsequent to the smart meter rollout and TOU rates, so that it could properly apply its experience and therefore evaluate all the changes required to the systems and processes to accommodate the smart meter technology and TOU rates. As noted, many processes are currently completed manually outside of the electronic systems and, with the increased amount of data and validation required for TOU billing, manual processes are no longer viable or sustainable for any period of time.

14. Ref: Application, page 18 – Other AMI Costs

On page 18, Oakville Hydro states:

> Oakville Hydro incurred incremental OM&A costs of $34,771 associated with the setup and testing of its ODS detailed in Other AMI capital.

This corresponds with line 2.5.6 of Sheet 2 of the Smart Meter Model, with OM&A expenses of $3,393 for 2009, $18,870 for 2010 and $12,509 for 2011. Oakville Hydro also shows $116,794 as OM&A expenses in the row for 2012.

Please provide explanation of:

a) the historical expenses for the period 2009 to 2011; and

RESPONSE:

The historical expenses for the period 2009 to 2011 relate to internal staffing costs required for the setup and testing of Oakville Hydro's Operational Data Store (ODS). These costs were not included in the 2010 Cost of Service Application.

b) the forecasted expenses of $116,794.

RESPONSE:

The forecasted expenses of $116,794 relate to monthly contractual payments to the Kinetiq / Savage Data Systems for the management of Oakville Hydro's ODS as discussed on page 12 of the Application. Prior to 2012 these expenses were included in capital rather than OM&A.

c) Please provide a further disaggregation of 2012 costs between one-time and ongoing expenses.

RESPONSE:

There are no one-time costs included in this amount as the payments to Kinetiq / Savage Data Systems for the management of Oakville Hydro's ODS will be ongoing expenses.

Per Meter Costs

15. Ref: Application, pages 11 and 24 – Smart Meter Costs Per Unit

On page 11 of the Application, Oakville Hydro has provided a table summarizing the overall average capital cost per installed smart meter. Oakville Hydro shows an average capital cost per meter of $162.10.

On page 24 of the Application, Oakville Hydro states:

> In keeping with the Guideline, Oakville Hydro has directly allocated class specific costs where reliable data is available. For costs that cannot be directly allocated by rate class, Oakville Hydro has allocated the costs on the basis of the number of installed smart meters.

a) Please complete the following table for the Residential and GS < 50 kW classes.

RESPONSE:

Oakville Hydro has completed the tables below.

Smart Meter Costs - Residential

	2007	2008	2009	2010	2011	2012	Total	
Capital related to minimum functionality	$ -	$ -	$ 1,250,103	$ 5,354,660	$ 1,207,552	$ -	$ 7,812,314	
Capital beyond minimum functionality	-	-	-	-	25,710	184,266	209,976	
OM&A related to minimum functionality	82,766	81,077	153,089	212,123	208,737	485,445	1,223,238	
OM&A beyond minimum functionlity	-	-	-	136,183	145,200	53,667	335,051	
Total Costs	$ 82,766	$ 81,077	$ 1,403,192	$ 5,702,966	$ 1,587,199	$ 723,379	$ 9,580,578	
Number of Smart Meters Deployed	-	-	11,996	44,916	1,808	-	58,720	Average Per Meter
						Total (capex + opex)	$ 9,580,578	$ 163.16
						Capex only	$ 8,022,290	$ 136.62
						OM&A only	$ 1,558,288	$ 26.54

Smart Meter Costs - General Service < 50 kW

	2007	2008	2009	2010	2011	2012	Total	
Capital related to minimum functionality	$ -	$ -	$ 275,442	$ 1,667,750	$ 347,741	$ -	$ 2,290,933	
Capital beyond minimum functionality	-	-	-	-	2,195	15,734	17,929	
OM&A related to minimum functionality	7,067	6,923	13,072	18,113	17,824	41,451	104,450	
OM&A beyond minimum functionlity	-	-	-	11,628	12,398	4,583	28,609	
Total Costs	$ 7,067	$ 6,923	$ 288,514	$ 1,697,491	$ 380,159	$ 61,768	$ 2,441,922	
Number of Smart Meters Deployed	-	-	-	3,907	1,107	-	5,014	Average Per Meter
						Total (capex + opex)	$ 2,441,922	$ 487.02
						Capex only	$ 2,308,862	$ 460.48
						OM&A only	$ 133,060	$ 26.54

b) Please provide a breakdown of the meter types installed, by year, for the Residential and GS < 50 kW classes.

RESPONSE:

Breakdown of Meter Types Installed (by year):

Class	Meter Type	2009	2010	2011	Total
Residential					
	iSA2 - 200 amp	11,996	44,632	1,808	58,436
	iSA2 - 20 amp		279		279
	iSA2 - 120 volt		5		5
Sub-Total		**11,996**	**44,916**	**1,808**	**58,720**
GS < 50 kW	A3D		1052	372	1,424
	A3TL		2855	51	2,906
	A3RL			579	579
	KV2c			105	105
Sub-Total			**3,907**	**1,107**	**5,014**

Smart Meter Model, Version 2.17

16. Ref: Excel Smart Meter Model, Version 2.17, Sheet 2 – Smart Meter Costs

On sheet 2 of the Smart Meter Model, Oakville Hydro has provided the costs incurred in the installation of smart meters, per year, for their smart meter deployment.

a) Column S of sheet 2 forms the basis for the calculation of the SMIRR. In column S, Oakville Hydro has shown $200,000 in capital costs and $585,147 in OM&A expenses for 2012. Please provide a table summarizing the amounts entered in column S that are one-time (i.e. 2012 only) expenses and amounts that are ongoing expenses for meters installed, as of December 31, 2011. Please use a format similar to column S of sheet 2 of the Smart Meter Model. For each line item, please provide a description for activities underlying the costs that are shown. Additionally, please confirm that each amount is an annualized amount.

RESPONSE:

The following table summarizes the amounts that form the basis for the calculation of the SMIRR. Those costs that have been identified as one-time costs have been amortized over the two-year period before Oakville Hydro's next scheduled cost of service application.

2012 Smart Meter Costs				
Capital Costs	On-going Costs	One-time Costs (Annualized)	Total	Description
1.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDM/R, etc.	200,000		200,000	System Upgrades (CIS in 2012, ODS in 2013)
Total Smart Meter Capital Costs	200,000		200,000	
OM&A Expenses Related to Minimum Functionality				
2.2.1 Maintenance	138,775		138,775	External: RNI Maintenance
2.3.2 Software Maintenance (may include maintenance support, etc.)	6,120		6,120	External Security Audit
	121,728		121,728	Incremental Staff (AMCC Support)
2.5.1 Business Process Redesign	19,220	44,260	63,480	Incremental Staff
		80,000	80,000	External Consultants
2.5.6 Other AMI Expenses	116,794		116,794	External: ODS Management
Total Other AMI OM&A Costs Related to Minimum Functionality	402,637	124,260	526,897	
2.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDM/R, etc.	13,250		13,250	Incremental Staff: Ongoing communications costs
		45,000	45,000	External: Consulting fees: MDM/R integration, CIS upgrades
Total OM&A Costs Beyond Minimum Functionality	13,250	45,000	58,250	
Total Smart Meter OM&A Costs	415,887	169,260	585,147	

b) On line 2.3.2 of Sheet 2 of the Smart Meter Model, Oakville Hydro shows software maintenance OM&A costs of $76,232, $20,811, $50,169, $38,153, $51,806 and $127,848 for 2007 through 2012, respectively. Please explain the significant jump in software maintenance expenses for the 2012 year.

RESPONSE:

As illustrated in the table provided in response to Board staff interrogatory number 11(a), the main reason for the increase in costs for AMCC maintenance costs is the increased allocation of incremental staff to this category in 2012. Total incremental staffing costs increased to $198,146 in 2012 from $137,165 in 2011.

c) On line 2.5.6 of Sheet 2 of the Smart Meter Model, Oakville Hydro has provided a total of $151,565 in Other AMI expenses. Please provide a description of the nature of these costs. Please explain the significant jump in Other AMI expenses projected for 2012.

RESPONSE:

On line 2.5.6 of Sheet 2 of the Smart Meter Model, Oakville Hydro has provided a total of $151,565 in Other AMI expenses. The increase in Other AMI expenses projected for 2012 is due to the fact that the costs associated with the management of Oakville Hydro's ODS, which is now an ongoing cost, were allocated to this OM&A category in 2012 whereas they were allocated to capital as part of setup in previous years. In 2010 the costs were $70,878 and in 2011 the costs were $111,721. The 2012 projected costs are slightly higher in 2012 than they were in previous years due to the number of meters and Collectors installed.

17. Ref: Excel Smart Meter Model, Version 2.17, Sheet 3 – Taxes/PILs Rates

Oakville Hydro has used the maximum taxes/PILs rates input on sheet 3, row 40, for the years 2006, 2007, 2008, 2009, 2010, 2011 and 2012 and beyond. These are summarized in the following table:

Year	2006	2007	2008	2009	2010	2011	2012 and beyond
Aggregate Federal and provincial income tax rate	36.12%	36.12%	33.50%	33.00%	31.00%	28.25%	26.25%

Please confirm that these are the tax rates corresponding to the taxes or PILs actually paid by Oakville Hydro in each of the historical years, and that Oakville Hydro forecasts it will pay for 2012. For historical years up to and including 2011, these would be the aggregate rate derived for calculating the taxes/PILs included in the revenue requirement in cost of service applications, or as calculated in taxes/PILs calculations as part of IRM applications. Otherwise, please explain the tax rates entered and their derivation.

RESPONSE:

Oakville Hydro confirms that the tax rates used are based on actual rates for historical years. The 2010 rate is equivalent to the cost of service application rate and the 2011 and 2012 rate is as calculated in Oakville Hydro's IRM applications.

18. Ref: Excel Smart Meter Model, Version 2.17 – Smart Meter Funding Adder Revenues

On Sheet 8, Board staff observes that interest is calculated to December 2012. The impact is to increase the carrying charges used to offset the deferred revenue requirement, and hence to decrease the amount to be recovered through the SMDR. Please explain Oakville Hydro's rationale for calculating interest beyond April 2012.

RESPONSE:

Oakville Hydro agrees that interest should not have been calculated to December 2012, but rather to only April 2012. Oakville Hydro has corrected the input to the model. This increase the carrying charges used to offset the deferred revenue requirement by $5,714.

19. Ref: Smart Meter Model, Sheet 8A – Depreciation Expense

While Oakville Hydro has documented smart meter capital costs since 2009, on Sheet 8A, Oakville Hydro only documents depreciation expense from February 2011 to December 2011. Please explain why Oakville Hydro does not have depreciation expenses documented in Account 1556 either before or after this time period.

RESPONSE:

Oakville Hydro commenced its smart meter project initiative in 2009 including procurement and related requirements. However, it was not until the end of 2010 that the smart meter meters were in-service. Therefore, Oakville Hydro commenced its depreciation at the beginning of 2011.

Oakville Hydro has since updated its model to include depreciation for 2010 and applied the half-year rule. Oakville Hydro has calculated its depreciation from January 2010 to December 2011. Total depreciation is now $1,019,175.

20. Ref: Smart Meter Model

If Oakville Hydro has changed its data inputs to the Smart Meter Model, Version 2.17 as a result of interrogatories by Board staff and/or the Vulnerable Energy Consumers Coalition, please update and re-file the smart meter model in working Microsoft Excel format.

RESPONSE:

Oakville Hydro has updated its Smart Meter Model, Version 2.17 and re-filed the smart meter model along with its Application. A copy is also provided as attachment A.

Cost Allocation

21. Ref: Application, pages 25 and 26 – Smart Meter Disposition Rider Calculation and Smart Meter Incremental Revenue Requirement Rate Rider Calculation

On pages 25 and 26 of the Application, Oakville Hydro has provided tables showing the calculation of class specific SMDRs and SMIRRs.

a) Please confirm the allocator used to allocate costs to each class in Oakville Hydro's SMDR and SMIRR calculations for the following:

i. Return (deemed interest plus return on equity);
ii. Amortization;
iii. OM&A;
iv. PILs; and
v. Smart Meter Rate Adder revenues

RESPONSE:

Oakville Hydro has allocated costs to each class in its SMDR and SMIRR calculations as follows:

Return (deemed interest plus return on equity)	Capital cost of the meters for each class.
Amortization	Capital cost of the meters for each class.
OM&A	Number of meters installed for each class.
PILs	Revenue requirement allocated to each class before PILs.
Smart Meter Rate Adder Revenues	Revenue collect from each class (revenues collected from the General Service > 50 kW class have been allocated equally between the Residential and General Service < 50 kW class.

22. Ref: Application, Section 16 – Cost Allocation

a) If Oakville Hydro has made revisions to its Smart Meter Model, Version 2.17 as a result of its responses to interrogatories, please update its proposed class-specific SMDRs.

RESPONSE:

Oakville Hydro has updated its proposed class specific SMDRs.

Smart Meter Actual Cost Recovery Rate Rider - SMDR Calculated by Rate Class			
Allocators	**Total**	**Residential**	**GS < 50**
Average Smart Meter Unit Cost	$ 140.30	$ 114.82	$ 438.69
Smart Meter Cost	$8,941,917	$6,742,347	$2,199,570
Allocation of Smart Meter Costs	100.00%	75.40%	24.60%
Number of meters installed	63,734	58,720	5,014
Percentage of meters installed	100.00%	92.13%	7.87%
Total Return (deemed interest plus return on equity)	$1,040,018	$ 786,215	$ 253,803
Amortization	$1,139,463	$ 859,173	$ 280,290
OM&A	$1,106,201	$1,019,176	$ 87,026
Carrying Charges	$ 34,330	$ 31,629	$ 2,701
Total Before PILs	$3,320,013	$2,696,193	$ 623,819
PILs	$ 108,827	$ 82,543	$ 26,284
Total Revenue Requirement 2006 to 2011	$3,428,840	$2,778,736	$ 650,104
Smart Meter Rate Adder Revenues	($3,645,357)	($3,312,395)	($332,962)
Carrying Charge	($95,579)	($85,564)	($10,015)
Smart Meter True-up	($312,096)	($619,223)	$307,127
Metered Customers	62,675	57,777	4,898
Rate Rider to Recover Smart Meter Costs - 2 yrs	$ (0.21)	$ (0.45)	$ 2.61

b) Similarly, please update the calculation of class-specific SMIRRs.

RESPONSE:

Oakville Hydro has updated its proposed class specific SMIRRs.

Smart Meter Actual Cost Recovery Rate Rider - SMIRR Calculated by Rate Class			
Allocators	**Total**	**Residential**	**GS < 50**
Average Smart Meter Costs	$ 140.30	$ 114.82	$ 438.69
Smart Meter Cost	$8,941,917	$6,742,347	$2,199,570
Allocaiton of Smart Meter Costs	100.00%	75.40%	24.60%
Number of meters installed	63,734	58,720	5,014
Percentage of meters installed	100.00%	92.13%	7.87%
Total Return (deemed interest plus return on equity)	$ 641,439	$ 484,728	$ 156,710
Amortization	$ 809,304	$ 610,228	$ 199,076
OM&A	$ 585,147	$ 539,113	$ 46,034
Total Before PILs	$2,035,889	$1,634,069	$ 401,820
PILs	$ 118,786	$ 89,773	$ 29,014
Total Revenue Requirement 2012	$2,154,675	$1,723,842	$ 430,834
Metered Customers	62,675	57,777	4,898
Rate Rider to Recover Smart Meter Costs	$ 2.86	$ 2.49	$ 7.33

Attachment A

Smart Meter Model

V 2.17

Ontario Energy Board

Smart Meter Model

Choose Your Utility:

Oakville Hydro Electricity Distribution Inc.
Orangeville Hydro Limited

Application Contact Information

Name:	Maryanne Wilson
Title:	Manager, Regulatory Affairs
Phone Number:	905-825-4422
Email Address:	mwilson@oakvillehydro.com
We are applying for rates effective:	May 1, 2012
Last COS Re-based Year	2010

Legend

DROP-DOWN MENU

INPUT FIELD

CALCULATION FIELD

Copyright

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

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

Ontario Energy Board

Smart Meter Model

Oakville Hydro Electricity Distribution Inc.

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

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

Smart Meter Capital Cost and Operational Expense Data

Smart Meter Installation Plan

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

	2006	2007	2008	2009	2010	2011	2012 and later	Total
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
Residential				11,996	44,916	1,808		58720
General Service < 50 kW					3,907	1,107		5014
Actual/Planned number of Smart Meters installed (Residential and GS < 50 kW only)	0	0	0	11996	48823	2915	0	63734
Percentage of Residential and GS < 50 kW Smart Meter Installations Completed	0.00%	0.00%	0.00%	18.82%	95.43%	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	11996	48823	2915	0	63734

1 Capital Costs

1.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)

	Asset Type (Asset type must be selected to enable calculations)	2006	2007	2008	2009	2010	2011	2012 and later	Total
		Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
1.1.1 Smart Meters *(may include new meters and modules, etc.)*	Smart Meter				924,190	5,781,693	1,058,039		$ 7,763,922
1.1.2 Installation Costs *(may include socket kits, labour, vehicle, benefits, etc.)*	Smart Meter				4,761	884,191	289,044		$ 1,177,995
1.1.3a Workforce Automation Hardware *(may include fieldwork handhelds, barcode hardware, etc.)*	Computer Hardware				4,109	63,444	1,824		$ 69,378
1.1.3b Workforce Automation Software *(may include fieldwork handhelds, barcode hardware, etc.)*									$ -
Total Advanced Metering Communications Devices (AMCD)		$ -	$ -	$ -	$ 933,061	$ 6,729,328	$ 1,348,907	$ -	$ 9,011,295

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

	Asset Type	2006	2007	2008	2009	2010	2011	2012 and later	Total
		Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
1.2.1 Collectors	Smart Meter				416,390	91,322	36,049		$ 543,761
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					8,474			$ 8,474
Total Advanced Metering Regional Collector (AMRC) (Includes LAN)		$ -	$ -	$ -	$ 416,390	$ 99,796	$ 36,049	$ -	$ 552,235

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				126,756				$ 126,756
1.3.2 Computer Software	Computer Software				6,227				$ 6,227
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		$ -	$ -	$ -	$ 132,983	$ -	$ -	$ -	$ 132,983

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	Computer Software					38,137			$ 38,137
1.5.3 Professional Fees									$ -
1.5.4 Integration	Smart Meter								$ -
1.5.5 Program Management	Smart Meter				43,111	68,659	50,061		$ 161,831
1.5.6 Other AMI Capital	Computer Software					86,488	120,277		$ 206,766
Total Other AMI Capital Costs Related to Minimum Functionalit		$ -	$ -	$ -	$ 43,111	$ 193,285	$ 170,338	$ -	$ 406,734
Total Capital Costs Related to Minimum Functionalit		$ -	$ -	$ -	$ 1,525,544	$ 7,022,409	$ 1,555,293	$ -	$ 10,103,247

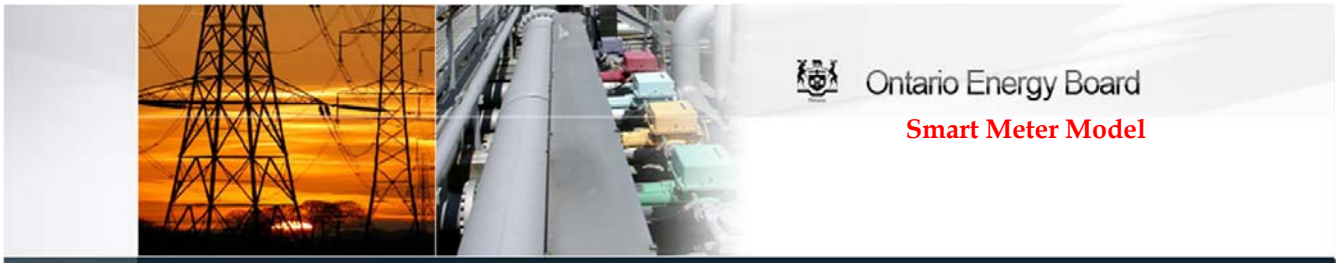
1.6 CAPITAL COSTS BEYOND MINIMUM FUNCTIONALITY *(Please provide a descriptive title and identify nature of beyond minimum functionality costs)*	Asset Type	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
1.6.1 Costs related to technical capabilities 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						27,905	200,000	$ 227,905
Total Capital Costs Beyond Minimum Functionalit		$ -	$ -	$ -	$ -	$ -	$ 27,905	$ 200,000	$ 227,905
Total Smart Meter Capital Costs		$ -	$ -	$ -	$ 1,525,544	$ 7,022,409	$ 1,583,198	$ 200,000	$ 10,331,152

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.)*								$	-
2.1.2 Other *(please specify)*								$	-
Total Incremental AMCD OM&A Costs	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$	-
2.2 ADVANCED METERING REGIONAL COLLECTOR (AMRC) (includes LAN)									
2.2.1 Maintenance					91,701	122,393	138,775	$	352,869
2.2.2 Other *(please specify)* Transformers								$	-
Total Incremental AMRC OM&A Costs	$ -	$ -	$ -	$ -	$ 91,701	$ 122,393	$ 138,775	$	352,869
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.)*		76,232	20,811	50,169	38,153	51,806	127,848	$	365,018
2.3.2 Other *(please specify)*								$	-
Total Incremental AMCC OM&A Costs	$ -	$ 76,232	$ 20,811	$ 50,169	$ 38,153	$ 51,806	$ 127,848	$	365,018
2.4 WIDE AREA NETWORK (WAN)									
2.4.1 WAN Maintenance		13,601	43,148	33,541	18,654	7,582		$	116,526
2.4.2 Other *(please specify)*								$	-
Total Incremental AMRC OM&A Costs	$ -	$ 13,601	$ 43,148	$ 33,541	$ 18,654	$ 7,582	$ -	$	116,526
2.5 OTHER AMI OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY									
2.5.1 Business Process Redesign					763	28,146	143,480	$	172,389
2.5.2 Customer Communication (may include project communication, etc.)				43,884	7,485			$	51,369
2.5.3 Program Management			24,041	28,365	52,135	4,126		$	108,667
2.5.4 Change Management (may include training, etc.)					2,475			$	2,475
2.5.5 Administration Costs				6,810				$	6,810
2.5.6 Other AMI Expenses *(please specify)*				3,393	18,870	12,509	116,794	$	151,565
Total Other AMI OM&A Costs Related to Minimum Functionality	$ -	$ -	$ 24,041	$ 82,451	$ 81,729	$ 44,780	$ 260,274	$	493,275
TOTAL OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY	$ -	$ 89,833	$ 88,000	$ 166,161	$ 230,236	$ 226,561	$ 526,897	$	1,327,688
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.					147,811	157,599	58,250	$	363,660
Total OM&A Costs Beyond Minimum Functionality	$ -	$ -	$ -	$ -	$ 147,811	$ 157,599	$ 58,250	$	363,660
Total Smart Meter OM&A Costs	$ -	$ 89,833	$ 88,000	$ 166,161	$ 378,048	$ 384,159	$ 585,147	$	1,691,348

3 Aggregate Smart Meter Costs by Category

3.1	**Capital**									
3.1.1	Smart Meter	$ -	$ -	$ -	$ 1,388,452	$ 6,834,339	$ 1,433,192	$ -	$ 9,655,983	
3.1.2	Computer Hardware	$ -	$ -	$ -	$ 130,865	$ 63,444	$ 1,824	$ -	$ 196,133	
3.1.3	Computer Software	$ -	$ -	$ -	$ 6,227	$ 124,626	$ 148,182	$ 200,000	$ 479,035	
3.1.4	Tools & Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
3.1.5	Other Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
3.1.6	Applications Software	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
3.1.7	**Total Capital Costs**	**$ -**	**$ -**	**$ -**	**$ 1,525,544**	**$ 7,022,409**	**$ 1,583,198**	**$ 200,000**	**$ 10,331,152**	
3.2	**OM&A Costs**									
3.2.1	**Total OM&A Costs**	**$ -**	**$ 89,833**	**$ 88,000**	**$ 166,161**	**$ 378,048**	**$ 384,159**	**$ 585,147**	**$ 1,691,348**	



	2006	2007	2008	2009	2010	2011	2012 and later
Cost of Capital							
Capital Structure[1]							
Deemed Short-term Debt Capitalization			0.0%	0.0%	4.0%	4.0%	4.0%
Deemed Long-term Debt Capitalization	55.0%	55.0%	57.5%	60.0%	56.0%	56.0%	56.0%
Deemed Equity Capitalization	45.0%	45.0%	42.5%	40.0%	40.0%	40.0%	40.0%
Preferred Shares	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Cost of Capital Parameters							
Deemed Short-term Debt Rate			0.00%	0.00%	2.07%	2.07%	2.07%
Long-term Debt Rate (actual/embedded/deemed)[2]	6.00%	6.00%	6.00%	6.00%	5.87%	5.87%	5.87%
Target Return on Equity (ROE)	9.0%	9.00%	9.00%	9.00%	9.85%	9.85%	9.85%
Return on Preferred Shares	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
WACC	7.35%	7.35%	7.28%	7.20%	7.31%	7.31%	7.31%
Working Capital Allowance							
Working Capital Allowance Rate	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
(% of the sum of Cost of Power + controllable expenses)							
Taxes/PILs							
Aggregate Corporate Income Tax Rate	36.12%	36.12%	33.50%	33.00%	31.00%	28.25%	26.25%
Capital Tax (until July 1st, 2010)	0.30%	0.225%	0.225%	0.225%	0.075%	0.00%	0.00%
Depreciation Rates							
(expressed as expected useful life in years)							
Smart Meters - years	15	15	15	15	15	15	15
- rate (%)	6.67%	6.67%	6.67%	6.67%	6.67%	6.67%	6.67%
Computer Hardware - years	5	5	5	5	5	5	5
- rate (%)	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
Computer Software - years	3	3	3	3	3	3	3
- rate (%)	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%
Tools & Equipment - years	10	10	10	10	10	10	10
- rate (%)	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
Other Equipment - years	10	10	10	10	10	10	10
- rate (%)	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
CCA Rates							
Smart Meters - CCA Class	47	47	47	47	47	47	47
Smart Meters - CCA Rate	8%	8%	8%	8%	8%	8%	8%
Computer Equipment - CCA Class	45	50	50	52	52	50	50
Computer Equipment - CCA Rate	45%	55%	55%	100%	100%	55%	55%
General Equipment - CCA Class	8	8	8	8	8	8	8
General Equipment - CCA Rate	20%	20%	20%	20%	20%	20%	20%
Applications Software - CCA Class	45	50	50	52	52	50	50
Applications Software - CCA Rate	45%	55%	55%	100%	100%	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.*

Oakville Hydro Electricity Distribution Inc.

	2006	2007	2008	2009	2010	2011	2012 and later
Net Fixed Assets - Smart Meters							
Gross Book Value							
Opening Balance		$ -	$ -	$ -	$ 1,388,452	$ 8,222,791	$ 9,655,983
Capital Additions during year (from Smart Meter Costs)	$ -	$ -	$ -	$ 1,388,452	$ 6,834,339	$ 1,433,192	$ -
Retirements/Removals (if applicable)							
Closing Balance	$ -	$ -	$ -	$ 1,388,452	$ 8,222,791	$ 9,655,983	$ 9,655,983
Accumulated Depreciation							
Opening Balance		$ -	$ -	$ -	-$ 46,282	-$ 366,656	-$ 962,616
Amortization expense during year	$ -	$ -	$ -	-$ 46,282	-$ 320,375	-$ 595,959	-$ 643,732
Retirements/Removals (if applicable)							
Closing Balance	$ -	$ -	$ -	-$ 46,282	-$ 366,656	-$ 962,616	-$ 1,606,348
Net Book Value							
Opening Balance	$ -	$ -	$ -	$ -	$ 1,342,170	$ 7,856,134	$ 8,693,367
Closing Balance	$ -	$ -	$ -	$ 1,342,170	$ 7,856,134	$ 8,693,367	$ 8,049,635
Average Net Book Value	$ -	$ -	$ -	$ 671,085	$ 4,599,152	$ 8,274,751	$ 8,371,501
Net Fixed Assets - Computer Hardware							
Gross Book Value							
Opening Balance		$ -	$ -	$ -	$ 130,865	$ 194,310	$ 196,133
Capital Additions during year (from Smart Meter Costs)	$ -	$ -	$ -	$ 130,865	$ 63,444	$ 1,824	$ -
Retirements/Removals (if applicable)							
Closing Balance	$ -	$ -	$ -	$ 130,865	$ 194,310	$ 196,133	$ 196,133
Accumulated Depreciation							
Opening Balance	$ -	$ -	$ -	$ -	-$ 13,087	-$ 45,604	-$ 84,648
Amortization expense during year	$ -	$ -	$ -	-$ 13,087	-$ 32,518	-$ 39,044	-$ 39,227
Retirements/Removals (if applicable)							
Closing Balance	$ -	$ -	$ -	-$ 13,087	-$ 45,604	-$ 84,648	-$ 123,875
Net Book Value							
Opening Balance	$ -	$ -	$ -	$ -	$ 117,779	$ 148,706	$ 111,485
Closing Balance	$ -	$ -	$ -	$ 117,779	$ 148,706	$ 111,485	$ 72,258
Average Net Book Value	$ -	$ -	$ -	$ 58,889	$ 133,242	$ 130,095	$ 91,872
Net Fixed Assets - Computer Software (including Applications Software)							
Gross Book Value							
Opening Balance		$ -	$ -	$ -	$ 6,227	$ 130,853	$ 279,035
Capital Additions during year (from Smart Meter Costs)	$ -	$ -	$ -	$ 6,227	$ 124,626	$ 148,182	$ 200,000
Retirements/Removals (if applicable)							
Closing Balance	$ -	$ -	$ -	$ 6,227	$ 130,853	$ 279,035	$ 479,035
Accumulated Depreciation							
Opening Balance	$ -	$ -	$ -	$ -	-$ 1,038	-$ 23,885	-$ 92,199
Amortization expense during year	$ -	$ -	$ -	-$ 1,038	-$ 22,847	-$ 68,315	-$ 126,345
Retirements/Removals (if applicable)							
Closing Balance	$ -	$ -	$ -	-$ 1,038	-$ 23,885	-$ 92,199	-$ 218,544
Net Book Value							
Opening Balance	$ -	$ -	$ -	$ -	$ 5,189	$ 106,968	$ 186,836
Closing Balance	$ -	$ -	$ -	$ 5,189	$ 106,968	$ 186,836	$ 260,491
Average Net Book Value	$ -	$ -	$ -	$ 2,595	$ 56,079	$ 146,902	$ 223,663

Net Fixed Assets - Tools and Equipmen

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 yea	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
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 yea	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Retirements/Removals (if applicable)								
Closing Balance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Net Book Value								
Opening Balance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Closing Balance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Average Net Book Value	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

Ontario Energy Board

Smart Meter Model

Oakville Hydro Electricity Distribution Inc.

	2006	2007	2008	2009	2010	2011	2012 and Later
Average Net Fixed Asset Values (from Sheet 4)							
Smart Meters	$ -	$ -	$ -	$ 671,085	$ 4,599,152	$ 8,274,751	$ 8,371,501
Computer Hardware	$ -	$ -	$ -	$ 58,889	$ 133,242	$ 130,095	$ 91,872
Computer Software	$ -	$ -	$ -	$ 2,595	$ 56,079	$ 146,902	$ 223,663
Tools & Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Net Fixed Assets	**$ -**	**$ -**	**$ -**	**$ 732,569**	**$ 4,788,473**	**$ 8,551,749**	**$ 8,687,037**
Working Capital							
Operating Expenses (from Sheet 2)	$ -	$ 89,833	$ 88,000	$ 166,161	$ 378,048	$ 384,159	$ 585,147
Working Capital Factor (from Sheet 3)	15%	15%	15%	15%	15%	15%	15%
Working Capital Allowance	$ -	$ 13,475	$ 13,200	$ 24,924	$ 56,707	$ 57,624	$ 87,772
Incremental Smart Meter Rate Base	**$ -**	**$ 13,475**	**$ 13,200**	**$ 757,493**	**$ 4,845,180**	**$ 8,609,372**	**$ 8,774,809**
Return on Rate Base							
Capital Structure							
Deemed Short Term Debt	$ -	$ -	$ -	$ -	$ 193,807	$ 344,375	$ 350,992
Deemed Long Term Debt	$ -	$ 7,411	$ 7,590	$ 454,496	$ 2,713,301	$ 4,821,249	$ 4,913,893
Equity	$ -	$ 6,064	$ 5,610	$ 302,997	$ 1,938,072	$ 3,443,749	$ 3,509,923
Preferred Shares	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Capitalization	$ -	$ 13,475	$ 13,200	$ 757,493	$ 4,845,180	$ 8,609,372	$ 8,774,809
Return on							
Deemed Short Term Debt	$ -	$ -	$ -	$ -	$ 4,012	$ 7,129	$ 7,266
Deemed Long Term Debt	$ -	$ 445	$ 455	$ 27,270	$ 159,271	$ 283,007	$ 288,446
Equity	$ -	$ 546	$ 505	$ 27,270	$ 190,900	$ 339,209	$ 345,727
Preferred Shares	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Return on Capital	$ -	$ 990	$ 960	$ 54,540	$ 354,183	$ 629,345	$ 641,439
Operating Expenses	$ -	$ 89,833	$ 88,000	$ 166,161	$ 378,048	$ 384,159	$ 585,147
Amortization Expenses (from Sheet 4)							
Smart Meters	$ -	$ -	$ -	$ 46,282	$ 320,375	$ 595,959	$ 643,732
Computer Hardware	$ -	$ -	$ -	$ 13,087	$ 32,518	$ 39,044	$ 39,227
Computer Software	$ -	$ -	$ -	$ 1,038	$ 22,847	$ 68,315	$ 126,345
Tools & Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Amortization Expense in Year	$ -	$ -	$ -	$ 60,406	$ 375,739	$ 703,318	$ 809,304
Incremental Revenue Requirement before Taxes/PILs	$ -	$ 90,823	$ 88,960	$ 281,107	$ 1,107,969	$ 1,716,823	$ 2,035,889
Calculation of Taxable Income							
Incremental Operating Expenses	$ -	$ 89,833	$ 88,000	$ 166,161	$ 378,048	$ 384,159	$ 585,147
Amortization Expense	$ -	$ -	$ -	$ 60,406	$ 375,739	$ 703,318	$ 809,304
Interest Expense	$ -	$ 445	$ 455	$ 27,270	$ 163,283	$ 290,136	$ 295,711
Net Income for Taxes/PILs	$ -	$ 546	$ 505	$ 27,270	$ 190,900	$ 339,209	$ 345,727
Grossed-up Taxes/PILs (from Sheet 7)	$ -	$ 308.58	$ 254.35	-$ 14,635.96	$ 16,889.40	$ 106,010.96	$ 118,786.10
Revenue Requirement, including Grossed-up Taxes/PILs	$ -	$ 91,132	$ 89,215	$ 266,471	$ 1,124,859	$ 1,822,834	$ 2,154,675

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	$ -	$ -	$ -	$ -	$ 1,332,913.59	$ 7,787,246.08	$ 8,540,130.93
Capital Additions	$ -	$ -	$ -	$ 1,388,451.66	$ 6,834,339.14	$ 1,433,192.22	$ -
Retirements/Removals (if applicable)							
UCC Before Half Year Rule	$ -	$ -	$ -	$ 1,388,451.66	$ 8,167,252.73	$ 9,220,438.30	$ 8,540,130.93
Half Year Rule (1/2 Additions - Disposals)	$ -	$ -	$ -	$ 694,225.83	$ 3,417,169.57	$ 716,596.11	$ -
Reduced UCC	$ -	$ -	$ -	$ 694,225.83	$ 4,750,083.16	$ 8,503,842.19	$ 8,540,130.93
CCA Rate Class	47	47	47	47	47	47	47
CCA Rate	8%	8%	8%	8%	8%	8%	8%
CCA	$ -	$ -	$ -	$ 55,538.07	$ 380,006.65	$ 680,307.38	$ 683,210.47
Closing UCC	$ -	$ -	$ -	$ 1,332,913.59	$ 7,787,246.08	$ 8,540,130.93	$ 7,856,920.45

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	$ -	$ -	$ -	$ -	$ 68,546.26	$ 94,035.11	$ 151,070.19
Capital Additions Computer Hardware	$ -	$ -	$ -	$ 130,865.31	$ 63,444.49	$ 1,823.68	$ -
Capital Additions Computer Software	$ -	$ -	$ -	$ 6,227.20	$ 124,625.73	$ 148,182.38	$ 200,000.00
Retirements/Removals (if applicable)							
UCC Before Half Year Rule	$ -	$ -	$ -	$ 137,092.51	$ 256,616.48	$ 244,041.17	$ 351,070.19
Half Year Rule (1/2 Additions - Disposals)	$ -	$ -	$ -	$ 68,546.26	$ 94,035.11	$ 75,003.03	$ 100,000.00
Reduced UCC	$ -	$ -	$ -	$ 68,546.26	$ 162,581.37	$ 169,038.14	$ 251,070.19
CCA Rate Class	45	50	50	52	52	50	50
CCA Rate	45%	55%	55%	100%	100%	55%	55%
CCA	$ -	$ -	$ -	$ 68,546.26	$ 162,581.37	$ 92,970.98	$ 138,088.61
Closing UCC	$ -	$ -	$ -	$ 68,546.26	$ 94,035.11	$ 151,070.19	$ 212,981.59

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	8	8	8	8	8	8	8
CCA Rate	20%	20%	20%	20%	20%	20%	20%
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	$ -	$ 545.73	$ 504.90	$ 27,269.76	$ 190,900.11	$ 339,209.27	$ 345,727.46
Amortization	$ -	$ -	$ -	$ 60,406.12	$ 375,738.95	$ 703,318.16	$ 809,304.00
CCA - Smart Meters	$ -	$ -	$ -	-$ 55,538.07	-$ 380,006.65	-$ 680,307.38	-$ 683,210.47
CCA - Computers	$ -	$ -	$ -	-$ 68,546.26	-$ 162,581.37	-$ 92,970.98	-$ 138,088.61
CCA - Applications Software	$ -	$ -	$ -	$ -	$ -	$ -	$ -
CCA - Other Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Change in taxable income	$ -	$ 545.73	$ 504.90	-$ 36,408.45	$ 24,051.04	$ 269,249.08	$ 333,732.38
Tax Rate (from Sheet 3)	36.12%	36.12%	33.50%	33.00%	31.00%	28.25%	26.25%
Income Taxes Payable	$ -	$ 197.12	$ 169.14	-$ 12,014.79	$ 7,455.82	$ 76,062.87	$ 87,604.75
ONTARIO CAPITAL TAX							
Smart Meters	$ -	$ -	$ -	$ 1,342,169.94	$ 7,856,134.33	$ 8,693,367.42	$ 8,049,635.22
Computer Hardware	$ -	$ -	$ -	$ 117,778.78	$ 148,705.76	$ 111,485.11	$ 72,258.41
Computer Software (Including Application Software)	$ -	$ -	$ -	$ 5,189.33	$ 106,968.38	$ 186,836.05	$ 260,490.95
Tools & Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Rate Base	$ -	$ -	$ -	$ 1,465,138.05	$ 8,111,808.46	$ 8,991,688.58	$ 8,382,384.58
Less: Exemption							
Deemed Taxable Capital	$ -	$ -	$ -	$ 1,465,138.05	$ 8,111,808.46	$ 8,991,688.58	$ 8,382,384.58
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)	$ -	$ -	$ -	$ 3,296.56	$ 6,083.86	$ -	$ -
Change in Income Taxes Payable	$ -	$ 197.12	$ 169.14	-$ 12,014.79	$ 7,455.82	$ 76,062.87	$ 87,604.75
Change in OCT	$ -	$ -	$ -	$ 3,296.56	$ 6,083.86	$ -	$ -
PILs	$ -	$ 197.12	$ 169.14	-$ 8,718.23	$ 13,539.68	$ 76,062.87	$ 87,604.75
Gross Up PILs							
Tax Rate	36.12%	36.12%	33.50%	33.00%	31.00%	28.25%	26.25%
Change in Income Taxes Payable	$ -	$ 308.58	$ 254.35	-$ 17,932.52	$ 10,805.54	$ 106,010.96	$ 118,786.10
Change in OCT	$ -	$ -	$ -	$ 3,296.56	$ 6,083.86	$ -	$ -
PILs	**$ -**	**$ 308.58**	**$ 254.35**	**-$ 14,635.96**	**$ 16,889.40**	**$ 106,010.96**	**$ 118,786.10**

Ontario Energy Board

Smart Meter Model

Oakville Hydro Electricity Distribution Inc.

This worksheet calculates the funding adder revenues.

Account 1555 - Sub-account Funding Adder Revenues

Interest Rates	Approved Deferral and Variance Accounts	CWIP	Date	Year	Quarter	Opening Balance (Principal)	Funding Adder Revenues	Interest Rate	Interest	Closing Balance	Annual amounts	Board Approved Smart Meter Funding Adder (from Tariff)
2006 Q1			Jan-06	2006	Q1	$ -		0.00%	$ -	$ -		
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	$ -	$ 3,106.07	4.59%	$ -	$ 3,106.07		$ 0.30
2008 Q1	5.14%	5.18%	Sep-06	2006	Q3	$ 3,106.07	$ 14,665.20	4.59%	$ 11.88	$ 17,783.15		$ 0.30
2008 Q2	4.08%	5.18%	Oct-06	2006	Q4	$ 17,771.27	$ 14,916.15	4.59%	$ 67.98	$ 32,755.40		$ 0.30
2008 Q3	3.35%	5.43%	Nov-06	2006	Q4	$ 32,687.42	$ 49,261.65	4.59%	$ 125.03	$ 82,074.10		$ 0.30
2008 Q4	3.35%	5.43%	Dec-06	2006	Q4	$ 81,949.07	$ 13,201.87	4.59%	$ 313.46	$ 95,464.40	$ 95,669.29	$ 0.30
2009 Q1	2.45%	6.61%	Jan-07	2007	Q1	$ 95,150.94	$ 16,465.46	4.59%	$ 363.95	$ 111,980.35		$ 0.30
2009 Q2	1.00%	6.61%	Feb-07	2007	Q1	$ 111,616.40	$ 14,431.75	4.59%	$ 426.93	$ 126,475.08		$ 0.30
2009 Q3	0.55%	5.67%	Mar-07	2007	Q1	$ 126,048.15	$ 16,916.79	4.59%	$ 482.13	$ 143,447.07		$ 0.30
2009 Q4	0.55%	4.66%	Apr-07	2007	Q2	$ 142,964.94	$ 13,695.97	4.59%	$ 546.84	$ 157,207.75		$ 0.30
2010 Q1	0.55%	4.34%	May-07	2007	Q2	$ 156,660.91	$ 17,987.65	4.59%	$ 599.23	$ 175,247.79		$ 0.27
2010 Q2	0.55%	4.34%	Jun-07	2007	Q2	$ 174,648.56	$ 13,947.06	4.59%	$ 668.03	$ 189,263.65		$ 0.27
2010 Q3	0.89%	4.66%	Jul-07	2007	Q3	$ 188,595.62	$ 16,964.33	4.59%	$ 721.38	$ 206,281.33		$ 0.27
2010 Q4	1.20%	4.01%	Aug-07	2007	Q3	$ 205,559.95	$ 15,697.51	4.59%	$ 786.27	$ 222,043.73		$ 0.27
2011 Q1	1.47%	4.29%	Sep-07	2007	Q3	$ 221,257.46	$ 16,126.20	4.59%	$ 846.31	$ 238,229.97		$ 0.27
2011 Q2	1.47%	4.29%	Oct-07	2007	Q4	$ 237,383.66	$ 14,431.22	5.14%	$ 1,016.79	$ 252,831.67		$ 0.27
2011 Q3	1.47%	4.29%	Nov-07	2007	Q4	$ 251,814.88	$ 18,036.92	5.14%	$ 1,078.61	$ 270,930.41		$ 0.27
2011 Q4	1.47%	4.29%	Dec-07	2007	Q4	$ 269,851.80	$ 13,586.25	5.14%	$ 1,155.87	$ 284,593.92	$ 196,979.45	$ 0.27
2012 Q1	1.47%	4.29%	Jan-08	2008	Q1	$ 283,438.05	$ 17,768.19	5.14%	$ 1,214.06	$ 302,420.30		$ 0.27
2012 Q2		4.29%	Feb-08	2008	Q1	$ 301,206.24	$ 13,811.35	5.14%	$ 1,290.17	$ 316,307.76		$ 0.27
2012 Q3		4.29%	Mar-08	2008	Q1	$ 315,017.59	$ 16,026.03	5.14%	$ 1,349.33	$ 332,392.95		$ 0.27
2012 Q4		4.29%	Apr-08	2008	Q2	$ 331,043.62	$ 15,552.92	4.08%	$ 1,125.55	$ 347,722.09		$ 0.27
			May-08	2008	Q2	$ 346,596.54	$ 16,321.15	4.08%	$ 1,178.43	$ 364,096.12		$ 0.27
			Jun-08	2008	Q2	$ 362,917.69	$ 16,299.55	4.08%	$ 1,233.92	$ 380,451.16		$ 0.27
			Jul-08	2008	Q3	$ 379,217.24	$ 17,638.62	3.35%	$ 1,058.65	$ 397,914.51		$ 0.27
			Aug-08	2008	Q3	$ 396,855.86	$ 14,679.92	3.35%	$ 1,107.89	$ 412,643.67		$ 0.27
			Sep-08	2008	Q3	$ 411,535.78	$ 17,181.66	3.35%	$ 1,148.87	$ 429,866.31		$ 0.27
			Oct-08	2008	Q4	$ 428,717.44	$ 15,639.91	3.35%	$ 1,196.84	$ 445,554.19		$ 0.27
			Nov-08	2008	Q4	$ 444,357.35	$ 16,780.43	3.35%	$ 1,240.50	$ 462,378.28		$ 0.27
			Dec-08	2008	Q4	$ 461,137.78	$ 15,312.23	3.35%	$ 1,287.34	$ 477,737.35	$ 207,443.51	$ 0.27
			Jan-09	2009	Q1	$ 476,450.01	$ 17,231.22	2.45%	$ 972.75	$ 494,653.98		$ 0.27
			Feb-09	2009	Q1	$ 493,681.23	$ 15,229.21	2.45%	$ 1,007.93	$ 509,918.37		$ 0.27
			Mar-09	2009	Q1	$ 508,910.44	$ 17,905.46	2.45%	$ 1,039.03	$ 527,854.93		$ 0.27
			Apr-09	2009	Q2	$ 526,815.90	$ 14,693.96	1.00%	$ 439.01	$ 541,948.87		$ 0.27
			May-09	2009	Q2	$ 541,509.86	$ 17,765.01	1.00%	$ 451.26	$ 559,726.13		$ 1.00
			Jun-09	2009	Q2	$ 559,274.87	$ 37,176.85	1.00%	$ 466.06	$ 596,917.78		$ 1.00
			Jul-09	2009	Q3	$ 596,451.72	$ 57,385.12	0.55%	$ 273.37	$ 654,110.21		$ 1.00
			Aug-09	2009	Q3	$ 653,836.84	$ 60,825.63	0.55%	$ 299.68	$ 714,962.15		$ 1.00
			Sep-09	2009	Q3	$ 714,662.47	$ 62,757.24	0.55%	$ 327.55	$ 777,747.26		$ 1.00
			Oct-09	2009	Q4	$ 777,419.71	$ 61,114.22	0.55%	$ 356.32	$ 838,890.25		$ 1.00
			Nov-09	2009	Q4	$ 838,533.93	$ 45,877.70	0.55%	$ 384.33	$ 884,795.96		$ 1.00
			Dec-09	2009	Q4	$ 884,411.63	$ 72,639.51	0.55%	$ 405.36	$ 957,456.50	$ 487,023.78	$ 1.00
			Jan-10	2010	Q1	$ 957,051.14	$ 62,412.16	0.55%	$ 438.65	$ 1,019,901.95		$ 1.00
			Feb-10	2010	Q1	$ 1,019,463.30	$ 60,702.82	0.55%	$ 467.25	$ 1,080,633.37		$ 1.00
			Mar-10	2010	Q1	$ 1,080,166.12	$ 61,458.52	0.55%	$ 495.08	$ 1,142,119.72		$ 1.00
			Apr-10	2010	Q2	$ 1,141,624.64	$ 63,583.16	0.55%	$ 523.24	$ 1,205,731.04		$ 1.00
			May-10	2010	Q2	$ 1,205,207.80	$ 59,867.58	0.55%	$ 552.39	$ 1,265,627.77		$ 1.69
			Jun-10	2010	Q2	$ 1,265,075.38	$ 88,386.79	0.55%	$ 579.83	$ 1,354,042.00		$ 1.69
			Jul-10	2010	Q3	$ 1,353,462.17	$ 101,389.09	0.89%	$ 1,003.82	$ 1,455,855.08		$ 1.69
			Aug-10	2010	Q3	$ 1,454,851.26	$ 103,830.29	0.89%	$ 1,079.01	$ 1,559,760.56		$ 1.69
			Sep-10	2010	Q3	$ 1,558,681.55	$ 105,532.91	0.89%	$ 1,156.02	$ 1,665,370.48		$ 1.69
			Oct-10	2010	Q4	$ 1,664,214.46	$ 104,414.76	1.20%	$ 1,664.21	$ 1,770,293.43		$ 1.69
			Nov-10	2010	Q4	$ 1,768,629.22	$ 98,322.29	1.20%	$ 1,768.63	$ 1,868,720.14		$ 1.69
			Dec-10	2010	Q4	$ 1,866,951.51	$ 95,302.16	1.20%	$ 1,866.95	$ 1,964,120.62	$ 1,016,797.61	$ 1.69
			Jan-11	2011	Q1	$ 1,962,253.67	$ 115,480.66	1.47%	$ 2,403.76	$ 2,080,138.09		$ 1.69
			Feb-11	2011	Q1	$ 2,077,734.33	$ 105,310.18	1.47%	$ 2,545.22	$ 2,185,589.73		$ 1.69
			Mar-11	2011	Q1	$ 2,183,044.51	$ 99,870.99	1.47%	$ 2,674.23	$ 2,285,589.73		$ 1.69
			Apr-11	2011	Q2	$ 2,282,915.50	$ 109,523.56	1.47%	$ 2,796.57	$ 2,395,235.63		$ 1.69
			May-11	2011	Q2	$ 2,392,439.06	$ 86,751.97	1.47%	$ 2,930.74	$ 2,482,121.77		$ 1.69
			Jun-11	2011	Q2	$ 2,479,191.03	$ 127,075.99	1.47%	$ 3,037.01	$ 2,609,304.03		$ 1.69
			Jul-11	2011	Q3	$ 2,606,267.02	$ 76,752.83	1.47%	$ 3,192.68	$ 2,686,212.53		$ 1.69
			Aug-11	2011	Q3	$ 2,683,019.85	$ 100,108.29	1.47%	$ 3,286.70	$ 2,786,414.84		$ 1.69
			Sep-11	2011	Q3	$ 2,783,128.14	$ 132,232.33	1.47%	$ 3,409.33	$ 2,918,769.80		$ 1.69
			Oct-11	2011	Q4	$ 2,915,360.47	$ 109,189.79	1.47%	$ 3,571.32	$ 3,028,121.58		$ 1.69
			Nov-11	2011	Q4	$ 3,024,550.26	$ 88,276.91	1.47%	$ 3,705.07	$ 3,116,532.24		$ 1.69
			Dec-11	2011	Q4	$ 3,112,827.17	$ 105,466.99	1.47%	$ 3,813.21	$ 3,222,107.37	$ 1,293,406.33	$ 1.69
			Jan-12	2012	Q1	$ 3,218,294.16	$ 106,549.71	1.47%	$ 3,942.41	$ 3,328,786.28		$ 1.69
			Feb-12	2012	Q1	$ 3,324,843.87	$ 106,693.64	1.47%	$ 4,072.93	$ 3,435,610.45		$ 1.69
			Mar-12	2012	Q1	$ 3,431,537.52	$ 106,837.58	1.47%	$ 4,203.63	$ 3,542,578.72		$ 1.69
			Apr-12	2012	Q2	$ 3,538,375.09	$ 106,981.51	1.47%	$ 4,334.51	$ 3,649,691.11		$ 1.69
			May-12	2012	Q2	$ 3,645,356.60		0.00%	$ -	$ 3,645,356.60		
			Jun-12	2012	Q2	$ 3,645,356.60		0.00%	$ -	$ 3,645,356.60		
			Jul-12	2012	Q3	$ 3,645,356.60		0.00%	$ -	$ 3,645,356.60		
			Aug-12	2012	Q3	$ 3,645,356.60		0.00%	$ -	$ 3,645,356.60		
			Sep-12	2012	Q3	$ 3,645,356.60		0.00%	$ -	$ 3,645,356.60		
			Oct-12	2012	Q4	$ 3,645,356.60		0.00%	$ -	$ 3,645,356.60		
			Nov-12	2012	Q4	$ 3,645,356.60		0.00%	$ -	$ 3,645,356.60		
			Dec-12	2012	Q4	$ 3,645,356.60		0.00%	$ -	$ 3,645,356.60	$ 443,615.92	
			Total Funding Adder Revenues Collected				$ 3,645,356.60		$ 95,579.29	$ 3,740,935.89	$ 3,740,935.89	

Ontario Energy Board

Smart Meter Model

Oakville Hydro Electricity Distribution Inc.

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

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

Prescribed Interest Rates	Approved Deferral and Variance Accounts	CWIP	Date	Year	Quarter	Opening Balance (Principal)	OM&A Expenses	Amortization / Depreciation Expense	Closing Balance (Principal)	(Annual) Interest Rate	Interest (on opening balance)	Cumulative Interest
2006 Q1	0.00%	0.00%	Jan-06	2006	Q1	$ -			-	0.00%	-	-
2006 Q2	4.14%	4.68%	Feb-06	2006	Q1	-			-	0.00%	-	-
2006 Q3	4.59%	5.05%	Mar-06	2006	Q1	-			-	0.00%	-	-
2006 Q4	4.59%	4.72%	Apr-06	2006	Q2	-			-	4.14%	-	-
2007 Q1	4.59%	4.72%	May-06	2006	Q2	-			-	4.14%	-	-
2007 Q2	4.59%	4.72%	Jun-06	2006	Q2	-			-	4.14%	-	-
2007 Q3	4.59%	5.18%	Jul-06	2006	Q3	-			-	4.59%	-	-
2007 Q4	5.14%	5.18%	Aug-06	2006	Q3	-			-	4.59%	-	-
2008 Q1	5.14%	5.18%	Sep-06	2006	Q3	-			-	4.59%	-	-
2008 Q2	4.08%	5.18%	Oct-06	2006	Q4	-			-	4.59%	-	-
2008 Q3	3.35%	5.43%	Nov-06	2006	Q4	-			-	4.59%	-	-
2008 Q4	3.35%	5.43%	Dec-06	2006	Q4	-			-	4.59%	-	-
2009 Q1	2.45%	6.61%	Jan-07	2007	Q1	-			-	4.59%	-	-
2009 Q2	1.00%	6.61%	Feb-07	2007	Q1	-			-	4.59%	-	-
2009 Q3	0.55%	5.67%	Mar-07	2007	Q1	-			-	4.59%	-	-
2009 Q4	0.55%	4.66%	Apr-07	2007	Q2	-			-	4.59%	-	-
2010 Q1	0.55%	4.34%	May-07	2007	Q2	-			-	4.59%	-	-
2010 Q2	0.55%	4.34%	Jun-07	2007	Q2	-			-	4.59%	-	-
2010 Q3	0.89%	4.66%	Jul-07	2007	Q3	-			-	4.59%	-	-
2010 Q4	1.20%	4.01%	Aug-07	2007	Q3	-			-	4.59%	-	-
2011 Q1	1.47%	4.29%	Sep-07	2007	Q3	-			-	4.59%	-	-
2011 Q2	1.47%	4.29%	Oct-07	2007	Q4	-			-	5.14%	-	-
2011 Q3	1.47%	4.29%	Nov-07	2007	Q4	-			-	5.14%	-	-
2011 Q4	1.47%	4.29%	Dec-07	2007	Q4	-	$ 89,832.76		89,832.76	5.14%	-	-
2012 Q1	1.47%	4.29%	Jan-08	2008	Q1	89,832.76	$ 4,563.00		94,395.76	5.14%	384.78	384.78
2012 Q2	0.00%	4.29%	Feb-08	2008	Q1	94,395.76	$ 4,563.00		98,958.77	5.14%	404.33	789.11
2012 Q3	0.00%	4.29%	Mar-08	2008	Q1	98,958.77	$ 4,563.00		103,521.77	5.14%	423.87	1,212.99
2012 Q4	0.00%	4.29%	Apr-08	2008	Q2	103,521.77	$ 4,563.00		108,084.77	4.08%	351.97	1,564.96
			May-08	2008	Q2	108,084.77	$ 30,164.54		138,249.31	4.08%	367.49	1,932.45
			Jun-08	2008	Q2	138,249.31	$ 4,442.08		142,691.39	4.08%	470.05	2,402.50
			Jul-08	2008	Q3	142,691.39	$ 4,860.78		147,552.17	3.35%	398.35	2,800.84
			Aug-08	2008	Q3	147,552.17	$ 4,424.48		151,976.65	3.35%	411.92	3,212.76
			Sep-08	2008	Q3	151,976.65	$ 4,118.34		156,094.99	3.35%	424.27	3,637.03
			Oct-08	2008	Q4	156,094.99	$ 5,963.55		162,058.54	3.35%	435.77	4,072.79
			Nov-08	2008	Q4	162,058.54	$ 9,119.78		171,178.32	3.35%	452.41	4,525.21
			Dec-08	2008	Q4	171,178.32	$ 6,654.47		177,832.79	3.35%	477.87	5,003.08
			Jan-09	2009	Q1	177,832.79	$ 5,341.51		183,174.30	2.45%	363.08	5,366.15
			Feb-09	2009	Q1	183,174.30	$ 5,575.43		188,749.73	2.45%	373.98	5,740.13
			Mar-09	2009	Q1	188,749.73	$ 5,805.69		194,555.42	2.45%	385.36	6,125.50
			Apr-09	2009	Q2	194,555.42	$ 13,157.70		207,713.12	1.00%	162.13	6,287.63
			May-09	2009	Q2	207,713.12	$ 5,093.64		212,806.76	1.00%	173.09	6,460.72
			Jun-09	2009	Q2	212,806.76	$ 6,466.28		219,273.04	1.00%	177.34	6,638.06
			Jul-09	2009	Q3	219,273.04	$ 5,568.76		224,841.80	0.55%	100.50	6,738.56
			Aug-09	2009	Q3	224,841.80	$ 9,398.03		234,239.83	0.55%	103.05	6,841.61
			Sep-09	2009	Q3	234,239.83	$ 40,686.37		274,926.20	0.55%	107.36	6,948.97
			Oct-09	2009	Q4	274,926.20	$ 26,770.34		301,696.54	0.55%	126.01	7,074.98
			Nov-09	2009	Q4	301,696.54	$ 20,677.88		322,374.42	0.55%	138.28	7,213.26
			Dec-09	2009	Q4	322,374.42	$ 21,619.23		343,993.65	0.55%	147.75	7,361.01
			Jan-10	2010	Q1	343,993.65	$ 25,320.56	$ 23,973.06	393,287.27	0.55%	157.66	7,518.68
			Feb-10	2010	Q1	393,287.27	$ 23,027.80	$ 23,973.06	440,288.14	0.55%	180.26	7,698.93
			Mar-10	2010	Q1	440,288.14	$ 28,798.02	$ 23,973.06	493,059.22	0.55%	201.80	7,900.73
			Apr-10	2010	Q2	493,059.22	$ 25,145.92	$ 23,973.06	542,178.20	0.55%	225.99	8,126.72
			May-10	2010	Q2	542,178.20	$ 19,918.73	$ 23,973.06	586,070.00	0.55%	248.50	8,375.22
			Jun-10	2010	Q2	586,070.00	$ 28,482.10	$ 23,973.06	638,525.16	0.55%	268.62	8,643.83
			Jul-10	2010	Q3	638,525.16	$ 18,423.72	$ 23,973.06	680,921.94	0.89%	473.57	9,117.41
			Aug-10	2010	Q3	680,921.94	$ 16,365.09	$ 23,973.06	721,260.10	0.89%	505.02	9,622.42
			Sep-10	2010	Q3	721,260.10	$ 45,208.98	$ 23,973.06	790,442.14	0.89%	534.93	10,157.36
			Oct-10	2010	Q4	790,442.14	$ 38,423.77	$ 23,973.06	852,838.97	1.20%	790.44	10,947.80
			Nov-10	2010	Q4	852,838.97	$ 66,717.48	$ 23,973.06	943,529.52	1.20%	852.84	11,800.64
			Dec-10	2010	Q4	943,529.52	$ 42,215.80	$ 23,973.06	1,009,718.38	1.20%	943.53	12,744.17
			Jan-11	2011	Q1	1,009,718.38	$ 24,583.62	$ 52,093.91	1,086,395.91	1.47%	1,236.91	13,981.07
			Feb-11	2011	Q1	1,086,395.91	$ 21,054.04	$ 52,093.91	1,159,543.85	1.47%	1,330.83	15,311.91
			Mar-11	2011	Q1	1,159,543.85	$ 51,213.00	$ 52,093.91	1,262,850.76	1.47%	1,420.44	16,732.35
			Apr-11	2011	Q2	1,262,850.76	$ 7,478.89	$ 52,093.91	1,322,423.56	1.47%	1,546.99	18,279.34
			May-11	2011	Q2	1,322,423.56	$ 45,937.47	$ 52,093.91	1,420,454.93	1.47%	1,619.97	19,899.31
			Jun-11	2011	Q2	1,420,454.93	$ 43,194.57	$ 52,093.91	1,515,743.41	1.47%	1,740.06	21,639.37
			Jul-11	2011	Q3	1,515,743.41	$ 32,190.25	$ 52,093.91	1,600,027.57	1.47%	1,856.79	23,496.15
			Aug-11	2011	Q3	1,600,027.57	$ 28,726.81	$ 52,093.91	1,680,848.28	1.47%	1,960.03	25,456.19
			Sep-11	2011	Q3	1,680,848.28	$ 46,845.24	$ 52,093.91	1,779,787.43	1.47%	2,059.04	27,515.23
			Oct-11	2011	Q4	1,779,787.43	$ 24,356.40	$ 52,093.91	1,856,237.73	1.47%	2,180.24	29,695.47
			Nov-11	2011	Q4	1,856,237.73	$ 18,722.19	$ 52,093.91	1,927,053.83	1.47%	2,273.89	31,969.36
			Dec-11	2011	Q4	1,927,053.83	$ 39,856.57	$ 52,093.91	2,019,004.31	1.47%	2,360.64	34,330.00
			Jan-12	2012	Q1	2,019,004.31	$ 11,430.02	$ 56,343.11	2,086,777.44	1.47%	2,473.28	36,803.28
			Feb-12	2012	Q1	2,086,777.44	$ 7,183.24	$ 56,343.11	2,150,303.80	1.47%	2,556.30	39,359.58
			Mar-12	2012	Q1	2,150,303.80	$ 7,481.47	$ 56,343.11	2,214,128.38	1.47%	2,634.12	41,993.70
			Apr-12	2012	Q2	2,214,128.38	$ 51,507.57	$ 56,343.11	2,321,979.07	1.47%	2,712.31	44,706.01
			May-12	2012	Q2	2,321,979.07			2,321,979.07	0.00%	-	44,706.01
			Jun-12	2012	Q2	2,321,979.07			2,321,979.07	0.00%	-	44,706.01
			Jul-12	2012	Q3	2,321,979.07			2,321,979.07	0.00%	-	44,706.01
			Aug-12	2012	Q3	2,321,979.07			2,321,979.07	0.00%	-	44,706.01
			Sep-12	2012	Q3	2,321,979.07			2,321,979.07	0.00%	-	44,706.01
			Oct-12	2012	Q4	2,321,979.07			2,321,979.07	0.00%	-	44,706.01
			Nov-12	2012	Q4	2,321,979.07			2,321,979.07	0.00%	-	44,706.01
			Dec-12	2012	Q4	2,321,979.07			2,321,979.07	0.00%	-	44,706.01
							$ 1,183,802.95	$ 1,138,176.12	$ 2,321,979.07			

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

Year	OM&A (from Sheet 5)	Amortization Expense (from Sheet 5)	Cumulative OM&A and Amortization Expense	Average Cumulative OM&A and Amortization Expense	Average Annual Prescribed Interest Rate for Deferral and Variance Accounts (from Sheets 8A and 8B)	Simple Interest on OM&A and Amortization Expenses
2006	$ -	$ -	$ -	$ -	4.37%	$ -
2007	$ 89,832.76	$ -	$ 89,832.76	$ 44,916.38	4.73%	$ 2,123.42
2008	$ 88,000.03	$ -	$ 177,832.79	$ 133,832.78	3.98%	$ 5,326.54
2009	$ 166,161.40	$ 60,406.12	$ 404,400.31	$ 291,116.55	1.14%	$ 3,311.45
2010	$ 378,047.77	$ 375,738.95	$ 1,158,187.03	$ 781,293.67	0.80%	$ 6,230.82
2011	$ 384,159.46	$ 703,318.16	$ 2,245,664.65	$ 1,701,925.84	1.47%	$ 25,018.31
2012	$ 585,146.61	$ 809,304.00	$ 3,640,115.26	$ 2,942,889.96	1.47%	$ 43,260.48
Cumulative Interest to 2011						$ 42,010.54
Cumulative Interest to 2012						$ 85,271.03

Ontario Energy Board

Smart Meter Model

Oakville Hydro Electricity Distribution Inc.

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)	$ -	$ 91,131.74	$ 89,214.68	$ 266,471.08	$ 1,124,858.80	$ 1,822,833.71	$ 2,154,675.22	$ 5,549,185.23
Interest on Deferred and forecasted OM&A and Amortization Expense (Sheet 8A/8B) (Check **one** of the boxes below)	$ -	$ -	$ 5,003.08	$ 2,357.94	$ 5,383.15	$ 21,585.83		$ 34,330.00
X Sheet 8A (Interest calculated on monthly balances)	$ -	$ -	$ 5,003.08	$ 2,357.94	$ 5,383.15	$ 21,585.83		$ 34,330.00
Sheet 8B (Interest calculated on average annual balances)								$ -
SMFA Revenues (from Sheet 8)	$ 95,150.94	$ 188,287.11	$ 193,011.96	$ 480,601.13	$ 1,005,202.53	$ 1,256,040.49	$ 427,062.44	$ 3,645,356.60
SMFA Interest (from Sheet 8)	$ 518.35	$ 8,692.34	$ 14,431.55	$ 6,422.65	$ 11,595.08	$ 37,365.84	$ 16,553.48	$ 95,579.29
Net Deferred Revenue Requirement	-$ 95,669.29	-$ 105,847.71	-$ 113,225.75	-$ 218,194.77	$ 113,444.35	$ 551,013.21	$ 1,711,059.30	$ 1,842,579.34
Number of Metered Customers (average for 2012 test year)							62675	

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

Years for collection or refunding	2	
Deferred Incremental Revenue Requirement from 2006 to December 31, 2011 plus Interest on OM&A and Amortization	$ 3,428,840.01	
SMFA Revenues collected from 2006 to 2012 test year (inclusive) Plus Simple Interest on SMFA Revenues	$ 3,740,935.89	
Net Deferred Revenue Requirement	-$ 312,095.88	
SMDR May 1, 2012 to April 30, 2014	-$ 0.21	Match
Check: Forecasted SMDR Revenues	-$ 315,882.00	

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

Incremental Revenue Requirement for 2012	$ 2,154,675.22	
SMIRR	$ 2.86	Match
Check: Forecasted SMIRR Revenues	$ 2,151,006.00	