

July 5, 2012

Ms. Kirsten Walli
Ontario Energy Board
PO Box 2319
27th Floor, 2300 Yonge Street
Toronto, Ontario M4P 1E4

Re: Final Disposition of Smart Meter Deferral/Variance Accounts 1555 & 1556
Rate Zones: (i) Chatham-Kent, (ii) Strathroy, Mount Brydges & Parkhill, (iii) Dutton and (iv) Newbury
Board File No.: EB-2012-0289

Dear Ms. Walli,

Entegrus Powerlines Inc. ("Entegrus"), formerly known as Chatham-Kent Hydro Inc. ("CKH") is the local electricity distribution company serving sixteen Ontario communities. CKH and Middlesex Power Distribution Corporation ("MPDC", part of the CKH corporate family since 2005 and recently amalgamated with CKH) have been leaders in the implementation of the Province of Ontario's Smart Meter initiative, and were among the 13 licensed distributors authorized by Ontario Regulation 427/06 to carry on discretionary Smart Metering activities.

In previous applications, CKH has applied for and received Ontario Energy Board ("Board") approval of Smart Meter-related expenditures and the recovery of the revenue requirements related to those expenditures, together with disposition of the balances in Deferral/Variance Accounts 1555 and 1556, for the periods and the rate zones set out in those applications. At this time, Entegrus seeks approval of its Smart Meter expenditures and recovery of its Smart Meter-related revenue requirement for the remaining periods and in the Entegrus rate zones set out in this Application, together with final disposition of all costs captured in Deferral/Variance Accounts 1555 and 1556.

Entegrus completed Smart Meter deployment and TOU billing implementation on deadline for June 2011. This achievement was consistent with the commitments of CKH and MPDC to the Board and the Ministry at the outset of the process.

This Application has been prepared in accordance with the Board's guidelines and requirements as follows:

- The August 8, 2007 Decision with Reasons (EB-2007-0063) in the Board's Combined Proceeding in relation to Smart Meter costs for thirteen distributors (including Entegrus' predecessor companies) that were at that time authorized to conduct Smart Meter activities;

- The Board's Smart Meter Funding and Cost Recovery Guideline (G-2011-0001) issued December 15, 2011;
- The Smart Meter Model version 2.17 issued by the Board on September 13, 2011, and subsequently updated by Board staff on November 11, 2011 (the "Model"); and
- Previous Board decisions.

Entegrus requests that copies of all correspondence and orders pertaining to this proceeding be delivered to the following individuals:

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The Entegrus team takes great pride in its pioneering role in the successful launch of Smart Meters and TOU deployment in Ontario. As an early adopter of AMI and Smart Meter technology, Entegrus and its predecessor companies demonstrated leadership in Smart Meter implementation both in its own service areas and by sharing its learnings and experience with the industry. The organization was also successful in integrating Smart Meter technology into LDCs that it acquired during the Smart Meter Initiative period.

Entegrus submits that the costs set out in this Application are reasonable and were prudently incurred, and that full recovery of the revenue recovery related to these costs is warranted.

If you have any questions or concerns regarding this application, please do not hesitate to contact the undersigned.

Regards,

[Original Signed By]

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cc: Dan Charron, President
Chris Cowell, Chief Financial and Regulatory Officer
Andrya Eagen, Senior Regulatory Specialist
James Sidlofsky, Partner, Borden Ladner Gervais LLP



**Application for Final Disposition of
Smart Meter Funding and Cost Recovery**

Board File No.: EB-2012-0289
Date Filed: July 5, 2012

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Table of Contents

Index of Terminology.....	4
Summary of Attachments.....	5
Section 1: Background – Entegrus Powerlines Inc.	6
Section 2: The CKH and MPDC Role in Ontario’s Smart Meter and Time of Use Deployment.....	8
Section 3: Basis for Application and Summary	13
Section 4: Details of Smart Meter System.....	16
Section 5: Deployment	19
<i>Residential Deployment Strategy</i>	<i>19</i>
<i>GS<50 Deployment Strategy.....</i>	<i>20</i>
<i>Deployment Process</i>	<i>20</i>
<i>Customer Communication</i>	<i>21</i>
<i>Deployment Challenges</i>	<i>21</i>
Section 6: Details of Current Application	24
<i>Current Application Models.....</i>	<i>24</i>
<i>Summary of Previously Approved Applications</i>	<i>24</i>
<i>Tab 2 – Smart Meter Costs</i>	<i>25</i>
<i>Tab 3 – Cost of Service Parameters</i>	<i>28</i>
<i>Tab 7 – Taxes/PILs</i>	<i>28</i>
<i>Tab 8 – Funding Adders</i>	<i>28</i>
<i>Tabs 8A & 8B – Interest Calculation</i>	<i>28</i>
Section 7: Expenditures Beyond Minimum Functionality.....	29
<i>Type B Expenditures: GS>50 kW Smart Meters</i>	<i>29</i>
<i>Type C Expenditures: TOU Rate Implementation and MDM/R Integration.....</i>	<i>30</i>
Section 8: Stranded Meter Costs.....	33
Section 9: Smart Meter Models Reconciled to December 31, 2011 RRR.....	34
Section 10: Summary of Requested Rate Riders and Proposed Bill Impacts.....	35
Section 11: Conclusion.....	37

Index of Terminology

Acronym	Description
MDM/R	Meter Data Management and Repository
CK	Refers to the Chatham-Kent service territory of Entegrus Powerlines
CKH	Refers to the Entegrus Powerlines predecessor LDC “Chatham-Kent Hydro”. CKH amalgamated with MPDC on January 1, 2012. The amalgamated LDC was subsequently renamed “Entegrus Powerlines”.
CT	Current transformers
Dutton	Refers to the Village of Dutton service territory of Entegrus Powerlines. This service territory was previously part of the Entegrus Powerlines predecessor LDC “Middlesex Power Distribution Corporation”
Entegrus	Refers to Entegrus Powerlines Inc.
HTR	Hard-to-Reach (representative of installations where there are challenges in accessing customer premises to perform meter deployment)
MPDC	Refers to the Entegrus Powerlines predecessor LDC “Middlesex Power Distribution Corporation”. MPDC was amalgamated with CKH on January 1, 2012.
Newbury	Refers to the Village of Newbury service territory of Entegrus Powerlines. This service territory was previously part of the Entegrus Powerlines predecessor LDC “Middlesex Power Distribution Corporation”
OM&A	Operating, Maintenance & Administrative
IESO	Independent Electricity System Operator
PILS	Payments in Lieu of Taxes
PT	Potential transformers
Model	The Smart Meter Model version 2.17 issued by the Board on September 13, 2011, and subsequently updated by Board staff on November 11, 2011
Report	The Board’s Sector Smart Meter Audit Review Report, dated March 31, 2010
RPP	Regulated Price Plan
RRR	Regulatory Reporting Requirements
SSS	Standard Service Supply Code
SMDR	Smart Meter Disposition Rider
SME	Smart Metering Entity (the IESO)
SMFA	Smart Meter Funding Adder
SMIRR	Smart Meter Incremental Revenue Requirement Rider
SMP	Refers to the Strathroy, Mount Brydges & Parkill service territory of the Entegrus Powerlines. This service territory was previously part of the Entegrus Powerlines predecessor LDC “Middlesex Power Distribution Corporation”
TOU	Time-of-Use

Summary of Attachments

- A. Smart Meter Deployment Schedule
- B. Previously Approved SMFAs, SMDRs and SMIRRs
- C. Sample Smart Meter and TOU Customer Communication Material
- D. CK Residential Smart Meter Model
- E. CK General Service Less than 50 kW Smart Meter Model
- F. CK General Service Greater than 50 kW Smart Meter Model
- G. SMP Residential Smart Meter Model
- H. SMP General Service less than 50 kW Smart Meter Model
- I. SMP General Service less Greater than 50 kW Smart Meter Model
- J. Dutton Residential Smart Meter Model
- K. Dutton General Service less than 50 kW Smart Meter Model
- L. Newbury Residential Smart Meter Model
- M. Newbury General Service less than 50 kW Smart Meter Model
- N. Newbury General Service greater than 50 kW Smart Meter Model
- O. OM&A and TOU Cost Allocation
- P. Ontario Capital Tax Exemption Schedule
- Q. TOU Implementation Cost Summary
- R. Reconciliation to December 31, 2011 RRR
- S. Navigator Time-of-Use Rates Focus Group Report (December 2007)
- T. Navigant Consulting Evaluation of Smart Meter Time-of-Use Project Report (February 10, 2009)

Section 1: Background – Entegrus Powerlines Inc.

This Application is being made by Entegrus Powerlines Inc. (“Entegrus”), formerly known as Chatham-Kent Hydro Inc. (“CKH”), for final disposition of all costs captured in Deferral/Variance Accounts 1555 and 1556 for the periods following those addressed in previous Decisions of the Ontario Energy Board (the “Board”) approving smart meter expenditures and cost recovery in the Entegrus rate zones or parts thereof. Utilizing the Board issued Models, Entegrus has calculated and is seeking to dispose of Smart Meter Capital and OM&A costs via:

- SMDR charges by rate zone and by customer class, commencing November 1, 2012. These charges will allow Entegrus to recover the variance between:
 - the deferred revenue requirement for unclaimed Smart Meters installed up to December 31, 2011,
 - the Smart Meter Funding Adder (SMFA) collected to April 30, 2012 (based on actual amounts collected to April 30, 2012), and
 - associated interest; and
- SMIRR charges by rate zone and customer class, commencing November 1, 2012. These charges represent a proxy for the incremental change in the distribution rates that the actual expenditures would have generated had they been incorporated into the rate base and revenue requirement calculation. It is requested that the SMIRR continue until the effective date of Entegrus’ next final rate order based on a Cost of Service application, currently scheduled for 2016.

The Application is discussed in greater detail in Section 3, below.

Entegrus serves the following communities:

- Town of Blenheim,
- Town of Bothwell,
- City of Chatham,
- Town of Dresden,
- Village of Erieau,
- Police Village of Merlin,
- Town of Ridgetown,
- Village of Thamesville,
- Town of Tilbury,
- Town of Wallaceburg,
- Village of Wheatley, and
- Part Lots 16 & 17, Concession A, Geographic Township of Ranleigh, designated as Part 1, Reference Plan 24R 7195, Municipality of Chatham-Kent, and Part Lot 17, Concession A, Geographic Township of Ranleigh, designated as Part 2, Reference Plan 7195, Municipality of Chatham-Kent as per Board Order RP-2003-0044, dated September 16, 2003.
- The former Town of Strathroy as of December 31, 2000.
- The former Police Village of Mount Brydges as of December 31, 2000.
- The former Town of Parkhill as of December 31, 2000.
- The Village of Dutton as of December 31, 1997, now within the Municipality of Dutton/Dunwich.
- The Village of Newbury as of November 7, 1998.

For the reader's assistance, Entegrus has described the evolution of its service area below. Certain portions of the Entegrus service area have been the subject of previous Board Smart Meter prudence reviews and approvals, as discussed in Section 3, below.

The former CKH was a local electricity distribution company (licence ED-2002-0563) servicing the Ontario communities of Blenheim, Bothwell, Chatham, Dresden, Erieau, Merlin, Ridgetown, Thamesville, Tilbury, Wallaceburg, Wheatley, and certain designated land parcels in the Township of Raleigh, known as the Bloomfield Business Park.

On March 24, 2005, CKH's parent company, the former Chatham-Kent Energy Inc. ("CKE"), submitted MAAD application EB-2005-0255 requesting Board approval to acquire all shares of Middlesex Power Distribution Corporation ("MPDC"). At that time, MPDC was a local distribution company (licence ED-2003-0059) servicing the Ontario communities of Strathroy, Mount Brydges and Parkhill.

The Board approved this acquisition in its Decision and Order issued on June 24, 2005. CKE's acquisition of MPDC subsequently closed June 30, 2005.

On October 15, 2008, MPDC submitted MAAD applications EB-2008-0332 and EB-2008-0350 requesting Board approval to acquire all shares of the former Dutton Hydro Limited and the former Newbury Power Corporation and to amalgamate all entities into MPDC. The Board approved these acquisitions and the amalgamation in its Decision and Order issued February 9, 2009. MPDC closed this transaction on April 30, 2009. Subsequently, MPDC served the distribution areas formerly licensed to each of MPDC, Dutton Hydro Limited & Newbury Power Corporation and maintained separate sets of rates for each of these three areas.

On August 31, 2011, CKH applied to the Board for leave to amalgamate MPDC with CKH (Board files EB-2011-0328/0329). On December 16, 2011, the Board approved the amalgamation, and on January 11, 2012 CKH notified the Board that this transaction was complete. On January 20, 2012, CKH received its amended licence ED-2002-0563 and notification that the MPDC licence ED-2003-0059 had been canceled.

Subsequently, on January 31, 2012, CKH applied to the Board to amend the company name on its Electricity Distribution Licence (ED-2002-0563) to Entegrus Powerlines Inc. ("Entegrus"). The Board approved this change and issued an updated licence on February 24, 2012.

Entegrus continues to maintain four sets of rates, as follows:

- Chatham-Kent ("CK") serving approximately 32,000 customers;
- Strathroy, Mt. Brydges & Parkhill ("SMP") serving approximately 7,400 customers;
- Dutton serving approximately 600 customers, and;
- Newbury serving approximately 200 customers.

Section 2: The CKH and MPDC Role in Ontario's Smart Meter and Time of Use Deployment

In May 2004, the Ontario government announced plans to create a culture of conservation in the province, designed to address peak demand issues and the ongoing strain on the provincial electricity supply. At the forefront of these plans was the Smart Meter Initiative ("SMI"), under which 4.3 million Ontario homes and small businesses would be equipped with Smart Meters by 2010. To this end, a target was set to install the first 800,000 Smart Meters before the end of 2007.

Prior to this announcement, CKH had already begun to assess Automated Meter Infrastructure ("AMI") technologies. The investigation involved in-depth technical reviews of various product lines and communication protocols, including: power line carrier, radio, cell and landline communication. The investigation recognized that any AMI solution would need to mesh with the profile of CKH's service territory, which at the time encompassed 2,400 square kilometers, a geographic area four times the size of Toronto. Chatham-Kent is bordered by Lake Erie to the south and Lake St. Clair to the west. As noted above, CKH's (now Entegrus') service area has expanded since that time.

CKH embraced the announcement of the provincial Smart Meter initiative, and management established an internal goal to have a pilot project running by the end of 2004. With its vast service territory and experience operating a 900 MHz SCADA system, CKH recognized the importance of proper radio communication. CKH embarked on a detailed technical review of the four of the leading AMI technologies available at the time. From this process, CKH identified the key principles in determining which Smart Meter technology and communication protocol best aligned with the overarching goals (Please refer to Section 4 for further details).

Subsequently, in July 2004, the Ontario Ministry of Energy (the "Ministry") formally directed the Board under Section 27.1 of the *Ontario Energy Board Act, 1998* (the "OEB Act") to provide the Ministry with an implementation plan for the achievement of the above-noted Smart Meter deployment targets. The Board issued a discussion paper in July 2004, and conducted subsequent consultation processes and working groups throughout the fall which CKH participated in. On January 26, 2005, the Board issued the Smart Meter Implementation Plan to the Minister, where it was noted in the Summary that the SMI would be "both challenging and complex, but nonetheless feasible."

In August 2004, CKH selected Tantalus Systems Corporation's ("Tantalus") TUNet system. TUNet operated on a variety of meter manufacturer device types and could be retrofitted to the majority of CKH's existing electromechanical meters, converting existing watt-hour meters to smart internal meters. The TUNet system involved bi-directional wireless radio technology using a hybrid 900/220 MHz system, which would economically automate meter reads and provide two-way communications with the customer for troubleshooting. The retrofit capability would minimize both new infrastructure costs by eliminating cell and land line rental costs. The capability was also environmentally friendly and reduced stranded meter costs. The selected vendor, Tantalus, was an established Canadian company based in Vancouver, British Columbia, that designed and manufactured wireless, two-way and real-time communication networks for distributors. Tantalus was one the few vendors at the time with field-tested, deployed products.

After reviewing qualified contractors and selecting Tantalus, CKH proceeded with the design of a five year installation plan utilizing internal resources for deployment.

In the fall of 2004, a 220 MHz antenna was erected by CKH on the grounds of its Chatham Operation Centre. CKH commenced pilot activities in November 2004, installing 1,000 Residential Smart Meters across diverse segments of its Chatham-Kent service territory. The pilot was approved by the Board for Third Tranche Conservation & Demand Management (“CDM”) funding in EB-2004-0459. Post launch, in February 2005, CKH held an Open House at its Chatham Operations Centre to review the operation of its Smart Meter pilot and its early success. The Ministry attended, as well as approximately 25% of Ontario LDCs. CKH would continue to willingly share Smart Meter implementation information with other utilities throughout the deployment phases.

In June 2005, CKE acquired MPDC, as described in Section 1. Since the MPDC service territory was non-contiguous to CKH’s service territory (approximately 100 km apart), a second 220 MHz antenna and Tantalus base station were added in Strathroy, which doubled the broadcast range. Another 200 Residential Smart Meters were added to the pilot from within the MPDC service territory.

In November 2005, CKH was invited to the Provincial Parliament session marking the introduction of the Energy Conservation and Responsibility Act. CKH management was recognized from the gallery by the Minister of Energy, Donna Cansfield, for the successes of its Smart Meter pilot project.

In the summer of 2006, the Board issued amendments to the Standard Service Supply Code (“SSS”), the Retail Settlement Code and the Distribution System Code relating to the Smart Meter Initiative. It was noted that a transition period was required, including a period for the initial enrolment of Smart Meters into a Meter Data Management and Repository (the “MDM/R”) under development by the Independent Electricity System Operator (the “IESO”). It was further noted that the MDM/R would eventually be operated by a Smart Metering Entity (“SME”). The amendments to the SSS allowed certain electricity distributors to charge Time-of-Use (“TOU”) prices for consumers on the Regulated Price Plan (the “RPP”) with eligible TOU rates. The amendments set the stage for CKH to start piloting TOU pricing on a small scale in 2007.

Throughout 2006 CKH made numerous customer presentations on the advantages of Smart Meters to increase awareness. In August 2006, CKH partnered with Enbridge Inc. on an early investigation into meter data management best practices for Smart Meters. The Utility Planning Network subsequently named CKH as the winner of its 2005/2006 Best Metering Data Integration Initiative contest, for its success in helping customers become more astute energy users.

In September 2006, as the SMI continued to evolve, the Ministry approached the industry’s early adopters to assist with reaching the goal of 800,000 Residential Smart Meters deployed by December 31, 2007. Accordingly, CKH and MPDC re-configured their original 5 year deployment plan to instead commence mass deployment in 2007. In preparing for the subsequent Ministry approval process, CKH engaged Deloitte Inc. to review the costs and benefits of the pilot, including all assumptions, financial calculations and suppositions from the pilot in order to derive objective conclusions on Residential deployment. The results of this report were provided to the Ministry and during the Combined Proceeding to demonstrate CKH’s ability to rapidly deploy Residential Smart Meters in its service territory. Subsequently, in January 2007, CKH and MPDC were among the thirteen licenced distributors authorized by Ontario Regulation 427/06 to conduct discretionary Smart Metering activities.

Meanwhile in early 2007, thirteen distributors, including CKH and MPDC, simultaneously participated in the Board’s 2007 Combined Proceeding with respect to Smart Meter costs (EB-2007-0063, referred to below as the “Combined Proceeding”). CKH and MPDC provided written submissions, as well as oral testimony to describe

the Tantalus TUNet technology, associated costs and other aspects of implementation of the SMI. The Combined Proceeding culminated with a Board Decision stating:

“the purchasing decision of the thirteen utilities involved in [the] proceeding [were] implemented with the necessary due diligence”.

Please see Section 4 for more information on the role of CKH and MPDC in the Combined Proceeding. CKH and MPDC subsequently received Board approval for recovery of Smart Meter-related costs for the period ending April 30, 2007.

On March 23, 2007, consistent with the above-referenced amendments to the SSS Code, CKH commenced TOU pricing on a small scale. The first 213 TOU bills were issued to customers for January 2, 2007 to March 6, 2007 read dates.

On March 28, 2007, the Independent Electricity System Operator (the “IESO”) was designated as the Smart Metering Entity by Ontario Regulation 393/07 (Smart Meter Entity) under the *Electricity Act, 1998*. CKH and MPDC enrolled with the MDM/R on April 4, 2007 and were part of the initial six distributors to participate in the Smart Metering System Implementation Program with the IESO. This involved a series of workshops oriented toward the initial implementation of the Ontario Smart Metering System. The workshops focused on coordination with IBM Canada on design issues, and then on LDC preparations needed to utilize the MDM/R.

By April 30, 2007, CKH had installed 17,052 Residential Smart Meters, representing approximately 60% of its Residential meter points. MPDC had installed 3,063 Residential Smart Meters, or approximately 45%. Please see Attachment A for timeline of deployment by rate zone and applicable rate class.

In the spring of 2007, Chartwell Inc. honored CKH with a Best Practices Award for Metering, citing the innovation, depth of business case and results it has achieved through its Smart Metering program. Throughout 2007, CKH and MPDC continued to host presentations on the tools available to consumers to monitor their usage and take advantage of off-peak energy consumption, including Smart Meters.

CKH completed Self-Certification and System Integration Testing with the MDM/R in May 2007, and began developing business processes for mass TOU billing. CKH entered into a pilot program with the MDM/R requiring more than 2,000 customers’ information to be transferred and tested on a daily basis.

CKH completed MDM/R Quality Assurance testing in December 2007, and then went into live production with the MDM/R in May 2008. CKH commenced reviewing daily data exchange reports with the MDM/R to ensure data validity.

By December 31, 2007, CKH had installed 26,872 Residential Smart Meters, representing approximately 94% of its Residential meter points, with the exception of certain Hard to Reach (“HTR”) meter points. Similarly, by December 31, 2007, MPDC had installed 5,887 Residential Smart Meters, representing approximately 87% of its Residential meter points. In completing the above installations, CKH and MPDC were able to assist with the provincial target of reaching 800,000 Smart Meters by December 31, 2007.

By way of a joint application dated September 16, 2008 (Board file number EB-2008-0155), CKH and MPDC applied to the Board for a prudence review and approval of recovery of Smart Meter-related costs through December 31, 2007. By its Decision dated November 25, 2008, the Board approved recovery for that period.

In December 2007, the IESO engaged Navigator to prepare a Focus Group Report where CKH's Smart Meter deployment and customer communications efforts were recognized as follows:

"It was clear that participants had received relevant communication products (web, bill stuffers, smart meter packages etc.) from their local utility. The level of understanding of the technology and price changes was greater than we had seen elsewhere. It may be useful to look at what Chatham-Kent has done to educate their customers in order to gain an understanding for similar LDCs."

Please see Attachment S for a copy of this report.

In early 2008, CKH and MPDC began focusing on the deployment of Commercial Smart Meters. It was determined that Smart Meters would be deployed to GS>50 kW customers for meter reading efficiency purposes, amongst other benefits (see Section 7). Accordingly, a Smart Meter solution for GS>50kW customers was requested from the vendor and developed in 2008. Subsequently, GS>50kW Smart Meters were deployed as the seal periods on the existing meters expired.

In the fall of 2008, after five years of significant focus on Smart Meter deployment and TOU development, it became clear that CKH and MPDC business systems would need to be enhanced prior to the full deployment of TOU pricing, in order to support the reliability required for a continuous flow of data. Management determined that these business systems needs should be addressed in advance of the commencement of the expected mass industry migration to the MDM/R and TOU pricing in 2010. It was recognized that interfacing with the MDM/R would be a significant endeavor – one that was unforeseen at the outset of Smart Meter deployment.

While TOU maintenance work would continue from late 2008 onward, including the ongoing maintenance of the MDM/R production environment and the daily exchange and review of files with the MRM/R, the primary focus would turn for a one and half year period to enhancing the CKH and MPDC Harris CIS system and the business processes around it.

The first business was a Harris CIS upgrade involving the implementation of 18 separate modules. This upgrade was commenced in late 2008. These modules included enhancements to file sharing and information synchronization capabilities, which also served to maintain the stability of the interface with the MDM/R. Simultaneously, CKH met with Harris to ensure alignment with the expected MDM/R bill formats that would be required when the industry migrated to the MDM/R.

The second business need was the move from bi-monthly billing to monthly billing in order to assist customers in managing their bills and also to reduce deposit requirements. This implementation started in January of 2010 and was completed in April 2010.

In April 2010, as part of its Cost of Service application, CKH requested a prudence review and approval of recovery of Smart Meter-related costs through December 31, 2008. As part of the partial Settlement Agreement in that proceeding, the parties thereto agreed as follows with respect to Issue 9.3:

"The Parties agree that the Smart Meter costs (both O&M A and capital) are appropriate for recovery from CK Hydro's customers. The Parties also agree that the return on the investment in smart meters should be updated for the cost of capital (Board staff IR # 57 b). The Parties also agree that the Smart Meter charges, rate rider, disposition rider and permanent rider, are appropriate after the updated cost of capital parameters are used."

By its Decision on the Partial Settlement and Procedural Order No. 5 dated March 11, 2010, the Board accepted the Partial Settlement Agreement, and the appropriate charges and riders were incorporated into CKH's final rate order for May 2010.

In May of 2010, with both the Harris CIS upgrades and monthly billing in place, CKH focused fully on the implementation of TOU pricing. Experienced Customer Service and IT personnel were redeployed from their day-to-day jobs to focus solely on TOU interface resolution and the design of business process design in a TOU environment. To backfill, CKH brought on additional full-time and contract resources.

In September 2010, the first wave of CKH Residential TOU was completed, and by December 2010, substantially all CKH Residential customers were being billed on TOU. In January 2011, deployment commenced on CKH GS<50kW.

While TOU system readiness preparation commenced in 2010 for MPDC, full MPDC self-certification was completed in early 2011. In April 2011, leveraging the benefits of the CKH TOU implementation work, MPDC rapidly moved on to Residential TOU implementation. MPDC Residential TOU, inclusive of the communities of Strathroy, Mt. Brydges, Parkhill, Dutton and Newbury, was completed in May 2011.

For June 2011, all CKH and MPDC Residential and GS<50 kW bills were completed on a TOU basis.

Although the road to full TOU deployment by June 2011 was challenging, CKH and MPDC did not request deadline extensions from the Board throughout the entire SMI process. Rather, Smart Meter deployment and TOU billing were completed on the deadline and timely reporting was available to the Board. This achievement was consistent with the commitments of CKH and MPDC to the Board and the Ministry at the outset of the process. Accordingly, Entegrus seeks full recovery of the amounts set out in this Application, which it submits are reasonable and were prudently incurred.

The Entegrus team continues to take great pride in the organization's pioneering role in the successful launch of Smart Meters and TOU deployment in Ontario.

Section 3: Basis for Application and Summary

This Smart Meter Funding and Cost Recovery – Final Disposition Application, referred to herein as the “Application”, has been prepared in accordance with the Board’s guidelines and requirements as follows:

- The August 8, 2007 Decision with Reasons (EB-2007-0063) in the Board’s Combined Proceeding in relation to Smart Meter costs for thirteen distributors (including the former CKH and the former MPDC which now comprise Entegrus) that were at that time authorized to conduct Smart Meter activities;
- The Board’s Smart Meter Funding and Cost Recovery Guideline (G-2011-0001) issued December 15, 2011;
- The Smart Meter Model version 2.17 issued by the Board on September 13, 2011, and subsequently updated by Board staff on November 11, 2011 (the “Model”); and Previous Board decisions.

As discussed above, Entegrus has previously received rate approvals from the Board for the disposition of Smart Meter costs for its CKH and SMP (as MPDC) rate zones.

Previous approvals include Smart Meter Funding Adders (“SMFA”), Smart Meter Disposition Riders (“SMDR”) and additional riders that are now referred to as Smart Meter Incremental Revenue Requirement Riders (“SMIRR”). Please see Attachment B for a complete list of previously approved SMFAs, SMDRs and SMIRRs by rate zone, including commencement date, termination date (where applicable) and applicable Board file numbers.

Throughout the SMI, Entegrus and its predecessor companies complied with the ongoing reporting requirements with respect to Smart Meter costs and installation progress.

This Application is being made by Entegrus, formerly known as CKH, for final disposition of all costs captured in Deferral/Variance Accounts 1555 and 1556 for the periods following those addressed in previous Decisions of the Board approving Smart Meter expenditures and cost recovery in the Entegrus rate zones or parts thereof. Utilizing the Board issued Models, Entegrus has calculated and is seeking to dispose of Smart Meter Capital and OM&A costs via:

- SMDR charges by rate zone and by customer class, commencing November 1, 2012. These charges will allow Entegrus to recover the variance between:
 - the deferred revenue requirement for unclaimed Smart Meters installed up to December 31, 2011,
 - the Smart Meter Funding Adder (SMFA) collected to April 30, 2012 (based on actual amounts collected to April 30, 2012), and
 - associated interest; and
- SMIRR charges by rate zone and customer class, commencing November 1, 2012. These charges represent a proxy for the incremental change in the distribution rates that the actual expenditures would have generated had they been incorporated into the rate base and revenue requirement calculation. It is requested that the SMIRR continue until the effective date of Entegrus’ next final rate order based on a Cost of Service application, currently scheduled for 2016.

Below is a summary of the rate riders proposed in this Application by rate zone and by customer class. These rate riders are calculated as fixed charges per customer per month. Please see Section 10 for specific details of the requested SMDR and SMIRR charges.

Entegrus Powerlines Inc.

Summary of Requested SMDR & SMIRR

Rate Class	No. of Customers	SMDR			SMIRR		Total Monthly Rate	2012 Estimate Bill	% Bill Increase (Decrease)
		Amount	Duration	Rate Rider	Amount	Rate Rider			
Chatham-Kent									
Residential	28,649	\$175,149	1 Year	\$0.51	\$95,953	\$0.28	\$0.79	\$114	0.69%
General Service <50	3,083	\$389,926	3.5 Years	\$3.01	\$207,246	\$5.60	\$8.61	\$277	3.11%
General Service >50	400	\$93,397	1 Year	\$19.46	\$54,307	\$11.31	\$30.77	\$29,390	0.10%
Strathroy, Mount Brydges & Parkhill									
Residential	6,422	-\$53,087	1 Year	-\$0.69	\$29,458	\$0.38	-\$0.31	\$118	-0.26%
General Service <50	662	\$93,160	3.5 Years	\$3.35	\$42,503	\$5.35	\$8.70	\$246	3.54%
General Service >50	89	\$14,670	1 Year	\$13.74	\$13,145	\$12.31	\$26.05	\$122,730	0.02%
Dutton									
Residential	521	\$26,288	3.5 Years	\$1.20	\$14,541	\$2.33	\$3.53	\$122	2.89%
General Service <50	89	\$8,248	3.5 Years	\$2.21	\$4,100	\$3.84	\$6.05	\$277	2.18%
Newbury									
Residential	168	\$5,400	3.5 Years	\$0.77	\$4,845	\$2.40	\$3.17	\$114	2.79%
General Service <50	31	\$1,597	3.5 Years	\$1.23	\$1,144	\$3.07	\$4.30	\$263	1.63%
General Service >50	5	\$820	1 Year	\$13.66	\$400	\$6.66	\$20.32	\$120,344	0.02%

The overall impact of the SMDR and SMIRR in terms of monthly bill impacts for all rate zones and all rate classes ranges from a low of -0.26% for SMP Residential to a high of 3.54% for SMP GS<50 kW. Bill impacts by rate zone and rate class are further discussed in Section 10, including support for the proposed disposition periods.

Please note that Entegrus is not seeking further recovery of stranded meter costs at this time. Please refer to Section 8 for further discussion of stranded meters.

As noted above, certain capital and operating costs have been approved in previous applications to the Board. Entegrus completed Smart Meter installations and TOU deployment for June 2011, and confirms that 100% of the costs submitted for disposition are included in the audited financial statements to December 31, 2011 (with the exception of ongoing costs). Entegrus submits that its SMI costs and thus its cost per installed meter are reasonable and were prudently incurred.

Entegrus respectfully requests that this Application be disposed of by way of a written hearing and that the Board provide reasons in writing for its final decision and order(s) in this proceeding. This request is made pursuant to subsection 17(1) of the *Statutory Powers Procedure Act*.

The names and contact information of Entegrus' authorized representatives and its counsel for the purpose of serving documents on Entegrus in this proceeding are as follows:

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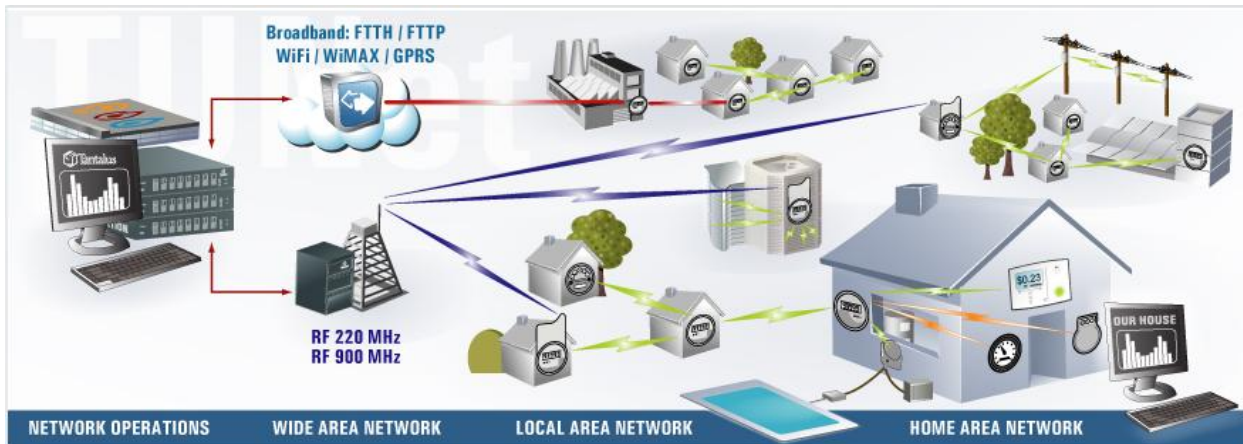
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Section 4: Details of Smart Meter System

Technical Description

Tantulus TUNet is an end-to-end communications system that combines WAN / LAN / HAN components to create a fast, reliable and scalable Smart Meter network. A high level schematic of the system operation is shown below:



The following technical description of the Tantulus TUNet system was included as Appendix (B)(d) to the Board's Combined Proceeding EB-2007-0063 decision:

Tantulus Systems AMI

The Tantulus product (TUNet® technology) is a Hybrid Wireless communication system that operates on a variety of meter manufacturers device types that capture the various functions that the meter provides and transmits the information back to a central server Advanced Metering Control Computer (AMCC). The Tantulus module is an Advanced Metering Communications Device (AMCD) that allows the utility to retrofit existing electromechanical meters that still have a useable un-depreciated life. These modules fit under the glass of the meter and collect hourly cumulative energy usage to 1/100th of a KWh with the storage capacity of 21 days.

The data is communicated in a self-healing mesh-network configuration using unlicensed 900MHz spread-spectrum frequencies with an Effective Radiated Power of 0.5 watts. Each device has a unique frequency identifier, unique utility assigned device identifier, a system assigned business identifier which along with the channel hopping nature of spread-spectrum provides several layers of security from the meter register.

The Local Area Network (LAN) is comprised of the actual modules in the meters at the customers' properties. The meters in the LAN can use each other to hop back to the source meter at the Wide Area Network (WAN) portal and the LAN has the routing depth capability of 16 devices that will lead to solid communication in sparsely populated areas rural areas. The LAN devices communicate back to a source meter on a WAN portal which is installed as part of the meter base.

The WAN portal does not store any data; it acts as a gateway to pass the data through a licensed 220MHz frequency, back to the central network controller which eliminates the possibility of any data overlapping. This frequency range is desirable as it is not heavily utilized and it has very good propagation characteristics, wide area of coverage, to follow the earth terrain and penetrate buildings as well as the wide coverage footprints. This enables the user to minimize the amount of infrastructure and antennas that are required to communicate over a wide area. The WAN is managed by the Network Controller that acts as a single regional collector or Advanced Metering Regional Collector (AMIC).

This system is being deployed by Chatham-Kent and Middlesex. It has been deployed in the following jurisdictions:

- *Northeastern Rural Electric Membership Corp.;*
- *Saint John Energy;*
- *Anaheim Public Utilities Department; and*
- *Appalachian Electric Cooperative.*

Procurement

As discussed In Section 2, CKH had begun to assess Smart Meter technologies prior to the provincial announcement with respect to the SMI. Subsequently, CKH and MPDC were named as priority installations under Ontario Regulation 428/06.

CKH's procurement investigation involved in-depth technical reviews of various product lines and communication protocols, including: power line carrier, radio, cell and landline communication. The investigation recognized that any AMI solution would need to mesh with the vast service territory involved. CKH conducted detailed technical review of the AMI technologies available at the time.

From this process, CKH identified the following principles in determining which technology and communication protocol best aligned with the overarching goals:

- Ensure that the solution is in step with Ministry and Board requirements and will support a TOU structure;
- Ensure consideration of existing metering assets and minimize stranded assets;
- Establish ongoing cost efficiency and flexibility as a priority;
- Ensure the system is non-proprietary;
- Ensure that the communication infrastructure may be used for other applications, such as: load control, AMI, outage management and/or revenue generating systems; and
- Search for opportunities to partner with other Local Distribution Companies (LDCs) and/or companies.

Based on the above-noted principles, in mid-2004 CKH and MPDC selected the Tantalus TUNet Smart Meter system. In particular, the Tantalus retrofit solution provided CKH and MPDC with the opportunity to maintain metering system product diversity, rather than going to one single meter supplier for the entire system. It also provided the opportunity to maintain the 10 year metering seal lives on the existing meters, as opposed to the 6 year seal lives allotted to other embedded Smart Meter technologies at the time.

Subsequently, in 2007 this selection was reviewed by the Board in the Combined Proceeding (EB-2007-0063), which served not only to determine cost recovery for certain Smart Metering activities, but also to provide guidance to other Ontario utilities who would be installing smart meters in the near future. Page 1 of the Board's Decision in the Combined Proceeding provides an overview of the proceeding's basis:

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

The Board went on to summarize the CKH and MPDC procurement and deployment plans as follows:

Chatham-Kent and Middlesex: Chatham-Kent and Middlesex, like Milton, Newmarket and Tay, are priority installations named in Ontario Regulation 428/06. Like Milton, Chatham-Kent began to assess smart meter technologies in 2004 prior to the Government's pronouncements with respect to the SMI. Chatham-Kent testified that it assessed four technologies before selecting Tantalus as the technology supplier for a pilot project. As part of its evidence, Chatham-Kent provided a study by Deloitte Inc. that reviewed the costs and benefits of the pilot, and calculated the cost estimates for full implementation. The results of this analysis were provided to the Ministry of Energy to demonstrate Chatham-Kent's ability to rapidly deploy the full complement of smart meters in its service areas. The deployment plans were provided to the Minister in August 2006. Chatham-Kent indicated that it negotiated a high volume discount with Tantalus to achieve significant price reductions from the pilot project pricing for both Chatham-Kent and Middlesex.

As noted above, the Tantalus TUNet system was further described as an Exhibit to the Board's Combined Proceeding decision.

In its Decision, the Board:

- Determined that there are fourteen cost categories in relation to Smart Meter minimum functionality . The cost categories were set out in Appendix A of the Decision;
- Found that the purchasing decisions of the thirteen utilities involved in this proceeding were implemented with the necessary due diligence, and the terms of the contracts each had concluded with suppliers, including the pricing, were prudent ;
- Decided that Utilities could, if they choose, bring forward applications for the recovery of stranded costs in the 2008 rates; and,
- Approved the rate relief for smart meter investments.

The Gantt chart displays a hierarchical structure of tasks for 'Project Alpha'. The tasks are listed on the left, and their duration is shown as horizontal bars. The chart includes a legend at the bottom with symbols for 'Task', 'Milestone', 'Summary', 'Summary Milestone', and 'Summary Milestone'.

Legend:

- Task: Blue bar
- Milestone: Green bar
- Summary: Red bar
- Summary Milestone: Blue bar
- Summary Milestone: Green bar

GS<50 Deployment Strategy

In August 2006, Ontario Regulation 425/06 was passed, which defined the concept of Minimum Functionality for the SMI. This regulation confirmed that small general service consumers were within the scope of Minimum Functionality.

At this time, CKH and MPDC Residential Smart Meter deployment was about to commence. It was determined that in order to ensure success of Residential Smart Meter deployment, GS<50 kW Smart Meter deployment should occur in a staged manner over a multi-year period. This would further allow for the utilization of CKH and MPDC Meter Technologists for deployment, and also for efficient combining of travel planning and outage scheduling logistics with day-to-day requirements.

It was further determined that GS>50 kW deployment would occur simultaneously with GS<50 kW deployment. See Section 7 for further information on GS>50 kW deployment.

Deployment Process

After consideration of outsourcing and reviewing for qualified contractors, CKH and MPDC made a business decision to primarily utilize in-house staff for Smart Meter deployment. This decision was supported as follows:

- CKH and MPDC staff had the best history, knowledge and understanding of the existing electromechanical metering system and would be best suited to handling any electrical issues found upon inspection;
- Given the importance of the SMI, it was felt that any customer concerns or SMI sensitivities would be best handled by internal staff; and
- It was determined that within the service territories, CKH and MPDC had the best qualified and trained personnel to perform the deployment process in a safe and effective manner.

Consequently, CKH and MPDC experienced very low instances of meter base damage during implementation.

As noted above, the majority of CKH and MPDC Residential Smart Meter deployment was done in an 18 month period ending December 31, 2007. This dedicated deployment approach required the utilization of CKH and MPDC Meter Technologists, Field Service Representatives and Powerline Maintainers for installation in order to meet the deployment commitment to the Ministry. In comparison, CKH and MPDC commercial meter deployment was done over a longer staging period and was performed by Meter Technologists.

The deployment process involved the following steps:

- CKH or MPDC staff travelled to specific neighborhood clusters;
- Each electro-mechanical meter in the vicinity was subjected to a rigorous review, including visual inspection, testing, cleaning and inspection to determine its suitability for re-use;
- If the meter was deemed re-usable, it was sent back to the CKH Operations Centre (Chatham) or the MPDC Operations Centre (Strathroy);
- The majority of re-usable meters were retrofitted by internal staff via the installation of a Tantalus TUNet module;

- Where new meters were required, the retrofit was completed at the factory or by a third party;
- The retrofitted meter was tested and resealed on-site at the CKH Operations Center;
- Ultimately, the retrofitted meter was then redeployed at another location.

Customer Communication

It was recognized early in the SMI that consumer awareness and education would be key to the successful deployment of Smart Meters and TOU billing. CKH and MPDC began the process of continuous customer outreach early in 2007.

To spread the word about Smart Meters and educate the communities about the advantages of Smart Meter technology, radio broadcasts and news media interviews were commenced in 2004. In addition, CKH and MPDC attended community events, including trade shows, senior center presentations, teachers' resource fairs and town hall meetings. Presentations were made to social service agencies, as well as local companies.

CKH and MPDC also provided customers with bill inserts and TOU decals promoting the SMI and educating on the benefits of shifting energy usage. At the time of deployment, information packages were left at the customer's door.

Subsequent to Smart Meter deployment in 2007, a web presentment tool was developed within the CKH and MPDC Harris CIS system allowing for next day customer viewing of energy consumption information. This tool provided both daily and hourly information to customers, highlighting the TOU periods in the day. It also provided a useful platform for CKH and MPDC customer service staff to conduct one-on-one customer walkthroughs of how to access the near real time hourly meter data, and how to interpret and mitigate it. While only a small number of pilot customers were charged TOU rates in the early stages of the SMI, the availability of the tool gave customers the ability to modify their habits in advance of TOU deployment.

By December 2007, CKH's deployment and communications efforts were recognized in the IESO Focus Group report as follows:

"It was clear that participants had received relevant communication products (web, bill stuffers, smart meter packages etc.) from their local utility. The level of understanding of the technology and price changes was greater than we had seen elsewhere. It may be useful to look at what Chatham-Kent has done to educate their customers in order to gain an understanding for similar LDCs."

A sample of Smart Meter and TOU communication materials provided to customers over the 2007-2012 period are shown in Attachment C. As these materials demonstrate, the CKH and MPDC customer education and communication efforts have continued through TOU deployment.

Entegrus believes that the outreach conducted over the past six years, through various channels, has played a critical role in customer awareness, acceptance and the ultimate success of the SMI in its service territories.

Deployment Challenges

Despite of the significant amount of planning that was undertaken for this project, a number of challenges arose. These challenges are consistent with the nature of pioneering the deployment of a new technology, and

the learning that goes with it. These challenges inevitably introduced delays and additional costs, to the project. Fortunately, by starting deployment early and maintaining executional focus, CKH and MPDC were able to fully deploy and commence billing TOU on deadline.

Early Adopter

In playing a pioneering role in the rollout of Smart Meters in Ontario, CKH and MPDC was on the forefront of Smart Meter technology evolution. While CKH was able to observe some U.S. Smart Meter deployment, specifically that completed by French Broad Electric Membership Corporation, there was no opportunity at the outset to observe or gather best practices from Canadian LDCs, subject to Measurement Canada guidelines.

Accordingly, early in the deployment process, there were frequent new releases being installed to the meters that caused issues with the system. Further, CKH and MPDC trialed many new technologies including meters, cross band repeaters, antenna designs, and software implementations. Many of these technologies were later enhanced or upgraded. While these costs were covered under warranty, the resulting changes and delays impacted deployment timing and therefore efficiency.

Geography

The service territory of the former CKH encompasses 2,400 square kilometers, a geographic area four times the size of Toronto. Half of the CKH meter population is located in the city of Chatham, with the remaining half dispersed in the outlying areas Chatham-Kent. This posed unique deployment challenges.

The meters in the outlying areas of Chatham-Kent were up to 48 km from the Chatham Operations Centre, which required significant travel time for both installation of Smart Meters and the collector antennas to gather combined readings from nearby groups of meters and transmit data to the main antenna tower.

The CKH system is comprised of one network controller and antenna tower configuration to communicate wirelessly with collectors across the entire 2,400 square kilometers. In some of the outlying communities, the 220 MHz radio communication was marginal and collector locations had to be relocated to hydro poles to gain a better line of sight for signal propagation. To relocate these devices to hydro poles required additional staff, equipment and material.

This challenge was encountered to a lesser extent in the former MPDC service territory, which covers a separate and non-contiguous area of 800 square kilometers, including the former Dutton Hydro and Newbury Power service territories.

Hard-to-Reach (“HTR”) Meters

The term “HTR Meters” is representative of installations where there are challenges in accessing customer premises to perform meter deployment. Such instances may include:

- Where the meter was located indoors and the customer was unavailable;
- Where the customer was travelling for extended periods of time; and/or
- Where the meter would not communicate indoors and had to be relocated outside.

To deal with these situations, CKH and MPDC developed a strategy for HTR deployments, which included:

- Multiple telephone call attempts;
- A letter explaining the meter deployment requirement and the basis for that requirement; and/or
- An additional site visit, coordinated with other nearby HTR locations, to attempt deployment or deliver a card describing the deployment requirement.

Given the vast service territory of CKH and MPDC and travel times involved, one-off HTR meter deployments created efficiency challenges. While the majority of Residential Smart Meter deployment occurred in 2007, remaining Residential HTR installations continued through to 2010.

Smart Meter Radio Communication

As Residential mass deployment commenced in 2007, the Smart Meter network grew quickly and consequently, there was increased radio traffic interacting on the system. This caused congestion, resulting in meter data errors that made the network take longer to recognize a deployed meter and register it into the network. In addition, the saturation of Smart Meters started to impact consumer electronics that also used the 902-928MHz frequency band, such as cordless phones.

The vendor was able to fix these problems through the fine-tuning of network communications, updating of firmware and warranty replacements. In addition, a second 220 MHz channel was added to address congestion.

Section 6: Details of Current Application

Current Application Models

The current Application riders were compiled and calculated using the Board-Approved Smart Meter Model Version 2.17 (the “Model”) issued by the Board on December 15, 2011.

As described in Section 1 above, Entegrus has four rate zones: CK, SMP, Dutton and Newbury. Further, Smart Meter deployment occurred across three separate rate classes: Residential, GS<50 kW and GS>50 kW (this class is not applicable to Dutton).

To facilitate rate rider calculations, Entegrus has completed 11 separate sets of Smart Meter Models, each model is completed by rate zone and rate class. The Models included in this Application are therefore described as follows:

- Attachment D – CK Residential Rate Class
- Attachment E – CK General Service Less than 50 kW
- Attachment F – CK General Service Greater than 50 kW
- Attachment G – SMP Residential
- Attachment H – SMP General Service Less than 50 kW
- Attachment I – SMP General Service Greater than 50 kW
- Attachment J – Dutton Residential
- Attachment K – Dutton General Service Less than 50 kW
- Attachment L – Newbury Residential
- Attachment M – Newbury General Service Less than 50 kW
- Attachment N – Newbury General Service Greater than 50 kW

Additional input and calculation details are discussed below.

Summary of Previously Approved Applications

As discussed above, both the CK and SMP (as MPDC) rate zones have previously been approved for various Smart Meter Funding Adders, and the Board has on three occasions approved final recovery of various Smart Meter-related costs (described below) through Smart Meter Disposition Riders and what are now referred to as SMIRRs:

- CKH and MPDC (previous to the acquisition of Dutton and Newbury) both participated with 11 other LDCs in the EB-2007-0063 Combined Proceeding. This was the first group of LDCs to be approved to deploy their Smart Meter solutions. In that proceeding, CKH and MPDC were approved for recovery of costs related to all Smart Meters installed up to April 30, 2007.
- CKH and MPDC were jointly approved for recovery of costs for Smart Meters installed between May 1, 2007 and December 31, 2007, in EB-2008-0155.
- Through its 2010 cost of service application (EB-2009-0261), CKH recovered costs related to Smart Meters installed in 2008, along with recovery of all operating costs not previously recovered.

Since the above-noted applications have been previously approved by the Board, those historic costs have not been included in the Models provided in support of the current Application.

Tab 2 – Smart Meter Costs

The costs presented in the current Application represent costs that have not previously been requested in the above-noted application approvals.

The current Application costs are similar in nature to the types of costs approved by the Board in the previous applications, with two exceptions related to Minimum Functionality:

- GS>50 Smart Meters;
- TOU Rate Implementation and MDM/R Integration.

Please see Section 7, below, for more details regarding Minimum Functionality.

All costs have been audited as part of the annual year-end audits, up to and including December 31, 2011. Since CKH and MPDC Smart Meter and TOU deployment were completed in 2011, there are no forecasted implementation costs in this Application (aside from the ongoing incremental OM&A costs described below).

Capital Costs

For the duration of the Smart Meter installation projects, CKH and MPDC tracked capital costs separately for each rate zone and applicable rate class. Capital costs not previously applied for or approved were input into the applicable Models on Tab 2.

The resulting average capital costs of Smart Meters related to Minimum Functionality for Entegrus' rate zones were as follows:

Entegrus Powerlines Inc. Summary of Capital Costs

Rate Class	Previously Approved			Current Application			Total		
	Installed Meters	Capital \$	Average	Installed Meters	Capital \$	Average	Installed Meters	Capital \$	Average
Chatham-Kent									
Residential & GS<50	27,958	\$4,966,104	\$178	3,842	\$1,541,229	\$401	31,800	\$6,507,333	\$205
General Service >50	112	\$78,087	\$697	276	\$354,712	\$1,285	388	\$432,799	\$1,115
Strathroy, Mount Brydges & Parkhill									
Residential & GS<50	5,887	\$979,085	\$166	1,521	\$386,145	\$254	7,408	\$1,365,229	\$184
General Service >50	-	\$0	\$0	81	\$72,264	\$892	81	\$72,264	\$892
Dutton									
Residential & GS<50	-	\$0	\$0	604	\$115,272	\$191	604	\$115,272	\$191
Newbury									
Residential & GS<50	-	\$0	\$0	201	\$35,293	\$176	201	\$35,293	\$176
General Service >50	-	\$0	\$0	4	\$2,768	\$692	4	\$2,768	\$692
Total									
Residential & GS<50	33,845	\$5,945,189	\$176	6,168	\$2,077,939	\$337	40,013	\$8,023,128	\$201
General Service >50	112	\$78,087	\$697	361	\$429,744	\$1,190	473	\$507,831	\$1,074

Entegrus notes that the relatively higher CKH average costs are consistent with the larger geographic service territory of CKH, as well as the relatively higher mix of commercial meters. Challenges related to geographic territory are further described in Section 5, above. The cost impact of commercial meters are discussed in further detail below.

Capital Costs – GS<50 kW Polyphase Meters

Polyphase meters are required for certain GS<50 kW customers where power quality must be measured. Examples of such customers include small industrial customers and multi-tenant commercial buildings.

A polyphase meter costs more than a single phase meter, and requires a more expensive communications module. Further, the quantity of communications for each polyphase meter is equivalent to that of approximately 10 single phase meters. In the case of CKH and MPDC deployment, this created a requirement for a third 220 MHz channel.

Since the CKH and SMP rate zones are more industrialized than the Dutton and Newbury rate zones, the GS<50 kW rate classes in CKH and SMP require a substantially higher mix of polyphase meters. Further, as previously noted, the larger geographic territory of CKH drives relatively higher installation costs.

OM&A Costs to December 31, 2011

As noted in Section 1 above, CKE acquired MPDC from its previous ownership on June 30, 2005. Subsequently, on April 30, 2009, MPDC acquired the former Dutton Hydro Limited and the former Newbury Power Corporation

The former MPDC rate zones [(i) Strathroy, Parkhill & Mt. Brydges, (ii) Dutton and (iii) Newbury] benefitted from the learnings and installation processes developed by CKH. As Smart Meter deployment progressed, meter and module deployment was increasingly staged from the Chatham operations centre for all service territories.

In addition, as described above, MPDC TOU rollout was commenced only after CKH Residential TOU deployment had already occurred. This strategy was utilized for two reasons:

- To allow CKUS staff key to the TOU rollout to be used for both rollouts; and
- To increase efficiency, such that the learning curve was only incurred once (and not twice simultaneously).

The former MPDC rate zones benefitted from being able to replicate the integration scenario learnings and business process documentation completed by CKH. Leveraging the benefits of this work, TOU implementation was able to be completed for SMP, Dutton and Newbury rate zones within a 3 month period – starting from MDM/R certification in April 2011 through complete Residential and GS<50 kW TOU deployment by June 2011.

When these three former MPDC zones are considered in isolation – that is, without taking into account the efficiencies developed over time by CKH through its early and lengthy involvement in the deployment process – it may appear that OM&A costs for these three zones should be lower than those of CKH. However, Entegrus submits that would be unfair to customers in the CKH rate zone, who would be forced to bear comparatively higher costs due to the timing of their Smart Meter deployment but could share none of the benefits of improved approaches to implementation. Entegrus submits that the most appropriate approach in this case is

to have all of its customers across its entire service area share equally in the OM&A costs and the savings realized over time through more efficient deployment and installation processes. Accordingly, for the purposes of this Application and equitable cost sharing, OM&A and TOU costs have been pooled amongst the four rate zones and allocated based on meter points. Please see Attachment O for further details on the allocation calculations.

Entegrus Powerlines Inc.
Summary of OM&A Costs

Rate Class	Previously Approved			Current Application			Total		
	Installed Meters	OM&A \$	Average	Installed Meters	OM&A \$	Average	Installed Meters	OM&A \$	Average
Chatham-Kent									
Residential & GS<50	27,958	\$862,081	\$31	3,842	\$273,715	\$71	31,800	\$1,135,796	\$36
General Service >50	112	\$1,340	\$12	276	\$3,340	\$12	388	\$4,680	\$12
Strathroy, Mount Brydges & Parkhill									
Residential & GS<50	5,887	\$36,717	\$6	1,521	\$144,371	\$95	7,408	\$181,088	\$24
General Service >50	-	\$0	\$0	81	\$1,579	\$19	81	\$1,579	\$19
Dutton									
Residential & GS<50	-	\$0	\$0	604	\$5,199	\$9	604	\$5,199	\$9
Newbury									
Residential & GS<50	-	\$0	\$0	201	\$1,730	\$9	201	\$1,730	\$9
General Service >50	-	\$0	\$0	4	\$34	\$9	4	\$34	\$9
Total									
Residential & GS<50	33,845	\$898,798	\$27	6,168	\$425,015	\$69	40,013	\$1,323,813	\$33
General Service >50	112	\$1,340	\$12	361	\$4,953	\$14	473	\$6,293	\$13

OM&A Costs 2012 and Later

As previously noted, Entegrus completed Smart Meter and TOU deployment in 2011.

As a result of the SMI, on an ongoing basis Entegrus will incur incremental Smart Meter system maintenance from third party vendors. These ongoing costs have been shown in the Model under the "2012 and Later" column as Hardware Maintenance and Software Maintenance costs. The associated costs are in support of all four Entegrus rate zones, and have been accordingly allocated among the rate zones based on the number of meter points.

- Hardware maintenance relates to annual charges for radio licensing fees to support Smart Meter system communications, as well as ongoing technical support. Technical support includes third party troubleshooting service for any issues with servers, controllers or Smart Meter modules. This service ensures network operating efficiency on a daily operational level.
- Software maintenance relates to annual charges for software enhancements and upgrades to servers and controllers related to the Smart Meter system.

Tab 3 – Cost of Service Parameters

Cost of Capital and Working Capital rates were input into the Models based on historic Board-approved Cost of Service applications in effect for the applicable time period for each rate zone. A summary of these applications is as follows:

- CKH 2006 EDR – EB-2005-0350
- CKH 2010 Cost of Service – EB-2009-0261
- MPDC (SMP) 2006 EDR – EB-2005-0351
- Dutton 2006 EDR – EB-2009-0177
- Newbury 2006 EDR – EB-2005-0392

The tax rates input into the Models are based on the taxes actually paid by CKH and MPDC for each of the historical years from 2009-2011, plus the tax rate forecasted for Entegrus for 2012.

Depreciation Rates and CCA Rates included in the Model are those employed by CKH and MPDC in their audited financial statement preparation and tax returns.

Tab 7 – Taxes/PILs

In the calculation of Rate Base in the Model, the allowable taxable capital exemption for Ontario Capital Tax purposes is shown on line 42. This percentage has been calculated from the historic CKH and MPDC tax returns on the basis of exempted taxable capital divided by total taxable capital. The calculated percentage was then applied on line 42 of the Model for the appropriate exemption. Please see Attachment P for more details of this calculation.

Tab 8 – Funding Adders

As previously noted, over the course of the deployment period, each rate zone was approved for multiple funding adders. For CKH and MPDC (specifically SMP) some of the earlier funding adders collected were disposed of in previous applications. Accordingly, the previously disposed funding adders have not been included in the current Applications Models herein.

The remaining revenue collected to April 30, 2012 has been included in the Models. The inputs represent amounts actually collected to April 30, 2012 and all unbilled revenue accruals have been reversed at the time of submission.

Please see Attachment B for a summary of previously approved Smart Meter Funding Adders, as well as previously approved Smart Meter Disposition Riders and Smart Meter Incremental Revenue Riders.

Tabs 8A & 8B – Interest Calculation

Due to the large number of Models utilized, for simplicity Entegrus has chosen the Model option whereby interest is calculated on an annualized basis using Tab 8B.

Section 7: Expenditures Beyond Minimum Functionality

On page 14 of the Board's Guideline G-2011-0001, the Board provides the following guidance with respect to costs Beyond Minimum Functionality:

While authorized Smart Meter deployment must meet the requirements for Minimum Functionality, a distributor may incur costs that are beyond the "Minimum Functionality." To date, the Board has reviewed three types of costs that are "Beyond Minimum Functionality":

- A. Costs for technical capabilities in the smart meters or related communications infrastructure that exceed those specified in O.Reg 425/06;
- B. Costs for deployment of smart meters to customers other than residential and small general service (i.e. Residential and GS<50 kW customers); and
- C. Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDM/R, etc.

Entegrus notes that it has incurred costs for the deployment of GS>50 kW Smart Meters (type B above), as well as costs related to TOU rate implementation and integration with the MDM/R (type C above).

Type B Expenditures: GS>50 kW Smart Meters

Entegrus has incurred \$475,072 in capital costs to deploy Smart Meters to all customers in the GS>50 kW rate class. These installations were done as the GS>50 kW Measurement Canada seals expired, and were deployed in parallel with GS<50 kW installations.

Consistent with the guidance provided by the Board, Entegrus has reported these costs as "Expenditures Beyond Minimum Functionality" in the attached Board model. However, it is the view of Entegrus that the cost of these meters should not be categorized as being beyond minimum functionality, but rather should be included as part of the core functionality of the Smart Meter initiative.

The deployment of CKH and MPDC Residential Smart Meters in 2007 established a base of communications infrastructure, including antennas and collectors, to bring meter data back to the network server.

In early 2008, CKH and MPDC began focusing on the deployment of Commercial Smart Meters. It was determined that Smart Meters would be deployed to GS>50 kW customers for meter reading efficiency purposes. Accordingly, a Smart Meter solution for GS>50kW customers was requested from the vendor and developed in 2008. Subsequently, GS>50kW customers were deployed as their seal periods expired.

Additional benefits to the deployment of GS>50kW Smart Meters include:

- A Smart Meter does not require the dedicated phone line service required for an interval meter;
- A Smart meter provides valuable hourly data, which assists the customer in making knowledgeable decisions regarding electricity use;
- Customer interval data is available if the customer requests to move to interval billing;
- A voltage reading can be obtained from the meter using the Tantalus TUNet software if required;

- A notification can be received when an outage occurs, which improves troubleshooting and system reliability design; and
- The frequent customer reclassifications between the GS<50kW class and GS>50kW class are facilitated by customers in the GS>50kW category having a Smart Meter prior to reclassification.

The costs associated with GS>50 kW Smart Meters and their installation are relatively higher than both Residential and GS<50 kW Smart Meters. This is due to the fact that these meters are more expensive and complex to install, and due to their location on the customers' premises, as discussed in the following paragraphs:

- First, the majority of GS>50 kW meters are transformer rated meters, with both current transformers ("CT") and potential transformers ("PT") in the metering circuit. This requires additional time and skill to remove the existing meter and install a new meter into the secondary wiring. Changing the meter in the CIS also requires additional time and knowledge due to the current and potential transformers. Further, the size and type of PT's and CT's at each customer site impacts the interpretation of a meter read and must be correctly entered into the customer's billing data in the CIS. This significantly affects the amount of data collected from the field and entered in the CIS.
- Second, GS>50 kW sites often require security clearance to enter meter locations, as well as outage management planning and notifications. Often, special tools and test equipment are required to meet installation specifications. Many of the meters are located inside industrial buildings, which pose communication challenges due to the steel structure of the building or due to the steel cabinets in which the original meter was installed. There are multiple time-consuming solutions available to resolve such issue – these include: the use of a remote antenna, the repositioning of a sharkfin, the installation of a new sharkfin, or moving the meter to a different location. Each GS>50 kW site was assessed on its own merits to determine which solution worked best and most economically.

As noted above, GS>50 kW deployment was completed by CKH and MPDC in 2011. Entegrus proposes that the costs of providing Smart Meters to GS>50kW customers be borne only by the customers in that class.

Type C Expenditures: TOU Rate Implementation and MDM/R Integration

As noted above, Entegrus was among the first LDCs to commence TOU pricing on a small scale, and to subsequently test system compatibility and MDM/R file integrations with the IESO. CKH completed Self-Certification and System Integration Testing with the MDM/R in May 2007, and began developing business processes for mass TOU billing. CKH entered into a pilot program with the MDM/R requiring more than 2,000 customers' information to be transferred and tested on a daily basis.

Subsequently, CKH engaged Navigant to analyze energy consumption patterns related its preliminary TOU billing experience. Navigant found that CKH customers had likely adjusted their consumption patterns prior to the TOU pilot, which was attributed in part to the impact of CKH's aggressive CDM awareness and education programs since 2002. Overall, CKH Residential customers showed a greater reduction in consumption compared to comparable early adopter Smart Meter and TOU LDC customers between 2002 and 2007.

Consulting costs related to the TOU impact study conducted by Navigant Consulting were approved in the CKH EB-2009-0261 application.

Please see Attachment T for a copy of the Navigant Report.

CKH's TOU education and communication efforts amongst other early adopters were recognized in the December 2007 IESO Focus Group Report, as previously noted above.

In the fall of 2008, after five years of significant focus on Smart Meter deployment and TOU development, it became clear that CKH and MPDC business systems would need to be enhanced prior to the full deployment of TOU billing in order support the reliability required for a continuous flow of data. Management determined that these business system needs should be addressed in advance of the commencement of the expected mass industry migration to the MDM/R and TOU in 2010. It was recognized that interfacing with the MDRM/R would be a significant endeavour – one that was unforeseen at the outset of Smart Meter deployment.

While TOU maintenance work would continue from late 2008 onward, including the ongoing maintenance of the MDM/R production environment and the daily exchange and review of files with the MDM/R, the primary focus would turn for an one and half year period to enhancing the Harris CIS system and the business processes around it.

The first business need was a Harris CIS upgrade involving the implementation of 18 separate modules. This upgrade was commenced in late 2008. These modules included enhancements to file sharing and information synchronization capabilities, which also served to maintain the stability of the interface with the MDM/R. Simultaneously, CKH worked with Harris to ensure alignment with the expected MDM/R bill formats that would be required when the industry migrated to the MDM/R.

The costs for the Harris CIS system upgrades were capitalized as incurred and are not included in this Application, nor the previous Smart Meter applications.

The second business need was the move from bi-monthly billing to monthly billing in order to assist customers in managing their bills, and to reduce deposit requirements. The move to monthly billing was requested by various local social service agencies. Implementation started in January of 2010 and was completed in April 2010. Monthly billing would also synchronize better with the online energy management tools that CKH and MPDC were rolling out to assist customers with the move to TOU.

The costs to move to monthly billing were considered by CKH to be unrelated to TOU. Accordingly, these costs were not included in the previous Smart Meter applications, nor are they included in the current Application. Rather, these costs were addressed in CKH's 2010 Cost of Service proceeding (EB-2009-0261).

In May of 2010, CKH focused fully on the implementation of TOU. Experienced Customer Service and IT personnel were redeployed from their day-to-day jobs to focus solely on TOU interface resolution and the design of business processes in a TOU environment. To backfill, additional full-time and contract resources were brought in.

It was determined that in order to leverage the previous CKH TOU development work, TOU would first be deployed in the CKH service territory. Management further assessed that despite the early investments made by CKH in TOU, there was significant work remaining to complete deployment. First, numerous software revisions had occurred at the Provincial MDM/R level, as well as the Harris CIS level. The MDM/R changes, specifically, would require aggressive regression testing. Second, the move toward a much higher volume TOU

environment uncovered various new MDM/R interface issue scenarios that had not been readily apparent in a test environment. The IESO visited Chatham-Kent to meet with CKH to discuss further upgrades needed to the MDM/R before mass TOU deployment could occur across the industry. The successful resolution of these matters required significant testing and rework, as well as additional business process design and documentation updates.

In September 2010, the first wave of CKH Residential TOU deployment was completed, and by December 2010, substantially all CKH Residential customers were being billed on TOU. In January 2011, deployment commenced for CKH's GS<50kW customers. This deployment proved particularly challenging, as the IESO advised that the MDM/R could not accommodate the demand component of the CKH polyphase meters due to the associated high data volume. This issue was resolved with vendor assistance in April 2011.

Subsequently, leveraging the benefits of the CKH TOU implementation work, MPDC completed self-certification with the MDM/R and rapidly moved forward with Residential TOU implementation. MPDC Residential TOU deployment, inclusive of the communities of Strathroy, Mt. Brydges, Parkhill, Dutton and Newbury, was completed in May 2011.

For June 2011, all CKH and MPDC Residential and GS<50 kW bills were completed on a TOU basis.

Please refer to Attachment Q for a summary of TOU Implementation Costs. These costs have been included in the Model on Tab 2, under Sections 2.6.3.

Section 8: Stranded Meter Costs

As previously noted, in its Combined Decision, the Board determined that utilities could, if they choose, bring forward applications for the recovery of stranded costs in 2008 rates.

CKH was approved for recovery of Stranded Meter costs of \$126,000 to December 31, 2008 in its 2010 Cost of Service Application (EB-2009-0261).

Based on the Board's Smart Meter Funding and Cost Recovery Guideline (G-2011-0001), Entegrus is not seeking further recovery of Stranded Meter costs at this time or in this Application. Rather, consistent with the Guideline, Stranded Meter costs will be included in rate base for rate-making purposes until Entegrus' next Cost of Service application. This is further consistent with the guidance provided by the Board in the Smart Meter Model instructions.

Accordingly, Entegrus has not included the net book value of remaining stranded meters in this disposition request. Stranded meters will be brought forward for disposition as part of Entegrus' next Cost of Service application, scheduled for the 2016 rate year.

Section 9: Smart Meter Models Reconciled to December 31, 2011 RRR

Please see Attachment R for a reconciliation of the amounts included in this Application and the balances reported by CKH and MPDC for the December 31, 2011 2.1.1 RRR filing.

Section 10: Summary of Requested Rate Riders and Proposed Bill Impacts

The proposed rate changes sought in this Application are summarized below. All charges are shown as monthly fixed charges, along with the applicable percentage rate change in terms the current 2012 typical monthly bill impact.

Entegrus Powerlines Inc.

Summary of Requested SMDR & SMIRR

Rate Class	No. of Customers	SMDR			SMIRR		Total Monthly Rate	2012 Estimate Bill	% Bill Increase (Decrease)
		Amount	Duration	Rate Rider	Amount	Rate Rider			
Chatham-Kent									
Residential	28,649	\$175,149	1 Year	\$0.51	\$95,953	\$0.28	\$0.79	\$114	0.69%
General Service <50	3,083	\$389,926	3.5 Years	\$3.01	\$207,246	\$5.60	\$8.61	\$277	3.11%
General Service >50	400	\$93,397	1 Year	\$19.46	\$54,307	\$11.31	\$30.77	\$29,390	0.10%
Strathroy, Mount Brydges & Parkhill									
Residential	6,422	-\$53,087	1 Year	-\$0.69	\$29,458	\$0.38	-\$0.31	\$118	-0.26%
General Service <50	662	\$93,160	3.5 Years	\$3.35	\$42,503	\$5.35	\$8.70	\$246	3.54%
General Service >50	89	\$14,670	1 Year	\$13.74	\$13,145	\$12.31	\$26.05	\$122,730	0.02%
Dutton									
Residential	521	\$26,288	3.5 Years	\$1.20	\$14,541	\$2.33	\$3.53	\$122	2.89%
General Service <50	89	\$8,248	3.5 Years	\$2.21	\$4,100	\$3.84	\$6.05	\$277	2.18%
Newbury									
Residential	168	\$5,400	3.5 Years	\$0.77	\$4,845	\$2.40	\$3.17	\$114	2.79%
General Service <50	31	\$1,597	3.5 Years	\$1.23	\$1,144	\$3.07	\$4.30	\$263	1.63%
General Service >50	5	\$820	1 Year	\$13.66	\$400	\$6.66	\$20.32	\$120,344	0.02%

Entegrus notes that there are variances between the typical bill impacts amongst its four rate zones and three applicable rate classes. This is the result of the following factors:

- Cost variations amongst the four rate zones due to geographic differences and other reasons described in Section 5 above;
- Cost variations amongst the three applicable rate classes due to differences in deployment complexity as described in Section 5 above; and,
- Variations in the duration and amount of rate adders collected by each of the four rate zones.

Support for Disposition Periods

As shown in the chart above, Entegrus is proposing two types of SMDR and SMIRR disposition periods for the various rate zones and rate classes:

- Group A: 1 year disposition period for: CKH Residential, CKH GS>50 kW, SMP Residential, SMP >50 kW , Newbury GS>50 kW
- Group B: 3.5 year disposition period for: CKH GS<50 kW, SMP GS<50 kW, Dutton Residential, Dutton GS<50 kW, Newbury Residential, Newbury GS<50 kW

Group A Disposition Period

Where rate impacts are relatively minimal (i.e. approximately 1% or lower), Entegrus is of the view that it is more appropriate to dispose of balances over a 1 year period. Accordingly, for the Group A rate classes noted above, Entegrus is proposing a 1 year disposition period.

Group B Disposition Period

Entegrus submits that the need for longer disposition periods for Group B rate classes is evident in the chart below showing what the typical customer bill impact would otherwise be over a one year period:

Entegrus Powerlines Inc. **Summary of Bill Impacts**

Rate Class	No. of Customers	Proposed Disposition	2012 Estimate Bill	% Bill Increase	
				1 Year	3.5 Years
Chatham-Kent					
Residential	28,649	1 Year	\$114	0.69%	0.38%
GS<50	3,083	3.5 Years	\$277	5.83%	3.11%
GS>50	400	1 Year	\$29,390	0.10%	0.06%
SMP					
Residential	6,422	1 Year	\$118	-0.26%	0.15%
GS<50	662	3.5 Years	\$246	6.94%	3.54%
GS>50	89	1 Year	\$122,730	0.02%	0.01%
Dutton					
Residential	521	3.5 Years	\$122	5.34%	2.89%
GS<50	89	3.5 Years	\$277	4.17%	2.18%
Newbury					
Residential	168	3.5 Years	\$114	4.47%	2.79%
GS<50	31	3.5 Years	\$263	2.80%	1.63%
GS>50	5	1 Year	\$120,344	0.02%	0.01%

Entegrus notes that on May 1, 2012, the Smart Meter rate adders for the rate zones of Chatham-Kent, SMP, Dutton and Newbury expired. The absence of these previous rate adders contributes to a portion of the above noted rate changes – between 0.9% to 2.0% of the change in the Residential bill impacts above, and 0.4% to 0.8% of the GS<50 kW bill impacts. A longer SMDR and SMIRR disposition period will mitigate rate volatility for the Group B rate zones and rate classes. Entegrus has proposed a disposition period of 3.5 years, rather than the typical maximum period of 4 years, in order to align the termination of the rate riders with the expected timing of the new Entegrus Cost of Service rates to be effective May 1, 2016.

Entegrus further notes that the customer composition of the Group B rate classes above has been relatively stable for several years. Therefore, there is little risk of intergenerational inequity.

Section 11: Conclusion

The Entegrus team takes great pride in its pioneering role in the successful launch of Smart Meters and TOU deployment in Ontario. As an early adopter of AMI and Smart Meter technology, Entegrus and its predecessor companies demonstrated leadership in Smart Meter implementation both in its own service areas and by sharing its learnings and experience with the industry. The organization was also successful in integrating Smart Meter technology into LDCs that it acquired during the Smart Meter Initiative period.

Although the eight year road to full TOU pricing deployment was challenging, Entegrus led by example in completing Smart Meter deployment and TOU billing on deadline - no extensions were requested from the Board throughout the entire implementation process. Above all, this achievement was in accordance with the commitments made to the Board and the Ministry by CKH and MPDC at the outset of the SMI process.

In summary, Entegrus respectfully submits that the costs necessary to fulfill its obligations under the provincially mandated Smart Meter initiative and addressed in this Application have been prudently incurred in accordance with Board guidelines; the associated proposed rate riders are just and reasonable; the proposed disposition periods are appropriate in order to reduce bill impacts to Entegrus' distribution customers; and it is appropriate that the Board approve these proposed riders at this time, for implementation effective November 1, 2012.

All of which is respectfully submitted.

Attachment A

Smart Meter Deployment Schedule

Entegrus Powerlines Inc.

Attachment A: Smart Meter Deployment Schedule

Chatham-Kent							
Rate Class	2006	2007	2008	2009	2010	2011	Total
Residential	8,600	18,272	123	673	1,023		28,691
GS<50			963	862	1,157	127	3,109
GS>50			112	144	65	67	388
Total	8,600	18,272	1,198	1,679	2,245	194	32,188

Strathroy, Mt Brydges & Parkhill							
Rate Class	2006	2007	2008	2009	2010	2011	Total
Residential	500	5,387	754	92			6,733
GS<50			267	88	300	20	675
GS>50				21	42	18	81
Total	500	5,387	1,021	201	342	38	7,489

Dutton							
Rate Class	2006	2007	2008	2009	2010	2011	Total
Residential				512	4		516
GS<50				77	12		89
GS>50				-			-
Total	-	-	-	589	16	-	605

Newbury							
Rate Class	2006	2007	2008	2009	2010	2011	Total
Residential				170			170
GS<50				31			31
GS>50				4			4
Total	-	-	-	205	-	-	205

TOTAL							
Rate Class	2006	2007	2008	2009	2010	2011	Total
Residential	9,100	23,659	877	1,447	1,027	-	36,110
GS<50	-	-	1,230	1,058	1,469	147	3,904
GS>50	-	-	112	169	107	85	473
Total	9,100	23,659	2,219	2,674	2,603	232	40,487

Attachment B

Previously Approved SMFAs, SMDRs and SMIRRs

Entegrus Powerlines Inc.

Attachment B: Previously Approved SMIRRs, SMDRs and SMFAs

Rider Type	Start	End	OEB Reference	Amount
Chatham-Kent				
SMFA	May 1, 2006	April 30, 2007	EB-2005-0350	\$0.38
SMFA	May 1, 2007	October 31, 2007	EB-2007-0517/EB-2007-0109	\$2.25
SMIRR	November 1, 2007	April 30, 2008	EB-2007-0063/EB-2007-0517	\$1.35
SMFA	November 1, 2007	April 30, 2008	EB-2007-0063/EB-2007-0517	\$1.09
SMIRR	May 1, 2008	April 30, 2010	EB-2007-0881	\$1.33
SMFA	May 1, 2008	April 30, 2009	EB-2007-0881	\$1.09
SMDR	November 1, 2008	April 30, 2009	EB-2008-0155	\$0.55
SMDR	May 1, 2009	April 30, 2010	EB-2008-0155	\$0.78
SMFA	May 1, 2009	April 30, 2010	EB-2008-0166	\$0.54
SMIRR	May 1, 2010	Next COS	EB-2009-0261	\$0.17
SMDR	May 1, 2010	April 30, 2012	EB-2009-0261	\$0.46
SMFA	May 1, 2010	April 30, 2001	EB-2009-0261	\$0.51
SMFA	May 1, 2011	April 30, 2012	EB-2010-0074	\$0.96
Strathroy, Mt Brydges & Parkhill				
SMFA	May 1, 2006	April 30, 2007	EB-2005-0351	\$0.38
SMFA	May 1, 2007	October 31, 2007	EB-2007-0553/EB-2007-0110	\$2.29
SMFA	May 1, 2007	April 30, 2008	EB-2007-0063/EB-2007-0553	\$1.35
SMDR	November 1, 2007	April 30, 2008	EB-2007-0063/EB-2007-0553	\$0.75
SMIRR	May 1, 2008	Next COS	EB-2007-0867	\$1.23
SMFA	May 1, 2008	October 31, 2008	EB-2007-0867	\$1.35
SMDR	November 1, 2008	April 30, 2009	EB-2008-0155	\$0.09
SMFA	November 1, 2008	April 30, 2010	EB-2008-0194	\$1.26
SMDR	May 1, 2009	Next COS	EB-2008-0155	\$0.77
SMFA	May 1, 2010	April 30, 2011	EB-2009-0202	\$1.26
SMFA	May 1, 2010	April 30, 2012	EB-2010-0098	\$1.18
Dutton				
SMFA	November 1, 2010	April 20, 2011	EB-2009-0177	\$1.00
SMFA	May 1, 2011	April 30, 2012	EB-2010-0274	\$2.50
Newbury				
SMFA	November 1, 2007	April 30, 2008	EB-2007-0056	\$0.25
SMFA	May 1, 2008	April 30, 2009	EB-2007-0864	\$0.25
SMFA	May 1, 2009	April 30, 2010	EB-2008-0196	\$1.00
SMFA	May 1, 2010	April 30, 2011	EB-2009-0203	\$1.00
SMFA	May 1, 2011	April 30, 2012	EB-2010-0275	\$2.50

Attachment C

Sample Smart Meter and TOU
Customer Communication Material

How does a Smart Meter work?

A Smart Meter records how much electricity you use and when you use it, hour by hour. You are then charged according to the rate for electricity at that time. You will save money if you can shift your energy usage to times when prices are lower.

How will my hydro bill change with a Smart Meter?

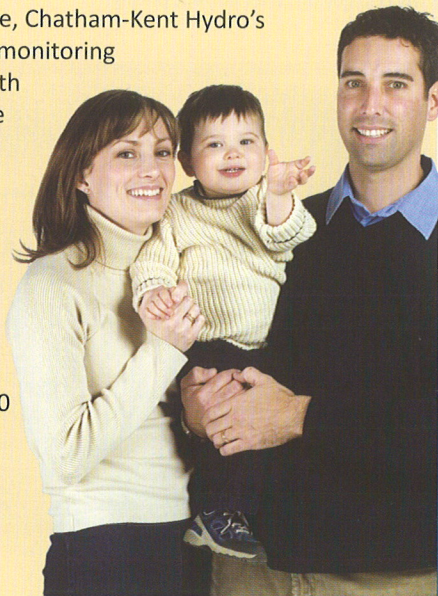
You will begin receiving your hydro bill monthly, compared to every two months. The new bill will clearly indicate how much electricity you use during different periods:

- On Peak Usage
- Mid Peak Usage
- Off Peak Usage

How can I monitor my energy usage?



Sign up for Go Figure, Chatham-Kent Hydro's free, online energy monitoring service. It is easy with Go Figure, to "figure out" your home's electricity usage, control your costs and conserve more.



To sign up, go to www.ckhydro.com
Or call 519-352-6300

Smart Meters Time-of-Use Rates Go Figure

Because information is power.

For more information on Smart Meters
and to sign up for Go Figure,

Call 519-352-6300

1-866-804-7325

Or go to www.ckhydro.com



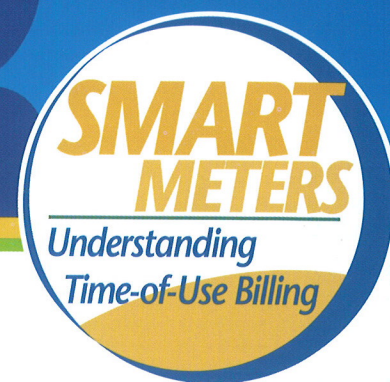
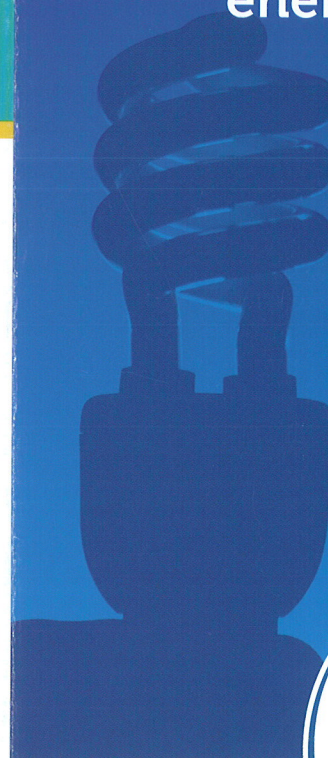
320 Queen St., Chatham, Ontario



For more information, visit
www.ontario.ca/powersmarter

Smart Meters and Time-of-Use Rates:

The smart way
to manage your
energy use



Smart Meters and Time-of-Use rates: Smart thinking for our future

In order to continue supplying Ontario with the energy you need, the province must overhaul about 80% of our current generating facilities and/or produce new sources of electricity.

Smart Meters and Time-of-Use rates put the power to manage your electricity consumption and costs in your hands.

When we all use a lot of electricity at the same time, we create "peak demand" periods, which have a range of impacts, including higher prices for consumers. The Smart Meter provides hourly information that helps conserve energy overall as well as reduce demand during peak times of day.

Working together to reduce demand at peak times makes good sense.

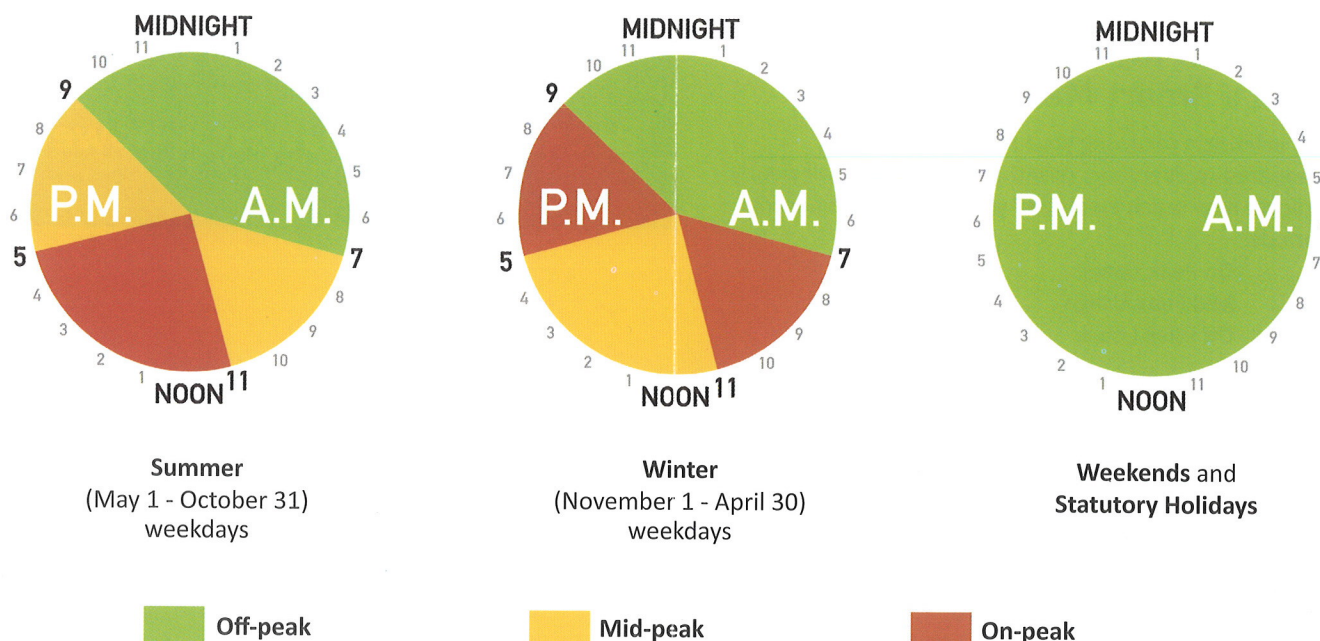
If all Ontario energy users can shift demand to off-peak periods, we can reduce the need and cost of creating new sources of electricity. And if you shift your energy use to off-peak periods, you can save significantly on electricity costs.

Chatham-Kent Hydro will begin phasing in the use of Smart Meters and Time-of-Use rates in 2010. All of our residential customers have had a Smart Meter installed. We now expect it to take six months to get all customers switched over.

Time-of-Use pricing puts the power in your hands.

Time-of-Use pricing rewards you for using electricity during low-demand periods whenever possible (reflected in green). These Time-of-Use rates – off-peak, mid-peak and on-peak, will vary between summer and winter.

As you can see from the seasonal charts below, the lowest rates are at night, on weekends and statutory holidays.



Note: Visit the Ontario Energy Board at www.oeb.gov.on.ca for current pricing.



Your Smart Meter will automatically record your electricity consumption so you can take advantage of Time-of-Use pricing.

Sign up for Chatham-Kent Hydro's Go Figure online service and you can monitor your electricity use day-by-day from your own computer.

To sign up, go to www.ckhydro.com
Or call 519-352-6300



Do Smart Meters offer any other advantages?

The particular technology that Chatham-Kent Hydro chose is based on a wireless system. That means that meter information is read automatically and remotely every day. This helps reduce our cost and keep the overall cost of implementing Smart Meters as low as possible so as to minimize the impact on electrical distribution rates.

Additionally, because this system is wireless and due to the nature of the electronics in each Smart Meter, Chatham-Kent Hydro is automatically and immediately notified when an outage occurs.

However, this being said, there is no substitute for the information we get from direct contact with customers, and we ask that you still call us when an outage occurs.

This technology will allow us to respond faster to outages and diagnose problems better.

Chatham-Kent Hydro is in the process of enhancing our outage management system to take full advantage of this built in feature

Theft of power has become an increasing concern. Theft costs everyone as they increase our cost to operate and the distribution rate you pay on your bill. Smart Meters will give Chatham-Kent Hydro tools to detect this theft of power at a much earlier stage.

Overall Chatham-Kent Hydro feels that Smart Meters not only provide the data customers need to manage their electricity bill but also help manage your local electrical utility's operating cost.

It is Chatham-Kent Hydro's goal to take advantage of all these features to keep distribution rates as low as possible.

How do I get more information?

For more information on Smart Metering please call:

Telephone: (519) 352-6300

Fax: (519) 352-9860

e-mail: ckenergy@chatham-kent.ca

320 Queen St., P.O. Box 70

Chatham, ON N7M 5K2

To access your account information

visit our WEB site at
www.ckenergy.com



**CHATHAM-KENT
HYDRO
HAS INSTALLED A
SMART METER**

**For more information on Ontario's Smart
Meter initiative visit the web site at**

www.oeb.gov.on.ca

or call

Ontario Energy Board 1-877-632-2727

Ministry of Energy 1-888-668-4636 or

www.energy.gov.on.ca

3 T's of HYDRO CONSERVATION



3 T's of HYDRO CONSERVATION



Why are Smart Meters being installed?

The government of Ontario has projected that demand for electricity will exceed available supply in the near future. As a result, the government is moving to install new generation. However, new generation alone is not the answer. Energy conserved is far cheaper than new generation while also better for the environment. Minimizing the cost to produce power keeps the price of electricity low and benefits the whole economy.

To conserve energy, consumers need the information necessary to pinpoint where and when they use electricity. Smart Meters is a technology that collects this information, that in turn, can be made available for this purpose.

In light of the above, the Ontario Government has mandated that all customers in Ontario receive a Smart Meter by the end of 2010.

What is a Smart Meter?

A Smart Meter measures electrical energy consumed (kWh) over a specific period of time. Unlike current meters that simply accumulate total kWh consumed Smart Meters are able to report how much is used between specific times of the day. The intervals of time could be hourly or blocks of hours to correspond to when electrical prices are most likely to be high or low. This is called Time of Use metering and billing.

Who will get a Smart Meter?

All customers who currently have a simple kWh meter and are billed on total kWh used will receive a Smart Meter. The Ontario Government has mandated that all these customers in Ontario are to receive a Smart Meter by the end of 2010.

How do I get Smart Meter?

Chatham-Kent Hydro will roll out the implementation of the new meters based on several technical criteria. As a customer you need do nothing, a Smart Meter will be provided for and installed depending where in the schedule you fit. The schedule will be based on several factors mostly geared to reduce implementation cost and inconvenience to customers.

Will the Smart Meter cost anything?

Chatham-Kent Hydro will factor the cost of Smart

Meters into its rates. There is no separate fee for Chatham-Kent Hydro to install a Smart Meter on your house.

Will my electrical bill go up?

This depends on you. Watch the "message" section of your bill for more information and specific details of when Time of Use Billing will start for you. At this time there will be a Conservation Management Tool available on our WEB site that allows you to view your next day 24 hour interval energy use. The price of electricity per kWh will vary depending on when you use it.

Day of the Week	Time	Time of Use Price Cents/kWh
*Weekends and holidays	All Day New Year's Day, Good Friday, Victoria Day, Canada Day, Civic Holiday, Labour Day, Thanksgiving Day, Christmas Day, Boxing Day	Off Peak
*Summer Weekdays (May 1st to Oct. 31st)	7:00 a.m. to 11:00 a.m. 11:00 a.m. to 5:00 p.m. 5:00 p.m. to 10:00 p.m. 10:00 p.m. to 7:00 a.m.	Mid Peak Peak Mid Peak Off Peak
*Winter Weekdays (Nov. 1st to Apr. 30th)	7:00 a.m. to 11:00 a.m. 11:00 a.m. to 5:00 p.m. 5:00 p.m. to 8:00 p.m. 8:00 p.m. to 10:00 p.m. 10:00 p.m. to 7:00 a.m.	Peak Mid Peak Peak Mid Peak Off Peak

Off Peak—Lowest Rate

Mid Peak—Medium Rate

Peak—Highest Rate

Remember these are only for the energy portion of your bill. Delivery and other charges are in addition to the energy costs.

* For more details visit our WEB site.

Depending how and when you use electricity you may pay more or less or see very little difference.

With Smart Meters, those who strive to conserve and shift their usage to off-peak, weekends or holidays will benefit the most. Customers who do not have a smart meter will see no price advantage no matter what time of the day they use power.

How do I make all this work for me?

Your electrical bill will change to display your total usage by period. In addition, Chatham-Kent Hydro will provide online all the information you need to see your individual usage. This information can be customized for your energy use. The system will also rank your electrical usage against your neighbours and guide you on how well you are managing your electricity usage.

This service is free and will securely display your data, up to the previous day.

With this information and the other tools provided online you can make informed decisions and also see the impact of how you use common household appliances.

Information about this service will be distributed in future billing inserts and information booklets.

This all sounds nice but seems far too complicated?

Chatham-Kent Hydro is sensitive to this issue. Smart Meters demand far more attention from customers with regards to their electrical usage. As compared to today, customers can do very little to manage their usage. Unfortunately, this also means that customers don't have access to the tools they need to reduce their electrical bill, if they choose to do so.

Smart Meters offer customers better tools and information to make informed decisions about their electrical usage but along with that comes a responsibility to review this information and make use of the services available.

The online services offered by Chatham-Kent Hydro are structured to be easily understood and to present this information as plainly as possible.

Our Customer Service representatives will be happy to step you through the process and answer any questions you may have.

Smart Meter – Smart Consumer

Smart meters have been installed at all residential homes in Chatham-Kent. They will provide consumers with more information on how they use their energy.

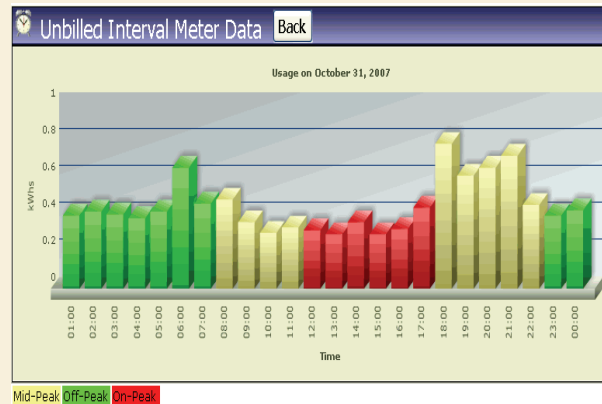
- ✓ Consumers have a real incentive—and the opportunity to benefit—by participating in conservation and managing their electricity use
- ✓ Consumers have access to detailed information about their electricity usage - and use that information to effectively manage costs
- ✓ Every time consumers take action to manage their own bills by shifting or reducing their electricity consumption, they will achieve multiple goods: managing costs, helping to reduce Ontario's overall generation requirements
- ✓ Moreover, in the long-run, consumers will be helping to keep electricity prices down
- ✓ Smart metering is smart for the environment, for the economy, and for the way we each manage our own individual bills ...

Log on to our website:

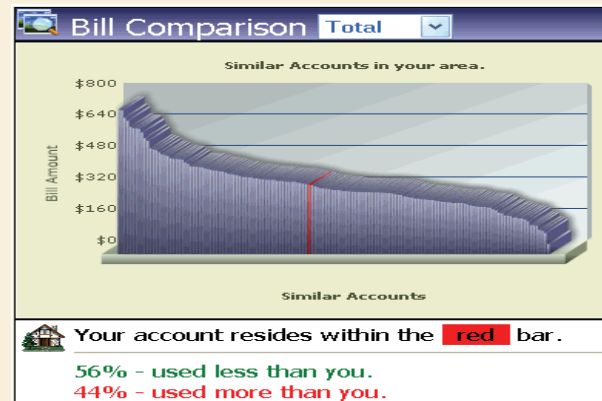
www.ckenergy.com

Access powerful tools that will provide:

- ✓ Information on how you consume energy
- ✓ Guidelines on how to reduce energy consumption
- ✓ Next day presentation of hourly consumption



- ✓ Comparative consumption information

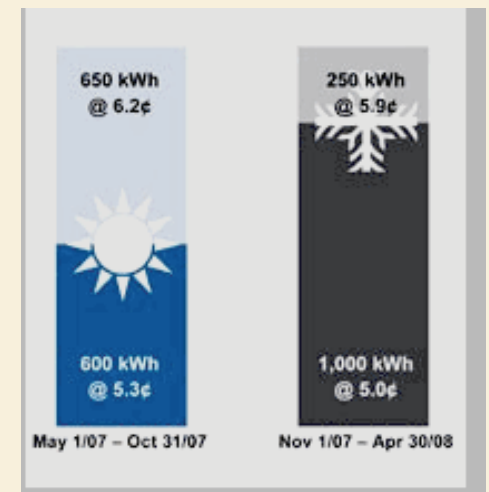


Visit our website for more information, helpful conservation tips and many useful links to find more ways to conserve and save on your electricity bill.

Regulated Price Plan

Effective November 1st, the Regulated Price Plan (RPP) prices will be 5.0 cents per kilowatt hour up to the consumption threshold each month and 5.9 cents per kilowatt hour above that. The new prices represent a 0.3 cents per kilowatt hour, or 4.8%, **decrease** relative to the prices that went into effect in May 2007. The impact of this price **reduction** on each consumer will depend on how much electricity the consumer uses.

The period from November 1st until April 30th marks the winter price period where residential consumers can use more electricity at a lower price. As in previous years, the amount of electricity charged at the lower price will change from the summer threshold of 600 kilowatt hours per month to the winter threshold of 1,000 kilowatt hours per month. Non-residential consumers eligible for the price plan can continue to use 750 kilowatt hours each month at the lower price throughout the year.



Issue includes:

- **Electricity Prices and Distribution Rates**
- **Considering an Electricity Contract?**

Spring/Summer 2008

Ontario Energy Board

Electricity Prices for May 1, 2008

The Ontario Energy Board (OEB) has updated electricity prices for Regulated Price Plan (RPP) consumers who have their electricity supplied by a utility. If your electricity is supplied by a retailer, you will continue to pay your contract price.

New RPP prices remain unchanged

- **5.0 cents per kilowatt hour (kWh) for energy use up to 600 kWh per month**
- **5.9 cents per kWh above that threshold**

The threshold for non-residential consumers who are eligible for the price plan stays at 750 kWh throughout the year.

Prices reviewed every six months – May 1 and November 1

Helps ensure you pay closer to the actual cost to generate the electricity you use while continuing to smooth electricity prices, so you are protected from day-to-day price volatility.



“Time-Of-Use” Prices

The Board has also set out “time-of-use” (TOU) RPP prices for those few utilities that have both systems and meters capable of tracking and billing based on hourly electricity use and have implemented TOU pricing for consumers who purchase their electricity from a utility. Unlike RPP tiered pricing, TOU prices have changed slightly (see below). However, overall, TOU prices are structured in a way that costs to the average consumer more or less equal the same amount as RPP tiered pricing.

Most consumers who have smart meters are not yet charged TOU prices. Your utility must notify you at least a month before you are placed on TOU prices.

On-peak price = 9.3 cents per kWh (+ 0.6 cents)

Mid-peak price = 7.3 cents per kWh (+ 0.3 cents)

Off-peak price = 2.7 cents per kWh (– 0.3 cents)

Distribution Rates

You may also see a change to the distribution rates you pay under the “Delivery” line of your bill. Distribution rate changes may come into effect at different times for each utility because rate applications are not all processed at the same time by the OEB.

Electricity distribution rates vary from utility to utility and are reflected on the “Delivery” line of your bill. They are designed to cover your utility’s costs to provide electricity services to homes and businesses within its service territory.

There are two methods being used to set electricity distribution rates for 2008: a cost of service proceeding, which is a detailed public review, or by way of the Board’s incentive regulation guidelines. In a cost of service proceeding, the utility applies for rates based on the costs it forecasts will be incurred to deliver electricity. Under the Board’s incentive regulation guidelines, distribution rates are set using a standard rate adjustment that accounts for inflation and productivity improvements.

Need more information on your distribution rates? Please contact your local utility.

Options

As an electricity consumer in Ontario, you can choose to stay on the Regulated Price Plan and have your power supplied by your local utility OR to have your power supplied by an electricity retailer. For more information, visit the OEB website or talk with your local utility or a retailer. Whatever you choose, don't feel rushed. Make the right choice for you.

The “Delivery” portion of your electricity bill includes:

- 1. Transmission Charge** – Pass through costs for transmitting electricity from the power grid to your local utility.
- 2. Distribution Charges** that include costs:
 - to design, build and maintain overhead and underground distribution lines, poles, stations and local transformers
 - to deliver electricity to your home or business
 - for administration, meter reading, billing and basic connection costs

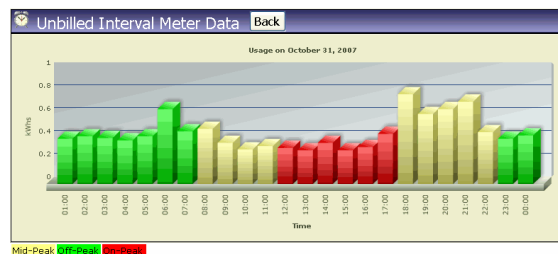
GO FIGURE



With the help of your Smart Meter, Go Figure gives you valuable information such as:

- ✓ How you use Energy
- ✓ Bill Summary
- ✓ Bill Comparison
- ✓ Bill History
- ✓ Time of Use Rates
- ✓ Ways to Save

Usage by Day or Month



This chart shows you when your household used energy and how much it cost you, depending if it's Off-Peak, Mid-Peak or On-Peak.

For more information on Smart Meters and to sign up for Go Figure, go to www.ckhydro.com. Click on Go Figure, follow the instructions & then log in.

Visit our website for more information, helpful conservation tips and many useful links to find more ways to conserve and save on your electricity bill.

www.ckenergy.com

Use our Energy Use Calculator to give you approximate energy costs for most of your household appliances.

Remember the 3 T's of Electricity Conservation

- 1) **TURN IT OFF**
- 2) **TURN IT DOWN**
- 3) **TRADE IT IN**

Interactive Voice Response

To better serve our customers we have added a 24-7 automated service to access your account balance information and payment history over the telephone.

- Call 519-352-6300 and press 2
- Please have your bill ready

IVR provides pro-active outbound notifications, friendly reminders, planned outages and serves customers who do not have access to view their account information over the internet.



Tariff of Rates and Charges

**Effective
May 1, 2010**

For More Information:

Telephone: 519 352-6300
Fax: 519 351-4059
1-866-804-7325

Email: ckenergy@ckenergy.com
PO Box 70, 320 Queen St.
Chatham ON N7M 5K2

www.ckhydro.com

RATE CHANGE

Chatham-Kent Hydro Inc. has received approval from the Ontario Energy Board for a rate change effective May 1, 2010 with implementation dates of June 1, 2010 and July 1, 2010.

Effective June 1, 2010 Monthly Rates and Charges

Residential

Service Charge	\$	23.56
Distribution Volumetric Rate	\$/kWh	0.0043
Retail Transmission Rate – Network Service Rate	\$/kWh	0.0058
Line and Transformation Connection Service Rate	\$/kWh	0.0049
Wholesale Market Service Rate	\$/kWh	0.0052
Rural Rate Protection Charge	\$/kWh	0.0013
Standard Supply Service – Administrative Charge	\$	0.25

General Service Less Than 50kW

Service Charge	\$	35.02
Distribution Volumetric Rate	\$/kWh	0.0137
Retail Transmission Rate – Network Service Rate	\$/kWh	0.0051
Line and Transformation Connection Service Rate	\$/kWh	0.0043
Wholesale Market Service Rate	\$/kWh	0.0052
Rural Rate Protection Charge	\$/kWh	0.0013
Standard Supply Service – Administrative Charge	\$	0.25

Effective July 1, 2010 Monthly Rates and Charges

Residential

Service Charge	\$	19.00
Distribution Volumetric Rate	\$/kWh	0.0095
Retail Transmission Rate – Network Service Rate	\$/kWh	0.0053
Line and Transformation Connection Service Rate	\$/kWh	0.0045
Wholesale Market Service Rate	\$/kWh	0.0052
Rural Rate Protection Charge	\$/kWh	0.0013
Standard Supply Service – Administrative Charge	\$	0.25

General Service Less Than 50kW

Service Charge	\$	34.07
Distribution Volumetric Rate	\$/kWh	0.0114
Retail Transmission Rate – Network Service Rate	\$/kWh	0.0047
Line and Transformation Connection Service Rate	\$/kWh	0.0040
Wholesale Market Service Rate	\$/kWh	0.0052
Rural Rate Protection Charge	\$/kWh	0.0013
Standard Supply Service – Administrative Charge	\$	0.25

The introduction of the HST means that Chatham-Kent Hydro customers will have to pay the new HST rate of 13 per cent on their electricity bills as of July 1st rather than the federal GST of five per cent applied up to and including June 30th. In other words, the sales tax rate on your electricity bills will increase to 13 per cent from five per cent on July 1st.

Understanding Time of Use Billing

Smart thinking for our future.

Smart meters and time of use rates put the power to manage your electricity consumption and costs in your hands. When we all use a lot of electricity at the same time we create “peak demand” periods, which have a range of impacts, including higher prices for consumers. By shifting your energy use to off-peak periods, you can save significantly on electricity costs.

How does a Smart Meter work?

Your Smart Meter will automatically record your electricity consumption, hour by hour, so you can take advantage of Time-of-Use pricing. You are then charged according to the rate for electricity at that time. You will save money if you can shift your energy usage to times when prices are lower.

When will Time-of Use pricing take effect?

Time-of-Use pricing is scheduled to begin in the fall of 2010, changing when and how electricity is used will assist you in a smooth transition into Time-of-Use pricing. You will receive notification prior to those rates taking effect.

For more information on Smart Meters and to sign up for Go Figure, go to www.ckhydro.com

Go Figure

Harness the power of your Smart Meter

With the help of your Smart Meter, Go Figure gives you valuable information such as:

- ✓ How you use energy
- ✓ Your bill summary
- ✓ Bill comparisons
- ✓ Your bill history
- ✓ Time-of-Use rates
- ✓ Ways to save

Know what you're spending, and when

The Go Figure feature shows when you used energy, and how much it cost you (depending on whether it was used during off-peak, mid-peak or on-peak hours). This tool is free to all residential and small business customers.

Visit
www.middlesexpower.ca
and click on the go figure
icon to register today!



Why is peak demand so important?

Supplying electricity at "peak" times has a number of impacts: it increases the price due to scarcity, it puts a strain on the environment, and it could end up costing the province more money to build new infrastructure to keep up with the demand.

Conservation makes cents

Whether you are a residential, small business, or commercial customer, conserving energy will not only help you save money, but will help maintain the health of our provincial electrical system.

If you have a central air conditioner, you can help the province to manage peak demand by enrolling in **peaksaver**® and receive a one-time bill credit as a thank-you.

Enroll today:
Peaksaver.middlesexpower.ca



Visit our website to see where you can save

Every day people are benefiting from government incentives available. Visit www.middlesexpower.ca and click on "conservation" to learn more!

- ✓ Receive up to \$650 by installing an ENERGY STAR® qualified central heating or cooling system.
- ✓ Coupons available to save money throughout the year when you purchase and install energy-efficient products for your home.
- ✓ The Government of Ontario will pay 50% of your Home Energy Audit (up to \$150). If your home is more than ten years old, it could be losing a lot of energy & you could qualify for up to \$10 000 in rebates!
- ✓ With our Small Business Lighting Program, small businesses can get up to \$1000 worth of energy efficient lighting and upgrades, plus, access to further incentives!

Learn more @ www.middlesexpower.ca

Tariff of Rates and Charges

EFFECTIVE MAY 1ST, 2011



For More Information

Telephone: 519-245-2010 (weekdays)
519-245-2019 (after hours)
Fax: 519-245-5384
1-866-666-7566
Email: email@middlesexpower.ca

351 Frances Street
Strathroy, ON
N7G 2L7

www.middlesexpower.ca

Understanding Time-Of-Use Billing

Smart thinking for our future

When we all use a lot of electricity at the same time we create “peak” demand periods. These peaks have a range of impacts, including higher prices for consumers. By shifting your energy use to off-peak periods, you may save significantly on energy costs.

How does a Smart Meter work?

Your Smart Meter will automatically record your electricity consumption, hour by hour, so you can take advantage of Time-of-Use pricing. You are then charged for electricity at that time. You will save money if you can shift your energy usage to times when prices are lower.

For more information on making Time-of-Use rates work for you, visit:



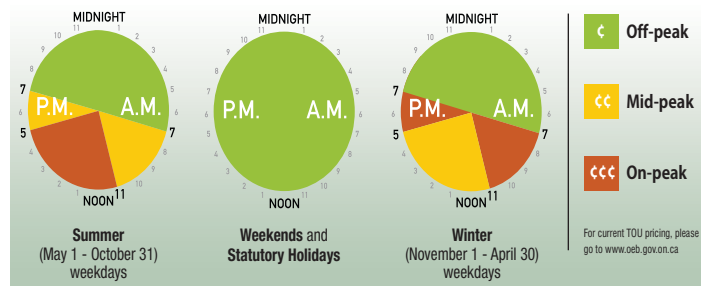
www.ontario.ca/powersmarter

Appliance	Time-of-Use Rate Examples		
	Off-peak 5.9¢ Per kWh	Mid-peak 8.9¢ Per kWh	On-peak 10.7¢ Per kWh
Clothes Dryer(1 load)	13¢	20¢	23¢
Clothes Washer (1 load/hotwash)*	46¢	69¢	84¢
Clothes Washer (1 load/coldwash)	7¢	10¢	12¢
Electric Stove (1 family meal)	30¢	45¢	54¢
Dishwasher (1 load)*	21¢	32¢	38¢
AC Central 25°C (1hour)	16¢	24¢	30¢
AC Central 20°C (1hour)	19¢	29¢	35¢

*Cost of electrical water heating included.

The above chart is for an example purpose only. Cost of electrical water heating included. Prices shown above only reflect the electricity or commodity cost on your bill.

How Time-Of-Use rates work



Rates subject to change every May 1 and November 1

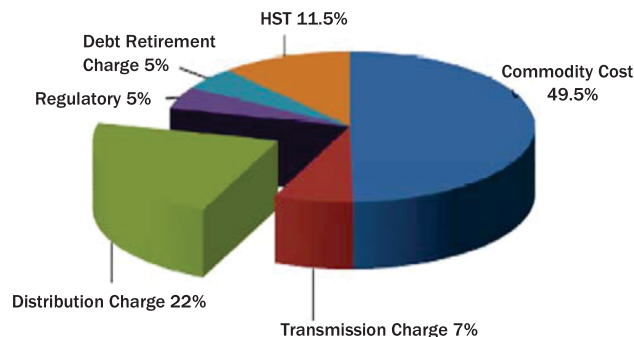
All Residential customers in Strathroy - Caradoc are now on Time-of-Use pricing.

With Time-of-Use rates, there are three different rates: off-peak, mid-peak and on-peak. These prices are regulated by the Ontario Energy Board and can change every May and November. The chart above demonstrates different prices, at different times and days of the week.

Why are there three prices? The price goes up when demand for electricity is high; it is lowest when demand is at its lowest.

Typical Ontario Residential Bill Profile (Using 800 kWh/month)

Source: Electricity Distributors Association



*Rates apply to regulated price plan customers only

**As of May 1, 2011, small general service (small business) less than 50 kW customers remain on tiered pricing. These customers will be notified prior to Time-of-Use rates taking effect in June.

Rate Change

The Ontario Energy Board has approved the following rate changes, effective May 1, 2011:

Residential

Time-Of-Use Electricity Rates:		
Off-Peak	\$/kWh	0.059
Mid-Peak	\$/kWh	0.089
On-Peak	\$/kWh	0.107
Service Charge		
*Distribution Volumetric Rate	\$/kWh	0.0155
Retail Transmission Rate -		
Network Service Rate	\$/kWh	0.0064
Line and Transformer		
Connection Service Rate	\$/kWh	0.0051
Wholesale Market Service Rate	\$/kWh	0.0052
Rural Rate Protection Charge	\$/kWh	0.0013
Standard Supply Service -		
Administrative Charge	\$	0.25
Small General Service (Small Business) - less than 50 kW		
Time-Of-Use Electricity Rates		
Off-Peak	\$/kWh	0.059
Mid-Peak	\$/kWh	0.089
On-Peak	\$/kWh	0.107
Service Charge		
*Distribution Volumetric Rate	\$/kWh	0.0052
Retail Transmission Rate -		
Network Service Rate	\$/kWh	0.0059
Line and Transformer		
Connection Service Rate	\$/kWh	0.0045
Wholesale Market Service Rate	\$/kWh	0.0052
Rural Rate Protection Charge	\$/kWh	0.0013
Standard Supply Service -		
Administrative Charge	\$	0.25
**Tiered Electricity Rates		
Up to 600kWh (750kWh for small business)	\$/kWh	0.068
Thereafter	\$/kWh	0.079

Electricity Conservation

Save Energy & Manage Your Energy Costs

We have a variety of programs available through the **saveONenergy** campaign to help reduce the amount of electricity you use in your home and better manage your energy costs.



peaksaver PLUS®

Do your part to ease critical strain on the electricity system in Ontario on hot summer days by signing up for

peaksaver PLUS®. All eligible participants (including past peaksaver® participants) who sign up for **peaksaver PLUS®** get a **free in-home display** to help manage energy costs.



EXCHANGE EVENT

Join us **June 16, 17 & 18** at a participating Canadian Tire Store, and trade in your old* window or room air conditioner, or dehumidifier and get a **\$50 coupon** toward the purchase of a new ENERGY STAR® qualified model.

*Your old unit must be at least 10 years old and in working order.



FRIDGE & FREEZER PICKUP

If you have a fridge or freezer that is 15 years or older, we'll haul it out of your home and recycle it in an environmentally friendly way for **FREE**. Call: 1-877-797-9473 to book your appointment.

Subject to terms and conditions found at entegrus.com/conservation.
Funded by the Ontario Power Authority and offered by Entegrus.

Visit entegrus.com/conservation to learn more about these and other residential conservation programs.

Visit 10 Smart Meter Lane and learn how shifting your electricity use makes sense.



10 Smart Meter Lane shows you how the cost of running appliances changes at different times of the day or week. You may be surprised what appliances are the top users in your house. Visit www.ieso.ca/house to tour 10 Smart Meter lane and start shifting today.

Coming Soon: E-Billing!

Benefits of electronic billing:

- ✓ Easy and convenient
- ✓ Access previous bills and important notices
- ✓ The less paper we use, the less energy we consume
- ✓ Save time and money
- ✓ Increased security
- ✓ Support environmental efforts

How to register for e-billing:

To register for e-billing, simply sign up for Go Figure, our online energy management service. In addition to your paper bill, Go Figure registrants will automatically receive an e-bill when the service becomes available.

Visit www.entegrus.com to sign up for Go Figure.

Monitor your energy

With the help of your Smart Meter, you can gain access to valuable information, such as:

- How you use your energy
- Time-of-Use rates
- Your bill summary
- Bill comparisons
- Your bill history
- Ways to save



Visit entegrus.com to register for Go Figure – your personal energy management service!

Did you know?

When you sign up for Pre-Authorized Payments, you can have the amount due either 1) deducted from your bank account, or 2) set a pre-arranged budget amount.

Visit our website at www.entegrus.com, or contact a Customer Service Representative today for more information: (519) 245-2010.

Tariff of Rates & Charges

Effective May 1st, 2012

Village of Newbury
Service Area

Residential & General Service
<50 kW



Formerly Middlesex Power

Telephone: 519-245-2010
Fax: 519-245-5384
1-866-666-7566

Emergency after hours:
519-245-2019

Email: email@entegrus.com

351 Frances Street
Strathroy, ON
N7G 2L7

entegrus.com

Time-Of-Use Billing

When we all use a lot of electricity at the same time we create “peak” demand periods. These peaks have a range of impacts, including higher prices for consumers. By shifting your energy use to off-peak periods, you may save significantly on energy costs.

Newbury has been on TOU since prior to June 2011.



How your Smart Meter works:

Your Smart Meter automatically records your electricity consumption, hour by hour, so you can take advantage of Time-of-Use pricing. You are then charged for electricity at that time. You save money when you can shift your energy usage to times when prices are lower.

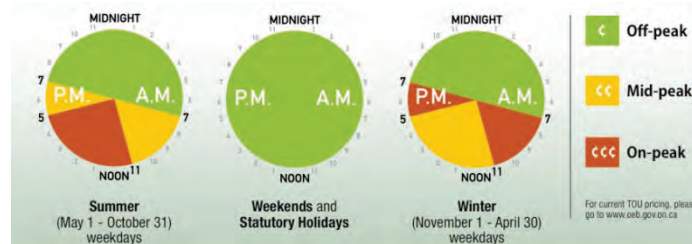
Visit www.ontario.ca/powersmarter for more information

Our Service Area: (marked in green)



How Time-of-Use Rates Work

All Residential and Small General Service customers in the Newbury service area are on Time-of-Use (TOU) pricing.

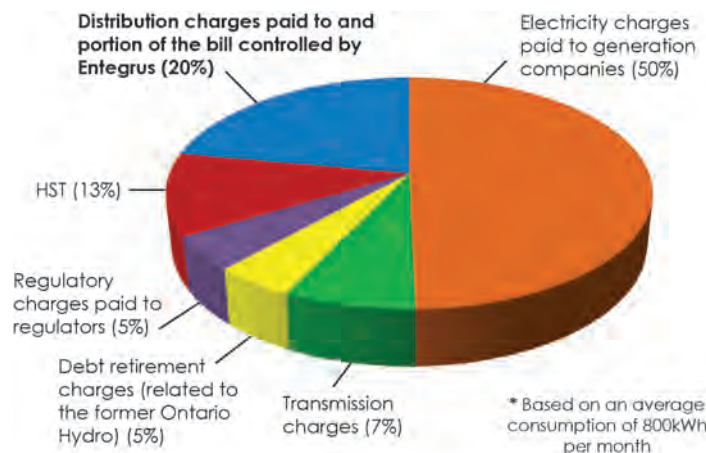


With TOU rates, there are three different rates: off-peak, mid-peak and on-peak. These prices are regulated by the Ontario Energy Board and change every May and November. The chart above demonstrates different prices, and different times and days of the week.

If you have signed a contract with an energy retailer, you can contact the retailer directly for more information on contractual rates at the phone number listed on your bill, or visit:

www.ontarioenergyboard.ca/OEB/Consumers

Typical Residential Bill Profile for the Entegrus Service Territory:



Rate Change effective May 1, 2012

The Ontario Energy Board has approved the following rates, effective May 1, 2012:

Residential

Time-Of-Use Electricity Rates:		
Off-Peak	\$/kWh	0.065
Mid-Peak	\$/kWh	0.100
On-Peak	\$/kWh	0.117
Service Charge	\$	12.07
Distribution Volumetric Rate	\$/kWh	0.0160
Retail Transmission Rate -		
Network Service Rate	\$/kWh	0.0059
Line and Transformer		
Connection Service Rate	\$/kWh	0.0035
Wholesale Market Service Rate	\$/kWh	0.0052
Rural Rate Protection Charge	\$/kWh	0.0011
Standard Supply Service -		
Administrative Charge	\$	0.25

General Service < less than 50 kW

Time-Of-Use Electricity Rates		
Off-Peak	\$/kWh	0.065
Mid-Peak	\$/kWh	0.100
On-Peak	\$/kWh	0.117
Service Charge	\$	22.09
Distribution Volumetric Rate	\$/kWh	0.0151
Retail Transmission Rate -		
Network Service Rate	\$/kWh	0.0054
Line and Transformer		
Connection Service Rate	\$/kWh	0.0030
Wholesale Market Service Rate	\$/kWh	0.0052
Rural Rate Protection Charge	\$/kWh	0.0011
Standard Supply Service -		
Administrative Charge	\$	0.25

For customers not on the Regulated Price Plan (Non - “RPP”), please see the IESO website (www.ieso.ca) for information on the Global Adjustment rate, which varies monthly.

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Attachment D

CK Residential Smart Meter Model



Ontario Energy Board

Smart Meter Model

Choose Your Utility:

Fort Albany Power Corporation
Fort Frances Power Corporation

Application Contact Information

Name: Andrya Eagen

Title: Senior Regulatory Specialist

Phone Number: 519-352-6300 Ext 243

Email Address: andryaeagen@ckenergy.com

We are applying for rates effective: November 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.



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.

	2006	2007	2008	2009	2010	2011	2012 and later	Total
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
Smart Meter Capital Cost and Operational Expense Data								
Smart Meter Installation Plan								
Actual/Planned number of Smart Meters installed during the Calendar Year								
Residential				673	1,023			1696
General Service < 50 kW								0
Actual/Planned number of Smart Meters installed (Residential and GS < 50 kW only)	0	0	0	673	1,023	0	0	1696
Percentage of Residential and GS < 50 kW Smart Meter Installations Completed	0.00%	0.00%	0.00%	39.68%	100.00%	0.00%	100.00%	100.00%
Actual/Planned number of GS > 50 kW meters installed								0
Other (please identify)								0
Total Number of Smart Meters installed or planned to be installed	0	0	0	673	1,023	0	0	1696
1 Capital Costs								
1.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)								
Asset Type								
1.1.1 Smart Meters (may include new meters and modules, etc.)	Smart Meter			62,647	95,227	0		\$ 157,875
1.1.2 Installation Costs (may include socket kits, labour, vehicle, benefits, etc.)	Smart Meter			18,655	28,357	0		\$ 47,011
1.1.3a Workforce Automation Hardware (may include fieldwork handhelds, barcode hardware, etc.)								\$ -
1.1.3b Workforce Automation Software (may include fieldwork handhelds, barcode hardware, etc.)								\$ -
Total Advanced Metering Communications Devices (AMCD)				\$ 81,302	\$ 123,584	\$ -	\$ -	\$ 204,886
1.2 ADVANCED METERING REGIONAL COLLECTOR (AMRC) (includes LAN)								
Asset Type								
1.2.1 Collectors								\$ -
1.2.2 Repeaters (may include radio licence, etc.)	Smart Meter			3,268	4,968	0		\$ 8,236
1.2.3 Installation (may include meter seals and rings, collector computer hardware, etc.)								\$ -
Total Advanced Metering Regional Collector (AMRC) (includes LAN)				\$ 3,268	\$ 4,968	\$ -	\$ -	\$ 8,236
1.3 ADVANCED METERING CONTROL COMPUTER (AMCC)								
Asset Type								
1.3.1 Computer Hardware	Computer Hardware			-1,856	0	0		\$ -1,856
1.3.2 Computer Software	Computer Software			-652	0	0		\$ -652
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)				\$ -2,508	\$ -	\$ -	\$ -	\$ -2,508
1.4 WIDE AREA NETWORK (WAN)								
Asset Type								
1.4.1 Activation Fees	Applications Software			1,120	1,703	0		\$ 2,823
Total Wide Area Network (WAN)				\$ 1,120	\$ 1,703	\$ -	\$ -	\$ 2,823
1.5 OTHER AMI CAPITAL COSTS RELATED TO MINIMUM FUNCTIONALITY								
Asset Type								
1.5.1 Customer Equipment (including repair of damaged equipment)								\$ -
1.5.2 AMI Interface to CIS								\$ -
1.5.3 Professional Fees								\$ -
1.5.4 Integration								\$ -
1.5.5 Program Management								\$ -
1.5.6 Other AMI Capital								\$ -
Total Other AMI Capital Costs Related to Minimum Functionality				\$ -	\$ -	\$ -	\$ -	\$ -
Total Capital Costs Related to Minimum Functionality				\$ 83,183	\$ 130,254	\$ -	\$ -	\$ 213,437
1.6 CAPITAL COSTS BEYOND MINIMUM FUNCTIONALITY								
Asset Type								
1.6.1 Costs related to technical capabilities in the smart meters or related communications infrastructure that exceed those specified in O.Reg 425/06	Computer Software							\$ -
1.6.2 Costs for deployment of smart meters to customers other than residential and small general service	Applications Software							\$ -
1.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDNR, etc.								\$ -
Total Capital Costs Beyond Minimum Functionality				\$ -	\$ -	\$ -	\$ -	\$ -
Total Smart Meter Capital Costs				\$ 83,183	\$ 130,254	\$ -	\$ -	\$ 213,437
2 OM&A Expenses								
2.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)								
Asset Type								
2.1.1 Maintenance (may include meter reverification costs, etc.)				38,983	31,319	48,157	0	\$ 118,459
2.1.2 Other (please specify)								\$ -
Total Incremental AMCD OM&A Costs				\$ 38,983	\$ 31,319	\$ 48,157	\$ -	\$ 118,459



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

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

Smart Meter Capital Cost and Operational Expense Data

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

2.2.1 Maintenance

2.2.2 Other (please specify)

Total Incremental AMRC OM&A Costs

2.3 ADVANCED METERING CONTROL COMPUTER (AMCC)

2.3.1 Hardware Maintenance (may include server support, etc.)

2.3.2 Software Maintenance (may include maintenance support, etc.)

2.3.2 Other (please specify)

Total Incremental AMCC OM&A Costs

2.4 WIDE AREA NETWORK (WAN)

2.4.1 WAN Maintenance

2.4.2 Other (please specify)

Total Incremental AMRC OM&A Costs

2.5 OTHER AMI OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY

2.5.1 Business Process Redesign

2.5.2 Customer Communication (may include project communication, etc.)

2.5.3 Program Management

2.5.4 Change Management (may include training, etc.)

2.5.5 Administration Costs

2.5.6 Other AM Expenses

(please specify)

Total Other AMI OM&A Costs Related to Minimum Functionality

TOTAL OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY

2.6 OM&A COSTS RELATED TO BEYOND MINIMUM FUNCTIONALITY

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

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

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

2.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDMR, etc.

Total OM&A Costs Beyond Minimum Functionality

Total Smart Meter OM&A Costs

	2006	2007	2008	2009	2010	2011	2012 and later	Total
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
								\$ -
								\$ -
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
				4,441	4,660	3,122	2,732	\$ 14,955
				17,293	12,967	8,423	62,023	\$ 100,705
								\$ -
	\$ -	\$ -	\$ -	\$ 21,734	\$ 17,626	\$ 11,545	\$ 64,754	\$ 115,659
								\$ -
								\$ -
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
								\$ -
								\$ -
								\$ -
				585	0	0	0	\$ 585
				6,137	1,928	4,187	0	\$ 12,252
	\$ -	\$ -	\$ -	\$ 6,722	\$ 1,928	\$ 4,187	\$ -	\$ 12,837
	\$ -	\$ -	\$ -	\$ 67,439	\$ 50,873	\$ 63,888	\$ 64,754	\$ 246,955
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual		
								\$ -
								\$ -
				5,788	239,549	187,278	0	\$ 432,614
	\$ -	\$ -	\$ -	\$ 5,788	\$ 239,549	\$ 187,278	\$ -	\$ 432,614
	\$ -	\$ -	\$ -	\$ 73,227	\$ 290,422	\$ 251,166	\$ 64,754	\$ 679,569

3 Aggregate Smart Meter Costs by Category

3.1

Capital

3.1.1 Smart Meter

3.1.2 Computer Hardware

3.1.3 Computer Software

3.1.4 Tools & Equipment

3.1.5 Other Equipment

3.1.6 Applications Software

3.1.7 Total Capital Costs

3.2 OM&A Costs

3.2.1 Total OM&A Costs

\$ -	\$ -	\$ -	\$ 84,570	\$ 128,552	\$ -	\$ -	\$ 213,122
\$ -	\$ -	\$ -	\$ 1,856	\$ -	\$ -	\$ -	\$ 1,856
\$ -	\$ -	\$ -	\$ 652	\$ -	\$ -	\$ -	\$ 652
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ 1,120	\$ 1,703	\$ -	\$ -	\$ 2,823
\$ -	\$ -	\$ -	\$ 83,183	\$ 130,254	\$ -	\$ -	\$ 213,437
\$ -	\$ -	\$ -	\$ 73,227	\$ 290,422	\$ 251,166	\$ 64,754	\$ 679,569



Ontario Energy Board

Smart Meter Model

Chatham-Kent Hydro Inc.

	2006	2007	2008	2009	2010	2011	2012 and later
Cost of Capital							
Capital Structure¹							
Deemed Short-term Debt Capitalization					4.0%	4.0%	4.0%
Deemed Long-term Debt Capitalization	50.0%	50.0%	53.3%	56.7%	56.0%	56.0%	56.0%
Deemed Equity Capitalization	50.0%	50.0%	46.7%	43.3%	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					2.07%	2.07%	2.07%
Long-term Debt Rate (actual/embedded/deemed) ²	7.04%	7.04%	7.04%	7.04%	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							
WACC	8.02%	8.02%	7.96%	7.89%	7.31%	7.31%	7.31%
Working Capital Allowance							
Working Capital Allowance Rate (% of the sum of Cost of Power + controllable expenses)	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
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	50	50	50	50
Computer Equipment - CCA Rate	45%	55%	55%	55%	55%	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	12	12	12	12	12	12	12
Applications Software - CCA Rate	100%	100%	100%	100%	100%	100%	100%

Assumptions

¹ Planned smart meter installations occur evenly throughout the year.

² Fiscal calendar year (January 1 to December 31) used.

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



	2006	2007	2008	2009	2010	2011	2012 and later
Net Fixed Assets - Smart Meters							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ 84,570	\$ 213,122	\$ 213,122
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ 84,570	\$ 128,552	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 84,570	\$ 213,122	\$ 213,122	\$ 213,122
Accumulated Depreciation							
Opening Balance		\$ -	\$ -	\$ -	\$ 2,819	\$ 12,742	\$ 26,950
Amortization expense during year	\$ -	\$ -	\$ -	\$ 2,819	\$ 9,923	\$ 14,208	\$ 14,208
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 2,819	\$ 12,742	\$ 26,950	\$ 41,158
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 81,751	\$ 200,380	\$ 186,172
Closing Balance	\$ -	\$ -	\$ -	\$ 81,751	\$ 200,380	\$ 186,172	\$ 171,963
Average Net Book Value	\$ -	\$ -	\$ -	\$ 40,876	\$ 141,065	\$ 193,276	\$ 179,068
Net Fixed Assets - Computer Hardware							
Gross Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 1,856	\$ 1,856	\$ 1,856
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ 1,856	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 1,856	\$ 1,856	\$ 1,856	\$ 1,856
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 186	\$ 1,856	\$ 2,227
Amortization expense during year	\$ -	\$ -	\$ -	\$ 186	\$ 1,670	\$ 371	\$ 371
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 186	\$ 1,856	\$ 2,227	\$ 2,598
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 1,670	\$ -	\$ 371
Closing Balance	\$ -	\$ -	\$ -	\$ 1,670	\$ -	\$ 371	\$ 742
Average Net Book Value	\$ -	\$ -	\$ -	\$ 835	\$ 835	\$ 186	\$ 557
Net Fixed Assets - Computer Software (Including Applications Software)							
Gross Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 468	\$ 2,171	\$ 2,171
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ 468	\$ 1,703	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 468	\$ 2,171	\$ 2,171	\$ 2,171
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 78	\$ 518	\$ 1,241
Amortization expense during year	\$ -	\$ -	\$ -	\$ 78	\$ 440	\$ 724	\$ 724
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 78	\$ 518	\$ 1,241	\$ 1,965
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 390	\$ 1,653	\$ 929
Closing Balance	\$ -	\$ -	\$ -	\$ 390	\$ 1,653	\$ 929	\$ 206
Average Net Book Value	\$ -	\$ -	\$ -	\$ 195	\$ 1,022	\$ 1,291	\$ 568
Net Fixed Assets - Tools and Equipment							
Gross Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Amortization expense during year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Average Net Book Value	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Fixed Assets - Other Equipment							
Gross Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Amortization expense during year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Average Net Book Value	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -



Ontario Energy Board

Smart Meter Model

Chatham-Kent Hydro Inc.

	2006	2007	2008	2009	2010	2011	2012 and Later
Average Net Fixed Asset Values (from Sheet 4)							
Smart Meters	\$ -	\$ -	\$ -	\$ 40,876	\$ 141,065	\$ 193,276	\$ 179,068
Computer Hardware	\$ -	\$ -	\$ -	\$ 835	\$ 835	\$ 186	\$ 557
Computer Software	\$ -	\$ -	\$ -	\$ 195	\$ 1,022	\$ 1,291	\$ 568
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Net Fixed Assets	\$ -	\$ -	\$ -	\$ 40,236	\$ 141,252	\$ 194,752	\$ 180,192
Working Capital							
Operating Expenses (from Sheet 2)	\$ -	\$ -	\$ -	\$ 73,227	\$ 290,422	\$ 251,166	\$ 64,754
Working Capital Factor (from Sheet 3)	15%	15%	15%	15%	15%	15%	15%
Working Capital Allowance	\$ -	\$ -	\$ -	\$ 10,984	\$ 43,563	\$ 37,675	\$ 9,713
Incremental Smart Meter Rate Base	\$ -	\$ -	\$ -	\$ 51,220	\$ 184,815	\$ 232,427	\$ 189,905
Return on Rate Base							
Capital Structure							
Deemed Short Term Debt	\$ -	\$ -	\$ -	\$ -	\$ 7,393	\$ 9,297	\$ 7,596
Deemed Long Term Debt	\$ -	\$ -	\$ -	\$ 29,041	\$ 103,497	\$ 130,159	\$ 106,347
Equity	\$ -	\$ -	\$ -	\$ 22,178	\$ 73,926	\$ 92,971	\$ 75,962
Preferred Shares	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Capitalization	\$ -	\$ -	\$ -	\$ 51,220	\$ 184,815	\$ 232,427	\$ 189,905
Return on							
Deemed Short Term Debt	\$ -	\$ -	\$ -	\$ -	\$ 153	\$ 192	\$ 157
Deemed Long Term Debt	\$ -	\$ -	\$ -	\$ 2,045	\$ 6,075	\$ 7,640	\$ 6,243
Equity	\$ -	\$ -	\$ -	\$ 1,996	\$ 7,282	\$ 9,158	\$ 7,482
Preferred Shares	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Return on Capital	\$ -	\$ -	\$ -	\$ 4,041	\$ 13,510	\$ 16,990	\$ 13,882
Operating Expenses	\$ -	\$ -	\$ -	\$ 73,227	\$ 290,422	\$ 251,166	\$ 64,754
Amortization Expenses (from Sheet 4)							
Smart Meters	\$ -	\$ -	\$ -	\$ 2,819	\$ 9,923	\$ 14,208	\$ 14,208
Computer Hardware	\$ -	\$ -	\$ -	\$ 186	\$ 1,670	\$ 371	\$ 371
Computer Software	\$ -	\$ -	\$ -	\$ 78	\$ 440	\$ 724	\$ 724
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Amortization Expense in Year	\$ -	\$ -	\$ -	\$ 2,711	\$ 8,693	\$ 14,561	\$ 14,561
Incremental Revenue Requirement before Taxes/PILs	\$ -	\$ -	\$ -	\$ 79,979	\$ 312,625	\$ 282,717	\$ 93,197
Calculation of Taxable Income							
Incremental Operating Expenses	\$ -	\$ -	\$ -	\$ 73,227	\$ 290,422	\$ 251,166	\$ 64,754
Amortization Expense	\$ -	\$ -	\$ -	\$ 2,711	\$ 8,693	\$ 14,561	\$ 14,561
Interest Expense	\$ -	\$ -	\$ -	\$ 2,045	\$ 6,228	\$ 7,833	\$ 6,400
Net Income for Taxes/PILs	\$ -	\$ -	\$ -	\$ 1,996	\$ 7,282	\$ 9,158	\$ 7,482
Grossed-up Taxes/PILs (from Sheet 7)	\$ -	\$ -	\$ -	\$ 513.14	\$ 2,047.68	\$ 3,007.84	\$ 2,755.55
Revenue Requirement, including Grossed-up Taxes/PILs	\$ -	\$ -	\$ -	\$ 80,492	\$ 314,673	\$ 285,725	\$ 95,953



Ontario Energy Board

Smart Meter Model

Chatham-Kent Hydro Inc.

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	\$ -	\$ -	\$ -	\$ -	\$ 81,187.32	\$ 198,101.89	\$ 182,253.74
Capital Additions	\$ -	\$ -	\$ -	\$ 84,570.13	\$ 128,551.62	\$ -	\$ -
Retirements/Removals (if applicable)							
UCC Before Half Year Rule	\$ -	\$ -	\$ -	\$ 84,570.13	\$ 209,738.94	\$ 198,101.89	\$ 182,253.74
Half Year Rule (1/2 Additions - Disposals)	\$ -	\$ -	\$ -	\$ 42,285.06	\$ 64,275.81	\$ -	\$ -
Reduced UCC	\$ -	\$ -	\$ -	\$ 42,285.06	\$ 145,463.13	\$ 198,101.89	\$ 182,253.74
CCA Rate Class	47	47	47	47	47	47	47
CCA Rate	8%	8%	8%	8%	8%	8%	8%
CCA	\$ -	\$ -	\$ -	\$ 3,382.81	\$ 11,637.05	\$ 15,848.15	\$ 14,580.30
Closing UCC	\$ -	\$ -	\$ -	\$ 81,187.32	\$ 198,101.89	\$ 182,253.74	\$ 167,673.44

UCC - Computer Equipment

	2006 Audited Actual	2007 Audited Actual	2008 Audited Actual	2009 Audited Actual	2010 Audited Actual	2011 Audited Actual	2012 and later Forecast
Opening UCC	\$ -	\$ -	\$ -	\$ -	\$ 2,507.58	\$ 1,128.41	\$ 507.78
Capital Additions Computer Hardware	\$ -	\$ -	\$ -	\$ 1,855.70	\$ -	\$ -	\$ -
Capital Additions Computer Software	\$ -	\$ -	\$ -	\$ 651.88	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
UCC Before Half Year Rule	\$ -	\$ -	\$ -	\$ 2,507.58	\$ 2,507.58	\$ 1,128.41	\$ 507.78
Half Year Rule (1/2 Additions - Disposals)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Reduced UCC	\$ -	\$ -	\$ -	\$ -	\$ 2,507.58	\$ 1,128.41	\$ 507.78
CCA Rate Class	45	50	50	50	50	50	50
CCA Rate	45%	55%	55%	55%	55%	55%	55%
CCA	\$ -	\$ -	\$ -	\$ -	\$ 1,379.17	\$ 620.63	\$ 279.28
Closing UCC	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

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	\$ -	\$ -	\$ -	\$ 1,996.03	\$ 7,281.72	\$ 9,157.63	\$ 7,482.25
Amortization	\$ -	\$ -	\$ -	\$ 2,711.46	\$ 8,692.74	\$ 14,560.55	\$ 14,560.55
CCA - Smart Meters	\$ -	\$ -	\$ -	\$ 3,382.81	\$ 11,637.05	\$ 15,848.15	\$ 14,580.30
CCA - Computers	\$ -	\$ -	\$ -	\$ -	\$ 1,379.17	\$ 620.63	\$ 279.28
CCA - Applications Software	\$ -	\$ -	\$ -	\$ 560.02	\$ 1,411.29	\$ 851.27	\$ -
CCA - Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Change in taxable income	\$ -	\$ -	\$ -	\$ 764.66	\$ 4,305.29	\$ 7,639.38	\$ 7,741.78
Tax Rate (from Sheet 3)	36.12%	36.12%	33.50%	33.00%	31.00%	28.25%	26.25%
Income Taxes Payable	\$ -	\$ -	\$ -	\$ 252.34	\$ 1,334.64	\$ 2,158.13	\$ 2,032.22
ONTARIO CAPITAL TAX							
Smart Meters	\$ -	\$ -	\$ -	\$ 81,751.12	\$ 200,379.68	\$ 186,171.56	\$ 171,963.45
Computer Hardware	\$ -	\$ -	\$ -	\$ 1,670.13	\$ -	\$ 371.14	\$ 742.28
Computer Software (Including Application Software)	\$ -	\$ -	\$ -	\$ 390.14	\$ 1,652.87	\$ 929.30	\$ 205.73
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Rate Base	\$ -	\$ -	\$ -	\$ 80,471.13	\$ 202,032.55	\$ 187,472.00	\$ 172,911.45
Less: Exemption	\$ -	\$ -	\$ -	\$ 19,795.90	\$ 50,811.19	\$ -	\$ -
Deemed Taxable Capital	\$ -	\$ -	\$ -	\$ 60,675.23	\$ 151,221.36	\$ 187,472.00	\$ 172,911.45
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)	\$ -	\$ -	\$ -	\$ 136.52	\$ 113.42	\$ -	\$ -
Change in Income Taxes Payable	\$ -	\$ -	\$ -	\$ 252.34	\$ 1,334.64	\$ 2,158.13	\$ 2,032.22
Change in OCT	\$ -	\$ -	\$ -	\$ 136.52	\$ 113.42	\$ -	\$ -
PILs	\$ -	\$ -	\$ -	\$ 388.86	\$ 1,448.06	\$ 2,158.13	\$ 2,032.22
Gross Up PILs							
Tax Rate	36.12%	36.12%	33.50%	33.00%	31.00%	28.25%	26.25%
Change in Income Taxes Payable	\$ -	\$ -	\$ -	\$ 376.62	\$ 1,934.26	\$ 3,007.84	\$ 2,755.55
Change in OCT	\$ -	\$ -	\$ -	\$ 136.52	\$ 113.42	\$ -	\$ -
PILs	\$ -	\$ -	\$ -	\$ 513.14	\$ 2,047.68	\$ 3,007.84	\$ 2,755.55



Ontario Energy Board

Smart Meter Model

Chatham-Kent Hydro 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	\$ -		4.59%	\$ -	\$ -		
2008 Q1	5.14%	5.18%	Sep-06	2006	Q3	\$ -		4.59%	\$ -	\$ -		
2008 Q2	4.08%	5.18%	Oct-06	2006	Q4	\$ -		4.59%	\$ -	\$ -		
2008 Q3	3.35%	5.43%	Nov-06	2006	Q4	\$ -		4.59%	\$ -	\$ -		
2008 Q4	3.35%	5.43%	Dec-06	2006	Q4	\$ -		4.59%	\$ -	\$ -	\$ -	
2009 Q1	2.45%	6.61%	Jan-07	2007	Q1	\$ -		4.59%	\$ -	\$ -		
2009 Q2	1.00%	6.61%	Feb-07	2007	Q1	\$ -		4.59%	\$ -	\$ -		
2009 Q3	0.55%	5.67%	Mar-07	2007	Q1	\$ -		4.59%	\$ -	\$ -		
2009 Q4	0.55%	4.66%	Apr-07	2007	Q2	\$ -		4.59%	\$ -	\$ -		
2010 Q1	0.55%	4.34%	May-07	2007	Q2	\$ -		4.59%	\$ -	\$ -		
2010 Q2	0.55%	4.34%	Jun-07	2007	Q2	\$ -		4.59%	\$ -	\$ -		
2010 Q3	0.89%	4.66%	Jul-07	2007	Q3	\$ -		4.59%	\$ -	\$ -		
2010 Q4	1.20%	4.01%	Aug-07	2007	Q3	\$ -		4.59%	\$ -	\$ -		
2011 Q1	1.47%	4.29%	Sep-07	2007	Q3	\$ -		4.59%	\$ -	\$ -		
2011 Q2	1.47%	4.29%	Oct-07	2007	Q4	\$ -		5.14%	\$ -	\$ -		
2011 Q3	1.47%	4.29%	Nov-07	2007	Q4	\$ -		5.14%	\$ -	\$ -		
2011 Q4	1.47%	4.29%	Dec-07	2007	Q4	\$ -		5.14%	\$ -	\$ -	\$ -	
2012 Q1	1.47%	4.29%	Jan-08	2008	Q1	\$ -		5.14%	\$ -	\$ -		
2012 Q2	1.47%	4.29%	Feb-08	2008	Q1	\$ -		5.14%	\$ -	\$ -		
2012 Q3	1.47%	4.29%	Mar-08	2008	Q1	\$ -		5.14%	\$ -	\$ -		
2012 Q4	1.47%	4.29%	Apr-08	2008	Q2	\$ -		4.08%	\$ -	\$ -		
			May-08	2008	Q2	\$ -		4.08%	\$ -	\$ -		
			Jun-08	2008	Q2	\$ -		4.08%	\$ -	\$ -		
			Jul-08	2008	Q3	\$ -		3.35%	\$ -	\$ -		
			Aug-08	2008	Q3	\$ -		3.35%	\$ -	\$ -		
			Sep-08	2008	Q3	\$ -		3.35%	\$ -	\$ -		
			Oct-08	2008	Q4	\$ -		3.35%	\$ -	\$ -		
			Nov-08	2008	Q4	\$ -		3.35%	\$ -	\$ -		
			Dec-08	2008	Q4	\$ -		3.35%	\$ -	\$ -	\$ -	
			Jan-09	2009	Q1	\$ -		2.45%	\$ -	\$ -		
			Feb-09	2009	Q1	\$ -		2.45%	\$ -	\$ -		
			Mar-09	2009	Q1	\$ -		2.45%	\$ -	\$ -		
			Apr-09	2009	Q2	\$ -		1.00%	\$ -	\$ -		
			May-09	2009	Q2	\$ -		1.00%	\$ -	\$ -		
			Jun-09	2009	Q2	\$ -		1.00%	\$ -	\$ -		
			Jul-09	2009	Q3	\$ -		0.55%	\$ -	\$ -		
			Aug-09	2009	Q3	\$ -		0.55%	\$ -	\$ -		
			Sep-09	2009	Q3	\$ -		0.55%	\$ -	\$ -		
			Oct-09	2009	Q4	\$ -		0.55%	\$ -	\$ -		
			Nov-09	2009	Q4	\$ -		0.55%	\$ -	\$ -		
			Dec-09	2009	Q4	\$ -		0.55%	\$ -	\$ -	\$ -	
			Jan-10	2010	Q1	\$ -		0.55%	\$ -	\$ -		
			Feb-10	2010	Q1	\$ -		0.55%	\$ -	\$ -		
			Mar-10	2010	Q1	\$ -		0.55%	\$ -	\$ -		
			Apr-10	2010	Q2	\$ -		0.55%	\$ -	\$ -		
			May-10	2010	Q2	\$ -		0.55%	\$ -	\$ -		
			Jun-10	2010	Q2	\$ -	\$ 2,335.50	0.55%	\$ -	\$ 2,335.50		\$ 0.51
			Jul-10	2010	Q3	\$ 2,335.50	\$ 20,345.10	0.89%	\$ 1.73	\$ 22,682.33		\$ 0.51
			Aug-10	2010	Q3	\$ 22,680.60	\$ 13,863.99	0.89%	\$ 16.82	\$ 36,561.41		\$ 0.51
			Sep-10	2010	Q3	\$ 36,544.59	\$ 11,888.87	0.89%	\$ 27.10	\$ 48,460.57		\$ 0.51
			Oct-10	2010	Q4	\$ 48,433.47	\$ 11,770.09	1.20%	\$ 48.43	\$ 60,251.99		\$ 0.51
			Nov-10	2010	Q4	\$ 60,203.56	\$ 11,268.90	1.20%	\$ 60.20	\$ 71,532.66		\$ 0.51
			Dec-10	2010	Q4	\$ 71,472.46	\$ 26,647.33	1.20%	\$ 71.47	\$ 98,191.26	\$ 98,345.54	\$ 0.51
			Jan-11	2011	Q1	\$ 98,119.79	\$ 10,262.51	1.47%	\$ 120.20	\$ 108,502.50		\$ 0.51
			Feb-11	2011	Q1	\$ 108,382.30	\$ 11,124.35	1.47%	\$ 132.77	\$ 119,639.42		\$ 0.51
			Mar-11	2011	Q1	\$ 119,506.65	\$ 14,433.54	1.47%	\$ 146.40	\$ 134,086.60		\$ 0.51
			Apr-11	2011	Q2	\$ 133,940.20	\$ 10,700.67	1.47%	\$ 164.08	\$ 144,804.95		\$ 0.51
			May-11	2011	Q2	\$ 144,640.87	\$ 15,595.55	1.47%	\$ 177.19	\$ 160,413.61		\$ 0.96
			Jun-11	2011	Q2	\$ 160,236.42	\$ 23,277.85	1.47%	\$ 196.29	\$ 183,710.56		\$ 0.96
			Jul-11	2011	Q3	\$ 183,514.27	\$ 22,055.13	1.47%	\$ 224.80	\$ 205,794.20		\$ 0.96
			Aug-11	2011	Q3	\$ 205,569.40	\$ 27,025.64	1.47%	\$ 251.82	\$ 232,846.86		\$ 0.96
			Sep-11	2011	Q3	\$ 232,595.04	\$ 24,907.36	1.47%	\$ 284.93	\$ 257,787.34		\$ 0.96
			Oct-11	2011	Q4	\$ 257,502.41	\$ 22,059.36	1.47%	\$ 315.44	\$ 279,877.21		\$ 0.96
			Nov-11	2011	Q4	\$ 279,561.77	\$ 27,655.98	1.47%	\$ 342.46	\$ 307,560.21		\$ 0.96
			Dec-11	2011	Q4	\$ 307,217.75	\$ 40,706.42	1.47%	\$ 376.34	\$ 348,300.51	\$ 252,537.10	\$ 0.96



This worksheet calculates the funding adder revenues.

Account 1555 - Sub-account Funding Adder Revenues

Interest Rates	Approved Deferral and Variance Accounts	CWIP				Opening Balance (Principal)	Funding Adder Revenues	Interest		Closing Balance	Annual amounts	Board Approved Smart Meter Funding Adder (from Tariff)
			Date	Year	Quarter			Rate	Interest			
			Jan-12	2012	Q1	\$ 347,924.17	\$ 40,706.83	1.47%	\$ 426.21	\$ 389,057.21		\$ 0.96
			Feb-12	2012	Q1	\$ 388,631.00	\$ 40,891.18	1.47%	\$ 476.07	\$ 429,998.25		\$ 0.96
			Mar-12	2012	Q1	\$ 429,522.18	\$ 40,763.13	1.47%	\$ 526.16	\$ 470,811.47		\$ 0.96
			Apr-12	2012	Q2	\$ 470,285.31	\$ 39,403.87	1.47%	\$ 576.10	\$ 510,265.28		\$ 0.96
			May-12	2012	Q2	\$ 509,689.18	\$ 4,174.32	1.47%	\$ 624.37	\$ 506,139.23		
			Jun-12	2012	Q2	\$ 505,514.86	\$ -	1.47%	\$ 619.26	\$ 506,134.12		
			Jul-12	2012	Q3	\$ 505,514.86	\$ -	1.47%	\$ 619.26	\$ 506,134.12		
			Aug-12	2012	Q3	\$ 505,514.86	\$ -	1.47%	\$ 619.26	\$ 506,134.12		
			Sep-12	2012	Q3	\$ 505,514.86	\$ -	1.47%	\$ 619.26	\$ 506,134.12		
			Oct-12	2012	Q4	\$ 505,514.86	\$ -	1.47%	\$ 619.26	\$ 506,134.12		
			Nov-12	2012	Q4	\$ 505,514.86	\$ -	1.47%	\$ 619.26	\$ 506,134.12		
			Dec-12	2012	Q4	\$ 505,514.86	\$ -	1.47%	\$ 619.26	\$ 506,134.12	\$ 164,554.42	
Total Funding Adder Revenues Collected						\$ 505,514.86			\$ 9,922.20	\$ 515,437.06	\$ 515,437.06	



Chatham-Kent Hydro 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	-			-	5.14%	-	-
2012 Q1	1.47%	4.29%	Jan-08	2008	Q1	-			-	5.14%	-	-
2012 Q2	1.47%	4.29%	Feb-08	2008	Q1	-			-	5.14%	-	-
2012 Q3	1.47%	4.29%	Mar-08	2008	Q1	-			-	5.14%	-	-
2012 Q4	1.47%	4.29%	Apr-08	2008	Q2	-			-	4.08%	-	-
			May-08	2008	Q2	-			-	4.08%	-	-
			Jun-08	2008	Q2	-			-	4.08%	-	-
			Jul-08	2008	Q3	-			-	3.35%	-	-
			Aug-08	2008	Q3	-			-	3.35%	-	-
			Sep-08	2008	Q3	-			-	3.35%	-	-
			Oct-08	2008	Q4	-			-	3.35%	-	-
			Nov-08	2008	Q4	-			-	3.35%	-	-
			Dec-08	2008	Q4	-			-	3.35%	-	-
			Jan-09	2009	Q1	-			-	2.45%	-	-
			Feb-09	2009	Q1	-			-	2.45%	-	-
			Mar-09	2009	Q1	-			-	2.45%	-	-
			Apr-09	2009	Q2	-			-	1.00%	-	-
			May-09	2009	Q2	-			-	1.00%	-	-
			Jun-09	2009	Q2	-			-	1.00%	-	-
			Jul-09	2009	Q3	-			-	0.55%	-	-
			Aug-09	2009	Q3	-			-	0.55%	-	-
			Sep-09	2009	Q3	-			-	0.55%	-	-
			Oct-09	2009	Q4	-			-	0.55%	-	-
			Nov-09	2009	Q4	-			-	0.55%	-	-
			Dec-09	2009	Q4	-			-	0.55%	-	-
			Jan-10	2010	Q1	-			-	0.55%	-	-
			Feb-10	2010	Q1	-			-	0.55%	-	-
			Mar-10	2010	Q1	-			-	0.55%	-	-
			Apr-10	2010	Q2	-			-	0.55%	-	-
			May-10	2010	Q2	-			-	0.55%	-	-
			Jun-10	2010	Q2	-			-	0.55%	-	-
			Jul-10	2010	Q3	-			-	0.89%	-	-
			Aug-10	2010	Q3	-			-	0.89%	-	-
			Sep-10	2010	Q3	-			-	0.89%	-	-
			Oct-10	2010	Q4	-			-	1.20%	-	-
			Nov-10	2010	Q4	-			-	1.20%	-	-
			Dec-10	2010	Q4	-			-	1.20%	-	-
			Jan-11	2011	Q1	-			-	1.47%	-	-
			Feb-11	2011	Q1	-			-	1.47%	-	-
			Mar-11	2011	Q1	-			-	1.47%	-	-
			Apr-11	2011	Q2	-			-	1.47%	-	-
			May-11	2011	Q2	-			-	1.47%	-	-
			Jun-11	2011	Q2	-			-	1.47%	-	-
			Jul-11	2011	Q3	-			-	1.47%	-	-
			Aug-11	2011	Q3	-			-	1.47%	-	-
			Sep-11	2011	Q3	-			-	1.47%	-	-
			Oct-11	2011	Q4	-			-	1.47%	-	-
			Nov-11	2011	Q4	-			-	1.47%	-	-
			Dec-11	2011	Q4	-			-	1.47%	-	-
			Jan-12	2012	Q1	-			-	1.47%	-	-
			Feb-12	2012	Q1	-			-	1.47%	-	-
			Mar-12	2012	Q1	-			-	1.47%	-	-
			Apr-12	2012	Q2	-			-	1.47%	-	-
			May-12	2012	Q2	-			-	1.47%	-	-
			Jun-12	2012	Q2	-			-	1.47%	-	-
			Jul-12	2012	Q3	-			-	1.47%	-	-
			Aug-12	2012	Q3	-			-	1.47%	-	-
			Sep-12	2012	Q3	-			-	1.47%	-	-
			Oct-12	2012	Q4	-			-	1.47%	-	-
			Nov-12	2012	Q4	-			-	1.47%	-	-
			Dec-12	2012	Q4	-			-	1.47%	-	-
						\$	-	\$	-	\$	-	-



Ontario Energy Board

Smart Meter Model

Chatham-Kent Hydro Inc.

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

Year	OM&A (from Sheet 5)	Amortization Expense (from Sheet 5)	Cumulative OM&A and Amortization Expense	Average Cumulative OM&A and Amortization Expense	Average Annual Prescribed Interest Rate for Deferral and Variance Accounts (from Sheets 8A and 8B)	Simple Interest on OM&A and Amortization Expenses
2006	\$ -	\$ -	\$ -	\$ -	4.37%	\$ -
2007	\$ -	\$ -	\$ -	\$ -	4.73%	\$ -
2008	\$ -	\$ -	\$ -	\$ -	3.98%	\$ -
2009	\$ 73,226.54	\$ 2,711.46	\$ 75,938.01	\$ 37,969.00	1.14%	\$ 431.90
2010	\$ 290,422.39	\$ 8,692.74	\$ 375,053.14	\$ 225,495.57	0.80%	\$ 1,798.33
2011	\$ 251,165.92	\$ 14,560.55	\$ 640,779.60	\$ 507,916.37	1.47%	\$ 7,466.37
2012	\$ 64,754.42	\$ 14,560.55	\$ 720,094.57	\$ 680,437.08	1.47%	\$ 10,002.43
Cumulative Interest to 2011						\$ 9,696.60
Cumulative Interest to 2012						\$ 19,699.02



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

Check if applicable

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

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

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

	2006	2007	2008	2009	2010	2011	2012 and later	Total
Deferred and forecasted Smart Meter Incremental Revenue Requirement (from Sheet 5)	\$ -	\$ -	\$ -	\$ 80,491.70	\$ 314,672.80	\$ 285,724.73	\$ 95,952.57	\$ 776,841.79
Interest on Deferred and forecasted OM&A and Amortization Expense (Sheet 8A/8B) (Check one of the boxes below)	\$ -	\$ -	\$ -	\$ 431.90	\$ 1,798.33	\$ 7,466.37		\$ 9,696.60
<input type="checkbox"/> Sheet 8A (Interest calculated on monthly balances)								\$ -
<input checked="" type="checkbox"/> Sheet 8B (Interest calculated on average annual balances)	\$ -	\$ -	\$ -	\$ 431.90	\$ 1,798.33	\$ 7,466.37		\$ 9,696.60
SMFA Revenues (from Sheet 8)	\$ -	\$ -	\$ -	\$ -	\$ 98,119.79	\$ 249,804.38	\$ 157,590.69	\$ 505,514.86
SMFA Interest (from Sheet 8)	\$ -	\$ -	\$ -	\$ -	\$ 225.75	\$ 2,732.72	\$ 6,963.73	\$ 9,922.20
Net Deferred Revenue Requirement	\$ -	\$ -	\$ -	\$ 80,923.59	\$ 218,125.59	\$ 40,654.00	\$ 68,601.85	\$ 271,101.32
Number of Metered Customers (average for 2012 test year)							28649	

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

Years for collection or refunding	1
Deferred Incremental Revenue Requirement from 2006 to December 31, 2011 plus Interest on OM&A and Amortization	\$ 690,585.82
SMFA Revenues collected from 2006 to 2012 test year (inclusive) Plus Simple Interest on SMFA Revenues	\$ 515,437.06
Net Deferred Revenue Requirement	\$ 175,148.76
SMDR November 1, 2012 to October 31, 2013	\$ 0.51
Check: Forecasted SMDR Revenues	\$ 175,331.88

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

Incremental Revenue Requirement for 2012	\$ 95,952.57
SMIRR	\$ 0.28
Check: Forecasted SMIRR Revenues	\$ 96,260.64

Attachment E

CK General Service Less than 50 kW Smart Meter Model



Ontario Energy Board

Smart Meter Model

Choose Your Utility:

Fort Albany Power Corporation
Fort Frances Power Corporation

Application Contact Information

Name: Andrya Eagen

Title: Senior Regulatory Specialist

Phone Number: 519-352-6300 Ext 243

Email Address: andryaeagen@ckenergy.com

We are applying for rates effective: November 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.



Chatham-Kent Hydro 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	2006	2007	2008	2009	2010	2011	2012 and later	Total
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
Smart Meter Installation Plan								
Actual/Planned number of Smart Meters installed during the Calendar Year								
Residential								0
General Service < 50 kW				862	1,157	127		2146
Actual/Planned number of Smart Meters installed (Residential and GS < 50 kW only)	0	0	0	862	1,157	127	0	2146
Percentage of Residential and GS < 50 kW Smart Meter Installations Completed	0.00%	0.00%	0.00%	40.17%	94.08%	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	862	1,157	127	0	2146
1 Capital Costs								
1.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)								
Asset Type								
1.1.1 Smart Meters (may include new meters and modules, etc.)	Smart Meter			296,656	398,179	43,707		\$ 738,542
1.1.2 Installation Costs (may include socket kits, labour, vehicle, benefits, etc.)	Smart Meter			192,722	258,677	28,394		\$ 479,793
1.1.3a Workforce Automation Hardware (may include fieldwork handhelds, barcode hardware, etc.)								\$ -
1.1.3b Workforce Automation Software (may include fieldwork handhelds, barcode hardware, etc.)								\$ -
Total Advanced Metering Communications Devices (AMCD)				\$ 489,378	\$ 656,856	\$ 72,101	\$ -	\$ 1,218,335
1.2 ADVANCED METERING REGIONAL COLLECTOR (AMRC) (includes LAN)								
Asset Type								
1.2.1 Collectors								\$ -
1.2.2 Repeaters (may include radio licence, etc.)	Computer Hardware			12,012	16,123	1,770		\$ 29,905
1.2.3 Installation (may include meter seals and rings, collector computer hardware, etc.)								\$ -
Total Advanced Metering Regional Collector (AMRC) (includes LAN)				\$ 12,012	\$ 16,123	\$ 1,770	\$ -	\$ 29,905
1.3 ADVANCED METERING CONTROL COMPUTER (AMCC)								
Asset Type								
1.3.1 Computer Hardware	Computer Hardware			18,288	24,546	2,694		\$ 45,528
1.3.2 Computer Software	Computer Software			4,425	5,939	652		\$ 11,016
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)				\$ 22,713	\$ 30,486	\$ 3,346	\$ -	\$ 56,544
1.4 WIDE AREA NETWORK (WAN)								
Asset Type								
1.4.1 Activation Fees	Applications Software			3,255	4,369	480		\$ 8,104
Total Wide Area Network (WAN)				\$ 3,255	\$ 4,369	\$ 480	\$ -	\$ 8,104
1.5 OTHER AMI CAPITAL COSTS RELATED TO MINIMUM FUNCTIONALITY								
Asset Type								
1.5.1 Customer Equipment (including repair of damaged equipment)	Smart Meter			5,986	8,035	882		\$ 14,904
1.5.2 AMI Interface to CIS								\$ -
1.5.3 Professional Fees								\$ -
1.5.4 Integration								\$ -
1.5.5 Program Management								\$ -
1.5.6 Other AMI Capital								\$ -
Total Other AMI Capital Costs Related to Minimum Functionality				\$ 5,986	\$ 8,035	\$ 882	\$ -	\$ 14,904
Total Capital Costs Related to Minimum Functionality				\$ 533,344	\$ 715,869	\$ 78,579	\$ -	\$ 1,327,792
1.6 CAPITAL COSTS BEYOND MINIMUM FUNCTIONALITY								
Asset Type								
1.6.1 Costs related to technical capabilities in the smart meters or related communications infrastructure that exceed those specified in O.Reg 425/06	Computer Software							\$ -
1.6.2 Costs for deployment of smart meters to customers other than residential and small general service	Applications Software							\$ -
1.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDNR, etc.								\$ -
Total Capital Costs Beyond Minimum Functionality				\$ -	\$ -	\$ -	\$ -	\$ -
Total Smart Meter Capital Costs				\$ 533,344	\$ 715,869	\$ 78,579	\$ -	\$ 1,327,792
2 OM&A Expenses								
2.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)								
Asset Type								
2.1.1 Maintenance (may include meter reverification costs, etc.)				4,224	3,394	5,218	0	\$ 12,836
2.1.2 Other (please specify)								\$ -
Total Incremental AMCD OM&A Costs				\$ 4,224	\$ 3,394	\$ 5,218	\$ -	\$ 12,836



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

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

Smart Meter Capital Cost and Operational Expense Data

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

2.2.1 Maintenance

2.2.2 Other (please specify)

Total Incremental AMRC OM&A Costs

2.3 ADVANCED METERING CONTROL COMPUTER (AMCC)

2.3.1 Hardware Maintenance (may include server support, etc.)

2.3.2 Software Maintenance (may include maintenance support, etc.)

2.3.2 Other (please specify)

Total Incremental AMCC OM&A Costs

2.4 WIDE AREA NETWORK (WAN)

2.4.1 WAN Maintenance

2.4.2 Other (please specify)

Total Incremental AMRC OM&A Costs

2.5 OTHER AMI OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY

2.5.1 Business Process Redesign

2.5.2 Customer Communication (may include project communication, etc.)

2.5.3 Program Management

2.5.4 Change Management (may include training, etc.)

2.5.5 Administration Costs

2.5.6 Other AM Expenses

(please specify)

Total Other AMI OM&A Costs Related to Minimum Functionality

TOTAL OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY

2.6 OM&A COSTS RELATED TO BEYOND MINIMUM FUNCTIONALITY

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

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

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

2.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDMR, etc.

Total OM&A Costs Beyond Minimum Functionality

Total Smart Meter OM&A Costs

	2006	2007	2008	2009	2010	2011	2012 and later	Total
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
2.2.1 Maintenance								\$ -
2.2.2 Other (please specify)								\$ -
Total Incremental AMRC OM&A Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3.1 Hardware Maintenance (may include server support, etc.)				481	505	338	296	\$ 1,621
2.3.2 Software Maintenance (may include maintenance support, etc.)				1,874	1,405	913	6,721	\$ 10,913
2.3.2 Other (please specify)								\$ -
Total Incremental AMCC OM&A Costs	\$ -	\$ -	\$ -	\$ 2,355	\$ 1,910	\$ 1,251	\$ 7,017	\$ 12,533
2.4.1 WAN Maintenance								\$ -
2.4.2 Other (please specify)								\$ -
Total Incremental AMRC OM&A Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5.1 Business Process Redesign								\$ -
2.5.2 Customer Communication (may include project communication, etc.)								\$ -
2.5.3 Program Management								\$ -
2.5.4 Change Management (may include training, etc.)								\$ -
2.5.5 Administration Costs				63	0	0	0	\$ 63
2.5.6 Other AM Expenses (please specify)				665	209	454	0	\$ 1,328
Total Other AMI OM&A Costs Related to Minimum Functionality	\$ -	\$ -	\$ -	\$ 728	\$ 209	\$ 454	\$ -	\$ 1,391
TOTAL OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY	\$ -	\$ -	\$ -	\$ 7,308	\$ 5,513	\$ 6,923	\$ 7,017	\$ 26,760
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 MDMR, etc.				627	25,958	20,294	0	\$ 46,879
Total OM&A Costs Beyond Minimum Functionality	\$ -	\$ -	\$ -	\$ 627	\$ 25,958	\$ 20,294	\$ -	\$ 46,879
Total Smart Meter OM&A Costs	\$ -	\$ -	\$ -	\$ 7,935	\$ 31,471	\$ 27,217	\$ 7,017	\$ 73,639

3 Aggregate Smart Meter Costs by Category

3.1 Capital

3.1.1 Smart Meter

3.1.2 Computer Hardware

3.1.3 Computer Software

3.1.4 Tools & Equipment

3.1.5 Other Equipment

3.1.6 Applications Software

3.1.7 Total Capital Costs

3.2 OM&A Costs

3.2.1 Total OM&A Costs

\$ -	\$ -	\$ -	\$ 495,364	\$ 664,892	\$ 72,983	\$ -	\$ 1,233,239
\$ -	\$ -	\$ -	\$ 30,300	\$ 40,669	\$ 4,464	\$ -	\$ 75,433
\$ -	\$ -	\$ -	\$ 4,425	\$ 5,939	\$ 652	\$ -	\$ 11,016
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ 3,255	\$ 4,369	\$ 480	\$ -	\$ 8,104
\$ -	\$ -	\$ -	\$ 533,344	\$ 715,869	\$ 78,579	\$ -	\$ 1,327,792
					Error		
\$ -	\$ -	\$ -	\$ 7,935	\$ 31,471	\$ 27,217	\$ 7,017	\$ 73,639



Ontario Energy Board

Smart Meter Model

Chatham-Kent Hydro Inc.

	2006	2007	2008	2009	2010	2011	2012 and later
Cost of Capital							
Capital Structure¹							
Deemed Short-term Debt Capitalization					4.0%	4.0%	4.0%
Deemed Long-term Debt Capitalization	50.0%	50.0%	53.3%	56.7%	56.0%	56.0%	56.0%
Deemed Equity Capitalization	50.0%	50.0%	46.7%	43.3%	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					2.07%	2.07%	2.07%
Long-term Debt Rate (actual/embedded/deemed) ²	7.04%	7.04%	7.04%	7.04%	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							
WACC	8.02%	8.02%	7.96%	7.89%	7.31%	7.31%	7.31%
Working Capital Allowance							
Working Capital Allowance Rate (% of the sum of Cost of Power + controllable expenses)	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
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	50	50	50	50
Computer Equipment - CCA Rate	45%	55%	55%	55%	55%	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	12	12	12	12	12	12	12
Applications Software - CCA Rate	100%	100%	100%	100%	100%	100%	100%

Assumptions

¹ Planned smart meter installations occur evenly throughout the year.

² Fiscal calendar year (January 1 to December 31) used.

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



	2006	2007	2008	2009	2010	2011	2012 and later
Net Fixed Assets - Smart Meters							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ 495,364	\$ 1,160,256	\$ 1,233,239
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ 495,364	\$ 664,892	\$ 72,983	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 495,364	\$ 1,160,256	\$ 1,233,239	\$ 1,233,239
Accumulated Depreciation							
Opening Balance		\$ -	\$ -	\$ -	\$ 16,512	\$ 71,699	\$ 151,483
Amortization expense during year	\$ -	\$ -	\$ -	\$ 16,512	\$ 55,187	\$ 79,783	\$ 82,216
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 16,512	\$ 71,699	\$ 151,483	\$ 233,699
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 478,852	\$ 1,088,556	\$ 1,081,756
Closing Balance	\$ -	\$ -	\$ -	\$ 478,852	\$ 1,088,556	\$ 1,081,756	\$ 999,540
Average Net Book Value	\$ -	\$ -	\$ -	\$ 239,426	\$ 783,704	\$ 1,085,156	\$ 1,040,648
Net Fixed Assets - Computer Hardware							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ 30,300	\$ 70,969	\$ 75,433
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ 30,300	\$ 40,669	\$ 4,464	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 30,300	\$ 70,969	\$ 75,433	\$ 75,433
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 3,030	\$ 13,157	\$ 27,797
Amortization expense during year	\$ -	\$ -	\$ -	\$ 3,030	\$ 10,127	\$ 14,840	\$ 15,087
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 3,030	\$ 13,157	\$ 27,797	\$ 42,884
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 27,270	\$ 57,812	\$ 47,636
Closing Balance	\$ -	\$ -	\$ -	\$ 27,270	\$ 57,812	\$ 47,636	\$ 32,549
Average Net Book Value	\$ -	\$ -	\$ -	\$ 13,635	\$ 42,541	\$ 52,724	\$ 40,093
Net Fixed Assets - Computer Software (Including Applications Software)							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ 7,680	\$ 17,989	\$ 19,120
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ 7,680	\$ 10,309	\$ 1,132	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 7,680	\$ 17,989	\$ 19,120	\$ 19,120
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 1,280	\$ 5,558	\$ 11,743
Amortization expense during year	\$ -	\$ -	\$ -	\$ 1,280	\$ 4,278	\$ 6,185	\$ 6,373
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 1,280	\$ 5,558	\$ 11,743	\$ 18,117
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 6,400	\$ 12,431	\$ 7,377
Closing Balance	\$ -	\$ -	\$ -	\$ 6,400	\$ 12,431	\$ 7,377	\$ 1,004
Average Net Book Value	\$ -	\$ -	\$ -	\$ 3,200	\$ 9,415	\$ 9,904	\$ 4,191
Net Fixed Assets - Tools and Equipment							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Amortization expense during year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Average Net Book Value	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Fixed Assets - Other Equipment							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Amortization expense during year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Average Net Book Value	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -



Ontario Energy Board

Smart Meter Model

Chatham-Kent Hydro Inc.

Average Net Fixed Asset Values (from Sheet 4)

	2006	2007	2008	2009	2010	2011	2012 and Later
Smart Meters	\$ -	\$ -	\$ -	\$ 239,426	\$ 783,704	\$ 1,085,156	\$ 1,040,648
Computer Hardware	\$ -	\$ -	\$ -	\$ 13,635	\$ 42,541	\$ 52,724	\$ 40,093
Computer Software	\$ -	\$ -	\$ -	\$ 3,200	\$ 9,415	\$ 9,904	\$ 4,191
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Net Fixed Assets	\$ -	\$ -	\$ -	\$ 256,261	\$ 835,660	\$ 1,147,784	\$ 1,084,931

Working Capital

Operating Expenses (from Sheet 2)	\$ -	\$ -	\$ -	\$ 7,935	\$ 31,471	\$ 27,217	\$ 7,017
Working Capital Factor (from Sheet 3)	15%	15%	15%	15%	15%	15%	15%
Working Capital Allowance	\$ -	\$ -	\$ -	\$ 1,190	\$ 4,721	\$ 4,083	\$ 1,053

Incremental Smart Meter Rate Base

	\$ -	\$ -	\$ -	\$ 257,451	\$ 840,381	\$ 1,151,867	\$ 1,085,984
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Return on Rate Base

Capital Structure

Deemed Short Term Debt	\$ -	\$ -	\$ -	\$ -	\$ 33,615	\$ 46,075	\$ 43,439
Deemed Long Term Debt	\$ -	\$ -	\$ -	\$ 145,975	\$ 470,613	\$ 645,045	\$ 608,151
Equity	\$ -	\$ -	\$ -	\$ 111,476	\$ 336,152	\$ 460,747	\$ 434,394
Preferred Shares	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Capitalization	\$ -	\$ -	\$ -	\$ 257,451	\$ 840,381	\$ 1,151,867	\$ 1,085,984

Return on

Deemed Short Term Debt	\$ -	\$ -	\$ -	\$ -	\$ 696	\$ 954	\$ 899
Deemed Long Term Debt	\$ -	\$ -	\$ -	\$ 10,277	\$ 27,625	\$ 37,864	\$ 35,698
Equity	\$ -	\$ -	\$ -	\$ 10,033	\$ 33,111	\$ 45,384	\$ 42,788
Preferred Shares	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Return on Capital	\$ -	\$ -	\$ -	\$ 20,310	\$ 61,432	\$ 84,201	\$ 79,385

Operating Expenses

	\$ -	\$ -	\$ -	\$ 7,935	\$ 31,471	\$ 27,217	\$ 7,017
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Amortization Expenses (from Sheet 4)

Smart Meters	\$ -	\$ -	\$ -	\$ 16,512	\$ 55,187	\$ 79,783	\$ 82,216
Computer Hardware	\$ -	\$ -	\$ -	\$ 3,030	\$ 10,127	\$ 14,640	\$ 15,087
Computer Software	\$ -	\$ -	\$ -	\$ 1,280	\$ 4,278	\$ 6,185	\$ 6,373
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Amortization Expense in Year	\$ -	\$ -	\$ -	\$ 20,822	\$ 69,592	\$ 100,608	\$ 103,676

Incremental Revenue Requirement before Taxes/PILs

	\$ -	\$ -	\$ -	\$ 49,067	\$ 162,495	\$ 212,026	\$ 190,078
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Calculation of Taxable Income

Incremental Operating Expenses	\$ -	\$ -	\$ -	\$ 7,935	\$ 31,471	\$ 27,217	\$ 7,017
Amortization Expense	\$ -	\$ -	\$ -	\$ 20,822	\$ 69,592	\$ 100,608	\$ 103,676
Interest Expense	\$ -	\$ -	\$ -	\$ 10,277	\$ 28,321	\$ 38,818	\$ 36,598
Net Income for Taxes/PILs	\$ -	\$ -	\$ -	\$ 10,033	\$ 33,111	\$ 45,384	\$ 42,788

Grossed-up Taxes/PILs (from Sheet 7)

	\$ -	\$ -	\$ -	\$ 802.29	\$ 4,059.49	\$ 11,166.50	\$ 17,167.53
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Revenue Requirement, including Grossed-up Taxes/PILs

	\$ -	\$ -	\$ -	\$ 49,869	\$ 166,554	\$ 223,193	\$ 207,246
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Ontario Energy Board

Smart Meter Model

Chatham-Kent Hydro Inc.

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	\$ -	\$ -	\$ -	\$ -	\$ 475,549.71	\$ 1,075,801.58	\$ 1,059,801.05
Capital Additions	\$ -	\$ -	\$ -	\$ 495,364.29	\$ 664,891.51	\$ 72,982.91	\$ -
Retirements/Removals (if applicable)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
UCC Before Half Year Rule	\$ -	\$ -	\$ -	\$ 495,364.29	\$ 1,140,441.22	\$ 1,148,784.49	\$ 1,059,801.05
Half Year Rule (1/2 Additions - Disposals)	\$ -	\$ -	\$ -	\$ 247,682.14	\$ 332,445.75	\$ 36,491.45	\$ -
Reduced UCC	\$ -	\$ -	\$ -	\$ 247,682.14	\$ 807,995.47	\$ 1,112,293.04	\$ 1,059,801.05
CCA Rate Class	47	47	47	47	47	47	47
CCA Rate	8%	8%	8%	8%	8%	8%	8%
CCA	\$ -	\$ -	\$ -	\$ 19,814.57	\$ 64,639.64	\$ 88,983.44	\$ 84,784.08
Closing UCC	\$ -	\$ -	\$ -	\$ 475,549.71	\$ 1,075,801.58	\$ 1,059,801.05	\$ 975,016.96

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	\$ -	\$ -	\$ -	\$ -	\$ 25,175.38	\$ 45,120.01	\$ 24,013.14
Capital Additions Computer Hardware	\$ -	\$ -	\$ -	\$ 30,299.67	\$ 40,669.05	\$ 4,464.10	\$ -
Capital Additions Computer Software	\$ -	\$ -	\$ -	\$ 4,424.99	\$ 5,939.35	\$ 651.94	\$ -
Retirements/Removals (if applicable)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
UCC Before Half Year Rule	\$ -	\$ -	\$ -	\$ 34,724.66	\$ 71,783.78	\$ 50,236.06	\$ 24,013.14
Half Year Rule (1/2 Additions - Disposals)	\$ -	\$ -	\$ -	\$ 17,362.33	\$ 23,304.20	\$ 2,558.02	\$ -
Reduced UCC	\$ -	\$ -	\$ -	\$ 17,362.33	\$ 48,479.58	\$ 47,678.03	\$ 24,013.14
CCA Rate Class	45	50	50	50	50	50	50
CCA Rate	45%	55%	55%	55%	55%	55%	55%
CCA	\$ -	\$ -	\$ -	\$ 9,549.28	\$ 26,663.77	\$ 26,222.92	\$ 13,207.23
Closing UCC	\$ -	\$ -	\$ -	\$ 25,175.38	\$ 45,120.01	\$ 24,013.14	\$ 10,805.91

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	\$ -	\$ -	\$ -	\$ 10,032.88	\$ 33,111.01	\$ 45,383.54	\$ 42,787.76
Amortization	\$ -	\$ -	\$ -	\$ 20,822.15	\$ 69,592.36	\$ 100,608.18	\$ 103,675.95
CCA - Smart Meters	\$ -	\$ -	\$ -	\$ 19,814.57	\$ 64,639.64	\$ 88,983.44	\$ 84,784.08
CCA - Computers	\$ -	\$ -	\$ -	\$ 9,549.28	\$ 26,663.77	\$ 26,222.92	\$ 13,207.23
CCA - Applications Software	\$ -	\$ -	\$ -	\$ 1,627.62	\$ 3,812.26	\$ 2,424.44	\$ 239.80
CCA - Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Change in taxable income	\$ -	\$ -	\$ -	\$ 136.45	\$ 7,587.70	\$ 28,360.92	\$ 48,232.60
Tax Rate (from Sheet 3)	36.12%	36.12%	33.50%	33.00%	31.00%	28.25%	26.25%
Income Taxes Payable	\$ -	\$ -	\$ -	\$ 45.03	\$ 2,352.19	\$ 8,011.96	\$ 12,661.06
ONTARIO CAPITAL TAX							
Smart Meters	\$ -	\$ -	\$ -	\$ 478,852.14	\$ 1,088,556.31	\$ 1,081,756.07	\$ 999,540.16
Computer Hardware	\$ -	\$ -	\$ -	\$ 27,269.71	\$ 57,811.92	\$ 47,635.87	\$ 32,549.30
Computer Software (Including Application Software)	\$ -	\$ -	\$ -	\$ 6,400.20	\$ 12,430.64	\$ 7,377.30	\$ 1,003.84
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Rate Base	\$ -	\$ -	\$ -	\$ 512,522.04	\$ 1,158,798.87	\$ 1,136,769.24	\$ 1,033,093.29
Less: Exemption	\$ -	\$ -	\$ -	\$ 126,080.42	\$ 291,437.91	\$ -	\$ -
Deemed Taxable Capital	\$ -	\$ -	\$ -	\$ 386,441.62	\$ 867,360.95	\$ 1,136,769.24	\$ 1,033,093.29
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)	\$ -	\$ -	\$ -	\$ 869.49	\$ 650.52	\$ -	\$ -
Change in Income Taxes Payable	\$ -	\$ -	\$ -	\$ 45.03	\$ 2,352.19	\$ 8,011.96	\$ 12,661.06
Change in OCT	\$ -	\$ -	\$ -	\$ 869.49	\$ 650.52	\$ -	\$ -
PILs	\$ -	\$ -	\$ -	\$ 824.46	\$ 3,002.71	\$ 8,011.96	\$ 12,661.06
Gross Up PILs							
Tax Rate	36.12%	36.12%	33.50%	33.00%	31.00%	28.25%	26.25%
Change in Income Taxes Payable	\$ -	\$ -	\$ -	\$ 67.21	\$ 3,408.97	\$ 11,166.50	\$ 17,167.53
Change in OCT	\$ -	\$ -	\$ -	\$ 869.49	\$ 650.52	\$ -	\$ -
PILs	\$ -	\$ -	\$ -	\$ 802.29	\$ 4,059.49	\$ 11,166.50	\$ 17,167.53



Ontario Energy Board

Smart Meter Model

Chatham-Kent Hydro 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	\$ -		4.59%	\$ -	\$ -		
2008 Q1	5.14%	5.18%	Sep-06	2006	Q3	\$ -		4.59%	\$ -	\$ -		
2008 Q2	4.08%	5.18%	Oct-06	2006	Q4	\$ -		4.59%	\$ -	\$ -		
2008 Q3	3.35%	5.43%	Nov-06	2006	Q4	\$ -		4.59%	\$ -	\$ -		
2008 Q4	3.35%	5.43%	Dec-06	2006	Q4	\$ -		4.59%	\$ -	\$ -	\$ -	
2009 Q1	2.45%	6.61%	Jan-07	2007	Q1	\$ -		4.59%	\$ -	\$ -		
2009 Q2	1.00%	6.61%	Feb-07	2007	Q1	\$ -		4.59%	\$ -	\$ -		
2009 Q3	0.55%	5.67%	Mar-07	2007	Q1	\$ -		4.59%	\$ -	\$ -		
2009 Q4	0.55%	4.66%	Apr-07	2007	Q2	\$ -		4.59%	\$ -	\$ -		
2010 Q1	0.55%	4.34%	May-07	2007	Q2	\$ -		4.59%	\$ -	\$ -		
2010 Q2	0.55%	4.34%	Jun-07	2007	Q2	\$ -		4.59%	\$ -	\$ -		
2010 Q3	0.89%	4.66%	Jul-07	2007	Q3	\$ -		4.59%	\$ -	\$ -		
2010 Q4	1.20%	4.01%	Aug-07	2007	Q3	\$ -		4.59%	\$ -	\$ -		
2011 Q1	1.47%	4.29%	Sep-07	2007	Q3	\$ -		4.59%	\$ -	\$ -		
2011 Q2	1.47%	4.29%	Oct-07	2007	Q4	\$ -		5.14%	\$ -	\$ -		
2011 Q3	1.47%	4.29%	Nov-07	2007	Q4	\$ -		5.14%	\$ -	\$ -		
2011 Q4	1.47%	4.29%	Dec-07	2007	Q4	\$ -		5.14%	\$ -	\$ -	\$ -	
2012 Q1	1.47%	4.29%	Jan-08	2008	Q1	\$ -		5.14%	\$ -	\$ -		
2012 Q2	1.47%	4.29%	Feb-08	2008	Q1	\$ -		5.14%	\$ -	\$ -		
2012 Q3	1.47%	4.29%	Mar-08	2008	Q1	\$ -		5.14%	\$ -	\$ -		
2012 Q4	1.47%	4.29%	Apr-08	2008	Q2	\$ -		4.08%	\$ -	\$ -		
			May-08	2008	Q2	\$ -		4.08%	\$ -	\$ -		
			Jun-08	2008	Q2	\$ -		4.08%	\$ -	\$ -		
			Jul-08	2008	Q3	\$ -		3.35%	\$ -	\$ -		
			Aug-08	2008	Q3	\$ -		3.35%	\$ -	\$ -		
			Sep-08	2008	Q3	\$ -		3.35%	\$ -	\$ -		
			Oct-08	2008	Q4	\$ -		3.35%	\$ -	\$ -		
			Nov-08	2008	Q4	\$ -		3.35%	\$ -	\$ -		
			Dec-08	2008	Q4	\$ -		3.35%	\$ -	\$ -	\$ -	
			Jan-09	2009	Q1	\$ -		2.45%	\$ -	\$ -		
			Feb-09	2009	Q1	\$ -		2.45%	\$ -	\$ -		
			Mar-09	2009	Q1	\$ -		2.45%	\$ -	\$ -		
			Apr-09	2009	Q2	\$ -		1.00%	\$ -	\$ -		
			May-09	2009	Q2	\$ -		1.00%	\$ -	\$ -		
			Jun-09	2009	Q2	\$ -		1.00%	\$ -	\$ -		
			Jul-09	2009	Q3	\$ -		0.55%	\$ -	\$ -		
			Aug-09	2009	Q3	\$ -		0.55%	\$ -	\$ -		
			Sep-09	2009	Q3	\$ -		0.55%	\$ -	\$ -		
			Oct-09	2009	Q4	\$ -		0.55%	\$ -	\$ -		
			Nov-09	2009	Q4	\$ -		0.55%	\$ -	\$ -		
			Dec-09	2009	Q4	\$ -		0.55%	\$ -	\$ -	\$ -	
			Jan-10	2010	Q1	\$ -		0.55%	\$ -	\$ -		
			Feb-10	2010	Q1	\$ -		0.55%	\$ -	\$ -		
			Mar-10	2010	Q1	\$ -		0.55%	\$ -	\$ -		
			Apr-10	2010	Q2	\$ -		0.55%	\$ -	\$ -		
			May-10	2010	Q2	\$ -		0.55%	\$ -	\$ -		\$ 0.51
			Jun-10	2010	Q2	\$ -	\$ 2.14	0.55%	\$ -	\$ 2.14		\$ 0.51
			Jul-10	2010	Q3	\$ 2.14	\$ 2,118.98	0.89%	\$ -	\$ 2,121.13		\$ 0.51
			Aug-10	2010	Q3	\$ 2,121.13	\$ 1,435.34	0.89%	\$ 1.57	\$ 3,558.04		\$ 0.51
			Sep-10	2010	Q3	\$ 3,556.47	\$ 1,170.41	0.89%	\$ 2.64	\$ 4,729.53		\$ 0.51
			Oct-10	2010	Q4	\$ 4,726.89	\$ 1,167.71	1.20%	\$ 4.73	\$ 5,899.33		\$ 0.51
			Nov-10	2010	Q4	\$ 5,894.60	\$ 1,166.57	1.20%	\$ 5.89	\$ 7,067.07		\$ 0.51
			Dec-10	2010	Q4	\$ 7,061.18	\$ 2,862.78	1.20%	\$ 7.06	\$ 9,931.02	\$ 9,945.85	\$ 0.51
			Jan-11	2011	Q1	\$ 9,923.96	\$ 1,101.98	1.47%	\$ 12.16	\$ 11,038.11		\$ 0.51
			Feb-11	2011	Q1	\$ 11,025.95	\$ 1,149.98	1.47%	\$ 13.51	\$ 12,189.44		\$ 0.51
			Mar-11	2011	Q1	\$ 12,175.93	\$ 1,288.07	1.47%	\$ 14.92	\$ 13,478.93		\$ 0.51
			Apr-11	2011	Q2	\$ 13,464.01	\$ 1,097.85	1.47%	\$ 16.49	\$ 14,578.35		\$ 0.51
			May-11	2011	Q2	\$ 14,561.86	\$ 1,439.86	1.47%	\$ 17.84	\$ 16,019.57		\$ 0.96
			Jun-11	2011	Q2	\$ 16,001.73	\$ 2,374.32	1.47%	\$ 19.60	\$ 18,395.65		\$ 0.96
			Jul-11	2011	Q3	\$ 18,376.05	\$ 2,396.61	1.47%	\$ 22.51	\$ 20,795.18		\$ 0.96
			Aug-11	2011	Q3	\$ 20,772.67	\$ 2,635.89	1.47%	\$ 25.45	\$ 23,434.01		\$ 0.96
			Sep-11	2011	Q3	\$ 23,408.56	\$ 2,566.26	1.47%	\$ 28.68	\$ 26,003.51		\$ 0.96
			Oct-11	2011	Q4	\$ 25,974.83	\$ 2,372.51	1.47%	\$ 31.82	\$ 28,379.16		\$ 0.96
			Nov-11	2011	Q4	\$ 28,347.34	\$ 2,724.85	1.47%	\$ 34.73	\$ 31,106.93		\$ 0.96
			Dec-11	2011	Q4	\$ 31,072.20	\$ 4,317.89	1.47%	\$ 38.06	\$ 35,428.15	\$ 25,741.90	\$ 0.96



This worksheet calculates the funding adder revenues.

Account 1555 - Sub-account Funding Adder Revenues

Interest Rates	Approved Deferral and Variance Accounts	CWIP				Opening Balance (Principal)	Funding Adder Revenues	Interest		Closing Balance	Annual amounts	Board Approved Smart Meter Funding Adder (from Tariff)
			Date	Year	Quarter			Rate	Interest			
			Jan-12	2012	Q1	\$ 35,390.09	\$ 4,377.45	1.47%	\$ 43.35	\$ 39,810.89		\$ 0.96
			Feb-12	2012	Q1	\$ 39,767.54	\$ 4,371.64	1.47%	\$ 48.72	\$ 44,187.90		\$ 0.96
			Mar-12	2012	Q1	\$ 44,139.18	\$ 4,390.31	1.47%	\$ 54.07	\$ 48,583.56		\$ 0.96
			Apr-12	2012	Q2	\$ 48,529.49	\$ 3,940.77	1.47%	\$ 59.45	\$ 52,529.71		\$ 0.96
			May-12	2012	Q2	\$ 52,470.26	\$ 152.79	1.47%	\$ 64.28	\$ 52,381.75		
			Jun-12	2012	Q2	\$ 52,317.47	\$ -	1.47%	\$ 64.09	\$ 52,381.56		
			Jul-12	2012	Q3	\$ 52,317.47	\$ -	1.47%	\$ 64.09	\$ 52,381.56		
			Aug-12	2012	Q3	\$ 52,317.47	\$ -	1.47%	\$ 64.09	\$ 52,381.56		
			Sep-12	2012	Q3	\$ 52,317.47	\$ -	1.47%	\$ 64.09	\$ 52,381.56		
			Oct-12	2012	Q4	\$ 52,317.47	\$ -	1.47%	\$ 64.09	\$ 52,381.56		
			Nov-12	2012	Q4	\$ 52,317.47	\$ -	1.47%	\$ 64.09	\$ 52,381.56		
			Dec-12	2012	Q4	\$ 52,317.47	\$ -	1.47%	\$ 64.09	\$ 52,381.56	\$ 17,645.88	
Total Funding Adder Revenues Collected						\$ 52,317.47	\$ 52,317.47	\$ 1,016.16	\$ 53,333.63	\$ 53,333.63		



Chatham-Kent Hydro 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	-			-	5.14%	-	-
2012 Q1	1.47%	4.29%	Jan-08	2008	Q1	-			-	5.14%	-	-
2012 Q2	1.47%	4.29%	Feb-08	2008	Q1	-			-	5.14%	-	-
2012 Q3	1.47%	4.29%	Mar-08	2008	Q1	-			-	5.14%	-	-
2012 Q4	1.47%	4.29%	Apr-08	2008	Q2	-			-	4.08%	-	-
			May-08	2008	Q2	-			-	4.08%	-	-
			Jun-08	2008	Q2	-			-	4.08%	-	-
			Jul-08	2008	Q3	-			-	3.35%	-	-
			Aug-08	2008	Q3	-			-	3.35%	-	-
			Sep-08	2008	Q3	-			-	3.35%	-	-
			Oct-08	2008	Q4	-			-	3.35%	-	-
			Nov-08	2008	Q4	-			-	3.35%	-	-
			Dec-08	2008	Q4	-			-	3.35%	-	-
			Jan-09	2009	Q1	-			-	2.45%	-	-
			Feb-09	2009	Q1	-			-	2.45%	-	-
			Mar-09	2009	Q1	-			-	2.45%	-	-
			Apr-09	2009	Q2	-			-	1.00%	-	-
			May-09	2009	Q2	-			-	1.00%	-	-
			Jun-09	2009	Q2	-			-	1.00%	-	-
			Jul-09	2009	Q3	-			-	0.55%	-	-
			Aug-09	2009	Q3	-			-	0.55%	-	-
			Sep-09	2009	Q3	-			-	0.55%	-	-
			Oct-09	2009	Q4	-			-	0.55%	-	-
			Nov-09	2009	Q4	-			-	0.55%	-	-
			Dec-09	2009	Q4	-			-	0.55%	-	-
			Jan-10	2010	Q1	-			-	0.55%	-	-
			Feb-10	2010	Q1	-			-	0.55%	-	-
			Mar-10	2010	Q1	-			-	0.55%	-	-
			Apr-10	2010	Q2	-			-	0.55%	-	-
			May-10	2010	Q2	-			-	0.55%	-	-
			Jun-10	2010	Q2	-			-	0.55%	-	-
			Jul-10	2010	Q3	-			-	0.89%	-	-
			Aug-10	2010	Q3	-			-	0.89%	-	-
			Sep-10	2010	Q3	-			-	0.89%	-	-
			Oct-10	2010	Q4	-			-	1.20%	-	-
			Nov-10	2010	Q4	-			-	1.20%	-	-
			Dec-10	2010	Q4	-			-	1.20%	-	-
			Jan-11	2011	Q1	-			-	1.47%	-	-
			Feb-11	2011	Q1	-			-	1.47%	-	-
			Mar-11	2011	Q1	-			-	1.47%	-	-
			Apr-11	2011	Q2	-			-	1.47%	-	-
			May-11	2011	Q2	-			-	1.47%	-	-
			Jun-11	2011	Q2	-			-	1.47%	-	-
			Jul-11	2011	Q3	-			-	1.47%	-	-
			Aug-11	2011	Q3	-			-	1.47%	-	-
			Sep-11	2011	Q3	-			-	1.47%	-	-
			Oct-11	2011	Q4	-			-	1.47%	-	-
			Nov-11	2011	Q4	-			-	1.47%	-	-
			Dec-11	2011	Q4	-			-	1.47%	-	-
			Jan-12	2012	Q1	-			-	1.47%	-	-
			Feb-12	2012	Q1	-			-	1.47%	-	-
			Mar-12	2012	Q1	-			-	1.47%	-	-
			Apr-12	2012	Q2	-			-	1.47%	-	-
			May-12	2012	Q2	-			-	1.47%	-	-
			Jun-12	2012	Q2	-			-	1.47%	-	-
			Jul-12	2012	Q3	-			-	1.47%	-	-
			Aug-12	2012	Q3	-			-	1.47%	-	-
			Sep-12	2012	Q3	-			-	1.47%	-	-
			Oct-12	2012	Q4	-			-	1.47%	-	-
			Nov-12	2012	Q4	-			-	1.47%	-	-
			Dec-12	2012	Q4	-			-	1.47%	-	-
						\$	-	\$	-	\$	-	-



Ontario Energy Board

Smart Meter Model

Chatham-Kent Hydro Inc.

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

Year	OM&A (from Sheet 5)	Amortization Expense (from Sheet 5)	Cumulative OM&A and Amortization Expense	Average Cumulative OM&A and Amortization Expense	Average Annual Prescribed Interest Rate for Deferral and Variance Accounts (from Sheets 8A and 8B)	Simple Interest on OM&A and Amortization Expenses
2006	\$ -	\$ -	\$ -	\$ -	4.37%	\$ -
2007	\$ -	\$ -	\$ -	\$ -	4.73%	\$ -
2008	\$ -	\$ -	\$ -	\$ -	3.98%	\$ -
2009	\$ 7,934.94	\$ 20,822.15	\$ 28,757.09	\$ 14,378.54	1.14%	\$ 163.56
2010	\$ 31,470.61	\$ 69,592.36	\$ 129,820.05	\$ 79,288.57	0.80%	\$ 632.33
2011	\$ 27,216.72	\$ 100,608.18	\$ 257,644.95	\$ 193,732.50	1.47%	\$ 2,847.87
2012	\$ 7,016.89	\$ 103,675.95	\$ 368,337.78	\$ 312,991.37	1.47%	\$ 4,600.97
Cumulative Interest to 2011						\$ 3,643.75
Cumulative Interest to 2012						\$ 8,244.72



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

Check if applicable

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

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

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

	2006	2007	2008	2009	2010	2011	2012 and later	Total
Deferred and forecasted Smart Meter Incremental Revenue Requirement (from Sheet 5)	\$ -	\$ -	\$ -	\$ 49,868.88	\$ 166,554.31	\$ 223,192.84	\$ 207,245.78	\$ 646,861.81
Interest on Deferred and forecasted OM&A and Amortization Expense (Sheet 8A/8B) (Check one of the boxes below)	\$ -	\$ -	\$ -	\$ 163.56	\$ 632.33	\$ 2,847.87		\$ 3,643.75
<input type="checkbox"/> Sheet 8A (Interest calculated on monthly balances)								\$ -
<input checked="" type="checkbox"/> Sheet 8B (Interest calculated on average annual balances)	\$ -	\$ -	\$ -	\$ 163.56	\$ 632.33	\$ 2,847.87		\$ 3,643.75
SMFA Revenues (from Sheet 8)	\$ -	\$ -	\$ -	\$ -	\$ 9,923.96	\$ 25,466.13	\$ 16,927.38	\$ 52,317.47
SMFA Interest (from Sheet 8)	\$ -	\$ -	\$ -	\$ -	\$ 21.89	\$ 275.77	\$ 718.50	\$ 1,016.16
Net Deferred Revenue Requirement	\$ -	\$ -	\$ -	\$ 50,032.44	\$ 157,240.78	\$ 200,298.81	\$ 189,599.90	\$ 597,171.93
Number of Metered Customers (average for 2012 test year)							3083	

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

Years for collection or refunding	3.5	
Deferred Incremental Revenue Requirement from 2006 to December 31, 2011	\$ 443,259.78	
plus Interest on OM&A and Amortization	\$ 53,333.63	
SMFA Revenues collected from 2006 to 2012 test year (inclusive)		
Plus Simple Interest on SMFA Revenues		
Net Deferred Revenue Requirement	\$ 389,926.15	
SMDR	November 1, 2012 to April 30, 2016	\$ 3.01
Check: Forecasted SMDR Revenues		\$ 389,752.86

Match

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

Incremental Revenue Requirement for 2012	\$ 207,245.78	
SMIRR	\$ 5.60	
Check: Forecasted SMIRR Revenues	\$ 207,177.60	

Match

Attachment F

CK General Service Greater than 50 kW Smart Meter Model



Ontario Energy Board

Smart Meter Model

Choose Your Utility:

Chapleau Public Utilities Corporation

Chatham-Kent Hydro Inc.

Application Contact Information

Name: Andrya Eagen

Title: Senior Regulatory Specialist

Phone Number: 519-352-6300 Ext 243

Email Address: andryaeagen@ckenergy.com

We are applying for rates effective: November 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.



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.

	2006	2007	2008	2009	2010	2011	2012 and later	Total
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
Smart Meter Capital Cost and Operational Expense Data								
Smart Meter Installation Plan								
Actual/Planned number of Smart Meters installed during the Calendar Year								
Residential								0
General Service < 50 kW								0
Actual/Planned number of Smart Meters installed (Residential and GS < 50 kW only)	0	0	0	0	0	0	0	0
Percentage of Residential and GS < 50 kW Smart Meter Installations Completed	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Actual/Planned number of GS > 50 kW meters installed				144	65	67		276
Other (please identify)								0
Total Number of Smart Meters installed or planned to be installed	0	0	0	144	65	67	0	276
1 Capital Costs								
1.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)								
Asset Type								
1.1.1 Smart Meters (may include new meters and modules, etc.)	Smart Meter			107,132	48,358	49,846		\$ 205,337
1.1.2 Installation Costs (may include socket kits, labour, vehicle, benefits, etc.)	Smart Meter			67,615	30,521	31,460		\$ 129,595
1.1.3a Workforce Automation Hardware (may include fieldwork handhelds, barcode hardware, etc.)								\$ -
1.1.3b Workforce Automation Software (may include fieldwork handhelds, barcode hardware, etc.)								\$ -
Total Advanced Metering Communications Devices (AMCD)				\$ 174,747	\$ 78,879	\$ 81,306		\$ 334,932
1.2 ADVANCED METERING REGIONAL COLLECTOR (AMRC) (includes LAN)								
Asset Type								
1.2.1 Collectors								\$ -
1.2.2 Repeaters (may include radio licence, etc.)								\$ -
1.2.3 Installation (may include meter seals and rings, collector computer hardware, etc.)								\$ -
Total Advanced Metering Regional Collector (AMRC) (includes LAN)				\$ -	\$ -	\$ -	\$ -	\$ -
1.3 ADVANCED METERING CONTROL COMPUTER (AMCC)								
Asset Type								
1.3.1 Computer Hardware	Computer Hardware			3,199	1,444	1,489		\$ 6,132
1.3.2 Computer Software								\$ -
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)				\$ 3,199	\$ 1,444	\$ 1,489		\$ 6,132
1.4 WIDE AREA NETWORK (WAN)								
Asset Type								
1.4.1 Activation Fees	Applications Software			5,723	2,583	2,663		\$ 10,970
Total Wide Area Network (WAN)				\$ 5,723	\$ 2,583	\$ 2,663		\$ 10,970
1.5 OTHER AMI CAPITAL COSTS RELATED TO MINIMUM FUNCTIONALITY								
Asset Type								
1.5.1 Customer Equipment (including repair of damaged equipment)	Smart Meter			1,397	631	650		\$ 2,678
1.5.2 AMI Interface to CIS								\$ -
1.5.3 Professional Fees								\$ -
1.5.4 Integration								\$ -
1.5.5 Program Management								\$ -
1.5.6 Other AMI Capital								\$ -
Total Other AMI Capital Costs Related to Minimum Functionality				\$ 1,397	\$ 631	\$ 650		\$ 2,678
Total Capital Costs Related to Minimum Functionality				\$ 185,067	\$ 83,537	\$ 86,108		\$ 354,712
1.6 CAPITAL COSTS BEYOND MINIMUM FUNCTIONALITY								
Asset Type								
1.6.1 Costs related to technical capabilities in the smart meters or related communications infrastructure that exceed those specified in O.Reg 425/06	Computer Software							\$ -
1.6.2 Costs for deployment of smart meters to customers other than residential and small general service	Applications Software							\$ -
1.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDNR, etc.								\$ -
Total Capital Costs Beyond Minimum Functionality				\$ -	\$ -	\$ -	\$ -	\$ -
Total Smart Meter Capital Costs				\$ 185,067	\$ 83,537	\$ 86,108		\$ 354,712
2 OM&A Expenses								
2.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)								
Asset Type								
2.1.1 Maintenance (may include meter reverification costs, etc.)				527	424	651	0	\$ 1,602
2.1.2 Other (please specify)								\$ -
Total Incremental AMCD OM&A Costs				\$ 527	\$ 424	\$ 651	\$ -	\$ 1,602



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

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

Smart Meter Capital Cost and Operational Expense Data

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

2.2.1 Maintenance

2.2.2 Other (please specify)

Total Incremental AMRC OM&A Costs

2.3 ADVANCED METERING CONTROL COMPUTER (AMCC)

2.3.1 Hardware Maintenance (may include server support, etc.)

2.3.2 Software Maintenance (may include maintenance support, etc.)

2.3.2 Other (please specify)

Total Incremental AMCC OM&A Costs

2.4 WIDE AREA NETWORK (WAN)

2.4.1 WAN Maintenance

2.4.2 Other (please specify)

Total Incremental AMRC OM&A Costs

2.5 OTHER AMI OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY

2.5.1 Business Process Redesign

2.5.2 Customer Communication (may include project communication, etc.)

2.5.3 Program Management

2.5.4 Change Management (may include training, etc.)

2.5.5 Administration Costs

2.5.6 Other AMI Expenses

(please specify)

Total Other AMI OM&A Costs Related to Minimum Functionality

TOTAL OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY

2.6 OM&A COSTS RELATED TO BEYOND MINIMUM FUNCTIONALITY

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

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

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

2.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDMR, etc.

Total OM&A Costs Beyond Minimum Functionality

Total Smart Meter OM&A Costs

	2006	2007	2008	2009	2010	2011	2012 and later	Total
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
2.2.1 Maintenance								\$ -
2.2.2 Other (please specify)								\$ -
Total Incremental AMRC OM&A Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3.1 Hardware Maintenance (may include server support, etc.)				60	63	42	37	\$ 202
2.3.2 Software Maintenance (may include maintenance support, etc.)				234	175	114	839	\$ 1,362
2.3.2 Other (please specify)								\$ -
Total Incremental AMCC OM&A Costs	\$ -	\$ -	\$ -	\$ 294	\$ 238	\$ 156	\$ 876	\$ 1,564
2.4.1 WAN Maintenance								\$ -
2.4.2 Other (please specify)								\$ -
Total Incremental AMRC OM&A Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5.1 Business Process Redesign								\$ -
2.5.2 Customer Communication (may include project communication, etc.)								\$ -
2.5.3 Program Management								\$ -
2.5.4 Change Management (may include training, etc.)								\$ -
2.5.5 Administration Costs				8	0	0	0	\$ 8
2.5.6 Other AMI Expenses				83	26	57	0	\$ 166
(please specify)								
Total Other AMI OM&A Costs Related to Minimum Functionality	\$ -	\$ -	\$ -	\$ 91	\$ 26	\$ 57	\$ -	\$ 174
TOTAL OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY	\$ -	\$ -	\$ -	\$ 912	\$ 688	\$ 864	\$ 876	\$ 3,340
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 MDMR, etc.				0	0	0	0	\$ -
Total OM&A Costs Beyond Minimum Functionality	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Smart Meter OM&A Costs	\$ -	\$ -	\$ -	\$ 912	\$ 688	\$ 864	\$ 876	\$ 3,340

3 Aggregate Smart Meter Costs by Category

3.1

Capital

3.1.1 Smart Meter

3.1.2 Computer Hardware

3.1.3 Computer Software

3.1.4 Tools & Equipment

3.1.5 Other Equipment

3.1.6 Applications Software

3.1.7 Total Capital Costs

3.2 OM&A Costs

3.2.1 Total OM&A Costs

\$ -	\$ -	\$ -	\$ 176,145	\$ 79,510	\$ 81,956	\$ -	\$ 337,610
\$ -	\$ -	\$ -	\$ 3,199	\$ 1,444	\$ 1,489	\$ -	\$ 6,132
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ 5,723	\$ 2,583	\$ 2,663	\$ -	\$ 10,970
\$ -	\$ -	\$ -	\$ 185,067	\$ 83,537	\$ 86,108	\$ -	\$ 354,712
\$ -	\$ -	\$ -	\$ 912	\$ 688	\$ 864	\$ 876	\$ 3,340



Ontario Energy Board

Smart Meter Model

Chatham-Kent Hydro Inc.

	2006	2007	2008	2009	2010	2011	2012 and later
Cost of Capital							
Capital Structure¹							
Deemed Short-term Debt Capitalization					4.0%	4.0%	4.0%
Deemed Long-term Debt Capitalization	50.0%	50.0%	53.3%	56.7%	56.0%	56.0%	56.0%
Deemed Equity Capitalization	50.0%	50.0%	46.7%	43.3%	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					2.07%	2.07%	2.07%
Long-term Debt Rate (actual/embedded/deemed) ²	7.04%	7.04%	7.04%	7.04%	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							
WACC	8.02%	8.02%	7.96%	7.89%	7.31%	7.31%	7.31%
Working Capital Allowance							
Working Capital Allowance Rate (% of the sum of Cost of Power + controllable expenses)	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
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	50	50	50	50
Computer Equipment - CCA Rate	45%	55%	55%	55%	55%	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	12	12	12	12	12	12	12
Applications Software - CCA Rate	100%	100%	100%	100%	100%	100%	100%

Assumptions

¹ Planned smart meter installations occur evenly throughout the year.

² Fiscal calendar year (January 1 to December 31) used.

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



	2006	2007	2008	2009	2010	2011	2012 and later
Net Fixed Assets - Smart Meters							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ 176,145	\$ 255,654	\$ 337,610
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ 176,145	\$ 79,510	\$ 81,956	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 176,145	\$ 255,654	\$ 337,610	\$ 337,610
Accumulated Depreciation							
Opening Balance		\$ -	\$ -	\$ -	\$ 5,871	\$ 20,265	\$ 40,040
Amortization expense during year	\$ -	\$ -	\$ -	\$ 5,871	\$ 14,393	\$ 19,775	\$ 22,507
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 5,871	\$ 20,265	\$ 40,040	\$ 62,548
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 170,273	\$ 235,390	\$ 297,570
Closing Balance	\$ -	\$ -	\$ -	\$ 170,273	\$ 235,390	\$ 297,570	\$ 275,063
Average Net Book Value	\$ -	\$ -	\$ -	\$ 85,137	\$ 202,831	\$ 266,480	\$ 286,316
Net Fixed Assets - Computer Hardware							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ 3,199	\$ 4,643	\$ 6,132
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ 3,199	\$ 1,444	\$ 1,489	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 3,199	\$ 4,643	\$ 6,132	\$ 6,132
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 320	\$ 1,104	\$ 2,182
Amortization expense during year	\$ -	\$ -	\$ -	\$ 320	\$ 784	\$ 1,078	\$ 1,226
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 320	\$ 1,104	\$ 2,182	\$ 3,408
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 2,879	\$ 3,539	\$ 3,950
Closing Balance	\$ -	\$ -	\$ -	\$ 2,879	\$ 3,539	\$ 3,950	\$ 2,724
Average Net Book Value	\$ -	\$ -	\$ -	\$ 1,440	\$ 3,209	\$ 3,745	\$ 3,337
Net Fixed Assets - Computer Software (Including Applications Software)							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ 5,723	\$ 8,307	\$ 10,970
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ 5,723	\$ 2,583	\$ 2,663	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 5,723	\$ 8,307	\$ 10,970	\$ 10,970
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 954	\$ 3,292	\$ 6,505
Amortization expense during year	\$ -	\$ -	\$ -	\$ 954	\$ 2,338	\$ 3,213	\$ 3,657
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 954	\$ 3,292	\$ 6,505	\$ 10,162
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 4,769	\$ 5,015	\$ 4,465
Closing Balance	\$ -	\$ -	\$ -	\$ 4,769	\$ 5,015	\$ 4,465	\$ 808
Average Net Book Value	\$ -	\$ -	\$ -	\$ 2,385	\$ 4,892	\$ 4,740	\$ 2,636
Net Fixed Assets - Tools and Equipment							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Amortization expense during year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Average Net Book Value	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Fixed Assets - Other Equipment							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Amortization expense during year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Average Net Book Value	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -



Ontario Energy Board

Smart Meter Model

Chatham-Kent Hydro Inc.

Average Net Fixed Asset Values (from Sheet 4)

	2006	2007	2008	2009	2010	2011	2012 and Later
Smart Meters	\$ -	\$ -	\$ -	\$ 85,137	\$ 202,831	\$ 266,480	\$ 286,316
Computer Hardware	\$ -	\$ -	\$ -	\$ 1,440	\$ 3,209	\$ 3,745	\$ 3,337
Computer Software	\$ -	\$ -	\$ -	\$ 2,385	\$ 4,892	\$ 4,740	\$ 2,636
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Net Fixed Assets	\$ -	\$ -	\$ -	\$ 88,961	\$ 210,933	\$ 274,964	\$ 292,290

Working Capital

Operating Expenses (from Sheet 2)	\$ -	\$ -	\$ -	\$ 912	\$ 688	\$ 864	\$ 876
Working Capital Factor (from Sheet 3)	15%	15%	15%	15%	15%	15%	15%
Working Capital Allowance	\$ -	\$ -	\$ -	\$ 137	\$ 103	\$ 130	\$ 131

Incremental Smart Meter Rate Base

	\$ -	\$ -	\$ -	\$ 89,098	\$ 211,036	\$ 275,094	\$ 292,421
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Return on Rate Base

Capital Structure

Deemed Short Term Debt	\$ -	\$ -	\$ -	\$ -	\$ 8,441	\$ 11,004	\$ 11,697
Deemed Long Term Debt	\$ -	\$ -	\$ -	\$ 50,518	\$ 118,180	\$ 154,053	\$ 163,756
Equity	\$ -	\$ -	\$ -	\$ 38,579	\$ 84,414	\$ 110,038	\$ 116,969
Preferred Shares	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Capitalization	\$ -	\$ -	\$ -	\$ 89,098	\$ 211,036	\$ 275,094	\$ 292,421

Return on

Deemed Short Term Debt	\$ -	\$ -	\$ -	\$ -	\$ 175	\$ 228	\$ 242
Deemed Long Term Debt	\$ -	\$ -	\$ -	\$ 3,556	\$ 6,937	\$ 9,043	\$ 9,612
Equity	\$ -	\$ -	\$ -	\$ 3,472	\$ 8,315	\$ 10,839	\$ 11,521
Preferred Shares	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Return on Capital	\$ -	\$ -	\$ -	\$ 7,029	\$ 15,427	\$ 20,109	\$ 21,376

Operating Expenses

	\$ -	\$ -	\$ -	\$ 912	\$ 688	\$ 864	\$ 876
--	------	------	------	--------	--------	--------	--------

Amortization Expenses (from Sheet 4)

Smart Meters	\$ -	\$ -	\$ -	\$ 5,871	\$ 14,393	\$ 19,775	\$ 22,507
Computer Hardware	\$ -	\$ -	\$ -	\$ 320	\$ 784	\$ 1,078	\$ 1,226
Computer Software	\$ -	\$ -	\$ -	\$ 954	\$ 2,338	\$ 3,213	\$ 3,657
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Amortization Expense in Year	\$ -	\$ -	\$ -	\$ 7,145	\$ 17,516	\$ 24,066	\$ 27,390

Incremental Revenue Requirement before Taxes/PILs

	\$ -	\$ -	\$ -	\$ 15,086	\$ 33,631	\$ 45,039	\$ 49,642
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Calculation of Taxable Income

Incremental Operating Expenses	\$ -	\$ -	\$ -	\$ 912	\$ 688	\$ 864	\$ 876
Amortization Expense	\$ -	\$ -	\$ -	\$ 7,145	\$ 17,516	\$ 24,066	\$ 27,390
Interest Expense	\$ -	\$ -	\$ -	\$ 3,556	\$ 7,112	\$ 9,271	\$ 9,855
Net Income for Taxes/PILs	\$ -	\$ -	\$ -	\$ 3,472	\$ 8,315	\$ 10,839	\$ 11,521

Grossed-up Taxes/PILs (from Sheet 7)

	\$ -	\$ -	\$ -	\$ 218.20	\$ 1,617.83	\$ 3,500.93	\$ 4,665.26
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Revenue Requirement, including Grossed-up Taxes/PILs

	\$ -	\$ -	\$ -	\$ 15,304	\$ 35,248	\$ 48,540	\$ 54,307
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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	\$ -	\$ -	\$ -	\$ -	\$ 169,098.80	\$ 231,900.22	\$ 292,026.11
Capital Additions	\$ -	\$ -	\$ -	\$ 176,144.58	\$ 79,509.71	\$ 81,956.16	\$ -
Retirements/Removals (if applicable)							
UCC Before Half Year Rule	\$ -	\$ -	\$ -	\$ 176,144.58	\$ 248,608.51	\$ 313,856.38	\$ 292,026.11
Half Year Rule (1/2 Additions - Disposals)	\$ -	\$ -	\$ -	\$ 88,072.29	\$ 39,754.85	\$ 40,978.08	\$ -
Reduced UCC	\$ -	\$ -	\$ -	\$ 88,072.29	\$ 208,853.65	\$ 272,878.30	\$ 292,026.11
CCA Rate Class	47	47	47	47	47	47	47
CCA Rate	8%	8%	8%	8%	8%	8%	8%
CCA	\$ -	\$ -	\$ -	\$ 7,045.78	\$ 16,708.29	\$ 21,830.26	\$ 23,362.09
Closing UCC	\$ -	\$ -	\$ -	\$ 169,098.80	\$ 231,900.22	\$ 292,026.11	\$ 268,664.02

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	\$ -	\$ -	\$ -	\$ -	\$ 2,319.52	\$ 2,090.79	\$ 2,020.08
Capital Additions Computer Hardware	\$ -	\$ -	\$ -	\$ 3,199.34	\$ 1,444.15	\$ 1,488.58	\$ -
Capital Additions Computer Software	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
UCC Before Half Year Rule	\$ -	\$ -	\$ -	\$ 3,199.34	\$ 3,763.67	\$ 3,579.37	\$ 2,020.08
Half Year Rule (1/2 Additions - Disposals)	\$ -	\$ -	\$ -	\$ 1,599.67	\$ 722.07	\$ 744.29	\$ -
Reduced UCC	\$ -	\$ -	\$ -	\$ 1,599.67	\$ 3,041.60	\$ 2,835.08	\$ 2,020.08
CCA Rate Class	45	50	50	50	50	50	50
CCA Rate	45%	55%	55%	55%	55%	55%	55%
CCA	\$ -	\$ -	\$ -	\$ 879.82	\$ 1,672.88	\$ 1,559.30	\$ 1,111.04
Closing UCC	\$ -	\$ -	\$ -	\$ 2,319.52	\$ 2,090.79	\$ 2,020.08	\$ 909.04

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	\$ -	\$ -	\$ -	\$ 3,472.14	\$ 8,314.81	\$ 10,838.70	\$ 11,521.40
Amortization	\$ -	\$ -	\$ -	\$ 7,145.32	\$ 17,515.95	\$ 24,065.82	\$ 27,390.38
CCA - Smart Meters	\$ -	\$ -	\$ -	\$ 7,045.78	\$ 16,708.29	\$ 21,830.26	\$ 23,362.09
CCA - Computers	\$ -	\$ -	\$ -	\$ 879.82	\$ 1,672.88	\$ 1,559.30	\$ 1,111.04
CCA - Applications Software	\$ -	\$ -	\$ -	\$ 2,861.69	\$ 4,153.42	\$ 2,623.21	\$ 1,331.48
CCA - Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Change in taxable income	\$ -	\$ -	\$ -	\$ 169.83	\$ 3,296.17	\$ 8,891.75	\$ 13,107.17
Tax Rate (from Sheet 3)	36.12%	36.12%	33.50%	33.00%	31.00%	28.25%	26.25%
Income Taxes Payable	\$ -	\$ -	\$ -	\$ 56.04	\$ 1,021.81	\$ 2,511.92	\$ 3,440.63
ONTARIO CAPITAL TAX							
Smart Meters	\$ -	\$ -	\$ -	\$ 170,273.10	\$ 235,389.51	\$ 297,570.18	\$ 275,062.82
Computer Hardware	\$ -	\$ -	\$ -	\$ 2,879.41	\$ 3,539.27	\$ 3,950.30	\$ 2,723.88
Computer Software (Including Application Software)	\$ -	\$ -	\$ -	\$ 4,769.48	\$ 5,014.58	\$ 4,464.76	\$ 808.16
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Rate Base	\$ -	\$ -	\$ -	\$ 177,921.98	\$ 243,943.36	\$ 305,985.24	\$ 278,594.86
Less: Exemption	\$ -	\$ -	\$ -	\$ 43,768.81	\$ 61,351.75	\$ -	\$ -
Deemed Taxable Capital	\$ -	\$ -	\$ -	\$ 134,153.17	\$ 182,591.60	\$ 305,985.24	\$ 278,594.86
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)	\$ -	\$ -	\$ -	\$ 301.84	\$ 136.94	\$ -	\$ -
Change in Income Taxes Payable	\$ -	\$ -	\$ -	\$ 56.04	\$ 1,021.81	\$ 2,511.92	\$ 3,440.63
Change in OCT	\$ -	\$ -	\$ -	\$ 301.84	\$ 136.94	\$ -	\$ -
PILs	\$ -	\$ -	\$ -	\$ 245.80	\$ 1,158.76	\$ 2,511.92	\$ 3,440.63
Gross Up PILs							
Tax Rate	36.12%	36.12%	33.50%	33.00%	31.00%	28.25%	26.25%
Change in Income Taxes Payable	\$ -	\$ -	\$ -	\$ 83.65	\$ 1,480.89	\$ 3,500.93	\$ 4,665.26
Change in OCT	\$ -	\$ -	\$ -	\$ 301.84	\$ 136.94	\$ -	\$ -
PILs	\$ -	\$ -	\$ -	\$ 218.20	\$ 1,617.83	\$ 3,500.93	\$ 4,665.26



Ontario Energy Board

Smart Meter Model

Chatham-Kent Hydro 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	\$ -		4.59%	\$ -	\$ -		
2008 Q1	5.14%	5.18%	Sep-06	2006	Q3	\$ -		4.59%	\$ -	\$ -		
2008 Q2	4.08%	5.18%	Oct-06	2006	Q4	\$ -		4.59%	\$ -	\$ -		
2008 Q3	3.35%	5.43%	Nov-06	2006	Q4	\$ -		4.59%	\$ -	\$ -		
2008 Q4	3.35%	5.43%	Dec-06	2006	Q4	\$ -		4.59%	\$ -	\$ -	\$ -	
2009 Q1	2.45%	6.61%	Jan-07	2007	Q1	\$ -		4.59%	\$ -	\$ -		
2009 Q2	1.00%	6.61%	Feb-07	2007	Q1	\$ -		4.59%	\$ -	\$ -		
2009 Q3	0.55%	5.67%	Mar-07	2007	Q1	\$ -		4.59%	\$ -	\$ -		
2009 Q4	0.55%	4.66%	Apr-07	2007	Q2	\$ -		4.59%	\$ -	\$ -		
2010 Q1	0.55%	4.34%	May-07	2007	Q2	\$ -		4.59%	\$ -	\$ -		
2010 Q2	0.55%	4.34%	Jun-07	2007	Q2	\$ -		4.59%	\$ -	\$ -		
2010 Q3	0.89%	4.66%	Jul-07	2007	Q3	\$ -		4.59%	\$ -	\$ -		
2010 Q4	1.20%	4.01%	Aug-07	2007	Q3	\$ -		4.59%	\$ -	\$ -		
2011 Q1	1.47%	4.29%	Sep-07	2007	Q3	\$ -		4.59%	\$ -	\$ -		
2011 Q2	1.47%	4.29%	Oct-07	2007	Q4	\$ -		5.14%	\$ -	\$ -		
2011 Q3	1.47%	4.29%	Nov-07	2007	Q4	\$ -		5.14%	\$ -	\$ -		
2011 Q4	1.47%	4.29%	Dec-07	2007	Q4	\$ -		5.14%	\$ -	\$ -	\$ -	
2012 Q1	1.47%	4.29%	Jan-08	2008	Q1	\$ -		5.14%	\$ -	\$ -		
2012 Q2	1.47%	4.29%	Feb-08	2008	Q1	\$ -		5.14%	\$ -	\$ -		
2012 Q3	1.47%	4.29%	Mar-08	2008	Q1	\$ -		5.14%	\$ -	\$ -		
2012 Q4	1.47%	4.29%	Apr-08	2008	Q2	\$ -		4.08%	\$ -	\$ -		
			May-08	2008	Q2	\$ -		4.08%	\$ -	\$ -		
			Jun-08	2008	Q2	\$ -		4.08%	\$ -	\$ -		
			Jul-08	2008	Q3	\$ -		3.35%	\$ -	\$ -		
			Aug-08	2008	Q3	\$ -		3.35%	\$ -	\$ -		
			Sep-08	2008	Q3	\$ -		3.35%	\$ -	\$ -		
			Oct-08	2008	Q4	\$ -		3.35%	\$ -	\$ -		
			Nov-08	2008	Q4	\$ -		3.35%	\$ -	\$ -		
			Dec-08	2008	Q4	\$ -		3.35%	\$ -	\$ -	\$ -	
			Jan-09	2009	Q1	\$ -		2.45%	\$ -	\$ -		
			Feb-09	2009	Q1	\$ -		2.45%	\$ -	\$ -		
			Mar-09	2009	Q1	\$ -		2.45%	\$ -	\$ -		
			Apr-09	2009	Q2	\$ -		1.00%	\$ -	\$ -		
			May-09	2009	Q2	\$ -		1.00%	\$ -	\$ -		
			Jun-09	2009	Q2	\$ -		1.00%	\$ -	\$ -		
			Jul-09	2009	Q3	\$ -		0.55%	\$ -	\$ -		
			Aug-09	2009	Q3	\$ -		0.55%	\$ -	\$ -		
			Sep-09	2009	Q3	\$ -		0.55%	\$ -	\$ -		
			Oct-09	2009	Q4	\$ -		0.55%	\$ -	\$ -		
			Nov-09	2009	Q4	\$ -		0.55%	\$ -	\$ -		
			Dec-09	2009	Q4	\$ -		0.55%	\$ -	\$ -	\$ -	
			Jan-10	2010	Q1	\$ -		0.55%	\$ -	\$ -		
			Feb-10	2010	Q1	\$ -		0.55%	\$ -	\$ -		
			Mar-10	2010	Q1	\$ -		0.55%	\$ -	\$ -		
			Apr-10	2010	Q2	\$ -		0.55%	\$ -	\$ -		
			May-10	2010	Q2	\$ -		0.55%	\$ -	\$ -		
			Jun-10	2010	Q2	\$ -	\$ 0.51	0.55%	\$ -	\$ 0.51		\$ 0.51
			Jul-10	2010	Q3	\$ 0.51	\$ 262.08	0.89%	\$ -	\$ 262.59		\$ 0.51
			Aug-10	2010	Q3	\$ 262.59	\$ 181.12	0.89%	\$ 0.19	\$ 443.90		\$ 0.51
			Sep-10	2010	Q3	\$ 443.71	\$ 126.79	0.89%	\$ 0.33	\$ 570.82		\$ 0.51
			Oct-10	2010	Q4	\$ 570.49	\$ 115.56	1.20%	\$ 0.57	\$ 686.62		\$ 0.51
			Nov-10	2010	Q4	\$ 686.05	\$ 116.33	1.20%	\$ 0.69	\$ 803.07		\$ 0.51
			Dec-10	2010	Q4	\$ 802.38	\$ 366.21	1.20%	\$ 0.80	\$ 1,169.39	\$ 1,171.17	\$ 0.51
			Jan-11	2011	Q1	\$ 1,168.59	\$ 116.06	1.47%	\$ 1.43	\$ 1,286.07		\$ 0.51
			Feb-11	2011	Q1	\$ 1,284.64	\$ 120.87	1.47%	\$ 1.57	\$ 1,407.08		\$ 0.51
			Mar-11	2011	Q1	\$ 1,405.51	\$ 119.76	1.47%	\$ 1.72	\$ 1,526.99		\$ 0.51
			Apr-11	2011	Q2	\$ 1,525.27	\$ 117.94	1.47%	\$ 1.87	\$ 1,645.08		\$ 0.51
			May-11	2011	Q2	\$ 1,643.21	\$ 108.66	1.47%	\$ 2.01	\$ 1,753.88		\$ 0.96
			Jun-11	2011	Q2	\$ 1,751.87	\$ 263.19	1.47%	\$ 2.15	\$ 2,017.20		\$ 0.96
			Jul-11	2011	Q3	\$ 2,015.05	\$ 292.03	1.47%	\$ 2.47	\$ 2,309.55		\$ 0.96
			Aug-11	2011	Q3	\$ 2,307.08	\$ 296.09	1.47%	\$ 2.83	\$ 2,606.00		\$ 0.96
			Sep-11	2011	Q3	\$ 2,603.17	\$ 302.25	1.47%	\$ 3.19	\$ 2,908.61		\$ 0.96
			Oct-11	2011	Q4	\$ 2,905.42	\$ 298.02	1.47%	\$ 3.56	\$ 3,206.99		\$ 0.96
			Nov-11	2011	Q4	\$ 3,203.43	\$ 300.77	1.47%	\$ 3.92	\$ 3,508.12		\$ 0.96
			Dec-11	2011	Q4	\$ 3,504.20	\$ 572.16	1.47%	\$ 4.29	\$ 4,080.65	\$ 2,938.78	\$ 0.96



This worksheet calculates the funding adder revenues.

Account 1555 - Sub-account Funding Adder Revenues

Interest Rates	Approved Deferral and Variance Accounts	CWIP				Opening Balance (Principal)	Funding Adder Revenues	Interest		Closing Balance	Annual amounts	Board Approved Smart Meter Funding Adder (from Tariff)
			Date	Year	Quarter			Rate	Interest			
			Jan-12	2012	Q1	\$ 4,076.36	\$ 567.52	1.47%	\$ 4.99	\$ 4,648.87		\$ 0.96
			Feb-12	2012	Q1	\$ 4,643.88	\$ 570.63	1.47%	\$ 5.69	\$ 5,220.20		\$ 0.96
			Mar-12	2012	Q1	\$ 5,214.51	\$ 575.95	1.47%	\$ 6.39	\$ 5,796.85		\$ 0.96
			Apr-12	2012	Q2	\$ 5,790.46	\$ 572.59	1.47%	\$ 7.09	\$ 6,370.14		\$ 0.96
			May-12	2012	Q2	\$ 6,363.05	\$ 35.05	1.47%	\$ 7.79	\$ 6,335.79		
			Jun-12	2012	Q2	\$ 6,328.00	\$ -	1.47%	\$ 7.75	\$ 6,335.75		
			Jul-12	2012	Q3	\$ 6,328.00	\$ -	1.47%	\$ 7.75	\$ 6,335.75		
			Aug-12	2012	Q3	\$ 6,328.00	\$ -	1.47%	\$ 7.75	\$ 6,335.75		
			Sep-12	2012	Q3	\$ 6,328.00	\$ -	1.47%	\$ 7.75	\$ 6,335.75		
			Oct-12	2012	Q4	\$ 6,328.00	\$ -	1.47%	\$ 7.75	\$ 6,335.75		
			Nov-12	2012	Q4	\$ 6,328.00	\$ -	1.47%	\$ 7.75	\$ 6,335.75		
			Dec-12	2012	Q4	\$ 6,328.00	\$ -	1.47%	\$ 7.75	\$ 6,335.75	\$ 2,337.84	
Total Funding Adder Revenues Collected						\$ 6,328.00		\$ 119.79	\$ 6,447.79	\$ 6,447.79		



Ontario Energy Board

Smart Meter Model

Chatham-Kent Hydro 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	-			-	5.14%	-	-
2012 Q1	1.47%	4.29%	Jan-08	2008	Q1	-			-	5.14%	-	-
2012 Q2	1.47%	4.29%	Feb-08	2008	Q1	-			-	5.14%	-	-
2012 Q3	1.47%	4.29%	Mar-08	2008	Q1	-			-	5.14%	-	-
2012 Q4	1.47%	4.29%	Apr-08	2008	Q2	-			-	4.08%	-	-
			May-08	2008	Q2	-			-	4.08%	-	-
			Jun-08	2008	Q2	-			-	4.08%	-	-
			Jul-08	2008	Q3	-			-	3.35%	-	-
			Aug-08	2008	Q3	-			-	3.35%	-	-
			Sep-08	2008	Q3	-			-	3.35%	-	-
			Oct-08	2008	Q4	-			-	3.35%	-	-
			Nov-08	2008	Q4	-			-	3.35%	-	-
			Dec-08	2008	Q4	-			-	3.35%	-	-
			Jan-09	2009	Q1	-			-	2.45%	-	-
			Feb-09	2009	Q1	-			-	2.45%	-	-
			Mar-09	2009	Q1	-			-	2.45%	-	-
			Apr-09	2009	Q2	-			-	1.00%	-	-
			May-09	2009	Q2	-			-	1.00%	-	-
			Jun-09	2009	Q2	-			-	1.00%	-	-
			Jul-09	2009	Q3	-			-	0.55%	-	-
			Aug-09	2009	Q3	-			-	0.55%	-	-
			Sep-09	2009	Q3	-			-	0.55%	-	-
			Oct-09	2009	Q4	-			-	0.55%	-	-
			Nov-09	2009	Q4	-			-	0.55%	-	-
			Dec-09	2009	Q4	-			-	0.55%	-	-
			Jan-10	2010	Q1	-			-	0.55%	-	-
			Feb-10	2010	Q1	-			-	0.55%	-	-
			Mar-10	2010	Q1	-			-	0.55%	-	-
			Apr-10	2010	Q2	-			-	0.55%	-	-
			May-10	2010	Q2	-			-	0.55%	-	-
			Jun-10	2010	Q2	-			-	0.55%	-	-
			Jul-10	2010	Q3	-			-	0.89%	-	-
			Aug-10	2010	Q3	-			-	0.89%	-	-
			Sep-10	2010	Q3	-			-	0.89%	-	-
			Oct-10	2010	Q4	-			-	1.20%	-	-
			Nov-10	2010	Q4	-			-	1.20%	-	-
			Dec-10	2010	Q4	-			-	1.20%	-	-
			Jan-11	2011	Q1	-			-	1.47%	-	-
			Feb-11	2011	Q1	-			-	1.47%	-	-
			Mar-11	2011	Q1	-			-	1.47%	-	-
			Apr-11	2011	Q2	-			-	1.47%	-	-
			May-11	2011	Q2	-			-	1.47%	-	-
			Jun-11	2011	Q2	-			-	1.47%	-	-
			Jul-11	2011	Q3	-			-	1.47%	-	-
			Aug-11	2011	Q3	-			-	1.47%	-	-
			Sep-11	2011	Q3	-			-	1.47%	-	-
			Oct-11	2011	Q4	-			-	1.47%	-	-
			Nov-11	2011	Q4	-			-	1.47%	-	-
			Dec-11	2011	Q4	-			-	1.47%	-	-
			Jan-12	2012	Q1	-			-	1.47%	-	-
			Feb-12	2012	Q1	-			-	1.47%	-	-
			Mar-12	2012	Q1	-			-	1.47%	-	-
			Apr-12	2012	Q2	-			-	1.47%	-	-
			May-12	2012	Q2	-			-	1.47%	-	-
			Jun-12	2012	Q2	-			-	1.47%	-	-
			Jul-12	2012	Q3	-			-	1.47%	-	-
			Aug-12	2012	Q3	-			-	1.47%	-	-
			Sep-12	2012	Q3	-			-	1.47%	-	-
			Oct-12	2012	Q4	-			-	1.47%	-	-
			Nov-12	2012	Q4	-			-	1.47%	-	-
			Dec-12	2012	Q4	-			-	1.47%	-	-
						\$ -	\$ -	\$ -	\$ -			



Ontario Energy Board

Smart Meter Model

Chatham-Kent Hydro Inc.

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

Year	OM&A (from Sheet 5)	Amortization Expense (from Sheet 5)	Cumulative OM&A and Amortization Expense	Average Cumulative OM&A and Amortization Expense	Average Annual Prescribed Interest Rate for Deferral and Variance Accounts (from Sheets 8A and 8B)	Simple Interest on OM&A and Amortization Expenses
2006	\$ -	\$ -	\$ -	\$ -	4.37%	\$ -
2007	\$ -	\$ -	\$ -	\$ -	4.73%	\$ -
2008	\$ -	\$ -	\$ -	\$ -	3.98%	\$ -
2009	\$ 912.00	\$ 7,145.32	\$ 8,057.32	\$ 4,028.66	1.14%	\$ 45.83
2010	\$ 687.98	\$ 17,515.95	\$ 26,261.25	\$ 17,159.28	0.80%	\$ 136.85
2011	\$ 863.99	\$ 24,065.82	\$ 51,191.05	\$ 38,726.15	1.47%	\$ 569.27
2012	\$ 875.70	\$ 27,390.38	\$ 79,457.13	\$ 65,324.09	1.47%	\$ 960.26
Cumulative Interest to 2011						\$ 751.95
Cumulative Interest to 2012						\$ 1,712.21



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

Check if applicable

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

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

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

	2006	2007	2008	2009	2010	2011	2012 and later	Total
Deferred and forecasted Smart Meter Incremental Revenue Requirement (from Sheet 5)	\$ -	\$ -	\$ -	\$ 15,304.15	\$ 35,248.48	\$ 48,540.10	\$ 54,307.35	\$ 153,400.09
Interest on Deferred and forecasted OM&A and Amortization Expense (Sheet 8A/8B) (Check one of the boxes below)	\$ -	\$ -	\$ -	\$ 45.83	\$ 136.85	\$ 569.27		\$ 751.95
<input type="checkbox"/> Sheet 8A (Interest calculated on monthly balances)								\$ -
<input checked="" type="checkbox"/> Sheet 8B (Interest calculated on average annual balances)	\$ -	\$ -	\$ -	\$ 45.83	\$ 136.85	\$ 569.27		\$ 751.95
SMFA Revenues (from Sheet 8)	\$ -	\$ -	\$ -	\$ -	\$ 1,168.59	\$ 2,907.77	\$ 2,251.64	\$ 6,328.00
SMFA Interest (from Sheet 8)	\$ -	\$ -	\$ -	\$ -	\$ 2.58	\$ 31.01	\$ 86.20	\$ 119.79
Net Deferred Revenue Requirement	\$ -	\$ -	\$ -	\$ 15,349.98	\$ 34,214.16	\$ 46,170.59	\$ 51,969.51	\$ 147,704.24
Number of Metered Customers (average for 2012 test year)							400	

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

Years for collection or refunding	1	
Deferred Incremental Revenue Requirement from 2006 to December 31, 2011 plus Interest on OM&A and Amortization	\$ 99,844.69	
SMFA Revenues collected from 2006 to 2012 test year (inclusive) Plus Simple Interest on SMFA Revenues	\$ 6,447.79	
Net Deferred Revenue Requirement	\$ 93,396.90	
SMDR November 1, 2012 to October 31, 2013	\$ 19.46	Match
Check: Forecasted SMDR Revenues	\$ 93,408.00	

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

Incremental Revenue Requirement for 2012	\$ 54,307.35	
SMIRR	\$ 11.31	Match
Check: Forecasted SMIRR Revenues	\$ 54,288.00	

Attachment G

SMP Residential Smart Meter Model



Ontario Energy Board

Smart Meter Model

Choose Your Utility:

Middlesex Power Distribution Corporation

Middlesex Power Distribution Corporation - Dutton

Application Contact Information

Name: Andrya Eagen

Title: Senior Regulatory Specialist

Phone Number: 519-352-6300 Ext 243

Email Address: andryaeagen@ckenergy.com

We are applying for rates effective: November 1, 2012

Last COS Re-based Year 2006

Legend

DROP-DOWN MENU

INPUT FIELD

CALCULATION FIELD

Copyright

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



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

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

Smart Meter Capital Cost and Operational Expense Data	2006	2007	2008	2009	2010	2011	2012 and later	Total
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
Smart Meter Installation Plan								
Actual/Planned number of Smart Meters installed during the Calendar Year								
Residential			754	92				846
General Service < 50 kW								0
Actual/Planned number of Smart Meters installed (Residential and GS < 50 kW only)	0	0	754	92	0	0	0	846
Percentage of Residential and GS < 50 kW Smart Meter Installations Completed	0.00%	0.00%	89.13%	100.00%	0.00%	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	754	92	0	0	0	846
1 Capital Costs								
1.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)								
1.1.1 Smart Meters (may include new meters and modules, etc.)	Smart Meter		38,689	4,721	0	0		\$ 43,410
1.1.2 Installation Costs (may include socket kits, labour, vehicle, benefits, etc.)	Smart Meter		52,539	6,411	0	0		\$ 58,949
1.1.3a Workforce Automation Hardware (may include fieldwork handhelds, barcode hardware, etc.)								\$ -
1.1.3b Workforce Automation Software (may include fieldwork handhelds, barcode hardware, etc.)								\$ -
Total Advanced Metering Communications Devices (AMCD)			\$ 91,228	\$ 11,131	\$ -	\$ -	\$ -	\$ 102,359
1.2 ADVANCED METERING REGIONAL COLLECTOR (AMRC) (includes LAN)								
1.2.1 Collectors								\$ -
1.2.2 Repeaters (may include radio licence, etc.)								\$ -
1.2.3 Installation (may include meter seals and rings, collector computer hardware, etc.)								\$ -
Total Advanced Metering Regional Collector (AMRC) (includes LAN)			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1.3 ADVANCED METERING CONTROL COMPUTER (AMCC)								
1.3.1 Computer Hardware								\$ -
1.3.2 Computer Software								\$ -
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)			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1.4 WIDE AREA NETWORK (WAN)								
1.4.1 Activation Fees	Applications Software		6,485	791	0	0		\$ 7,276
Total Wide Area Network (WAN)			\$ 6,485	\$ 791	\$ -	\$ -	\$ -	\$ 7,276
1.5 OTHER AMI CAPITAL COSTS RELATED TO MINIMUM FUNCTIONALITY								
1.5.1 Customer Equipment (including repair of damaged equipment)								\$ -
1.5.2 AMI Interface to CIS								\$ -
1.5.3 Professional Fees								\$ -
1.5.4 Integration								\$ -
1.5.5 Program Management								\$ -
1.5.6 Other AMI Capital								\$ -
Total Other AMI Capital Costs Related to Minimum Functionality			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Capital Costs Related to Minimum Functionality			\$ 97,713	\$ 11,923	\$ -	\$ -	\$ -	\$ 109,636
1.6 CAPITAL COSTS BEYOND MINIMUM FUNCTIONALITY (Please provide a descriptive title and identify nature of beyond minimum functionality costs)								
1.6.1 Costs related to technical capabilities in the smart meters or related communications infrastructure that exceed those specified in O.Reg 425/06	Computer Software							\$ -
1.6.2 Costs for deployment of smart meters to customers other than residential and small general service	Applications Software							\$ -
1.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDNR, etc.								\$ -
Total Capital Costs Beyond Minimum Functionality			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Smart Meter Capital Costs			\$ 97,713	\$ 11,923	\$ -	\$ -	\$ -	\$ 109,636
2 OM&A Expenses								
2.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)								
2.1.1 Maintenance (may include meter reverification costs, etc.)			9,574	9,148	7,350	11,301	0	\$ 37,373
2.1.2 Other (please specify)								\$ -
Total Incremental AMCD OM&A Costs			\$ 9,574	\$ 9,148	\$ 7,350	\$ 11,301	\$ -	\$ 37,373



Ontario Energy Board
Smart Meter Model

Middlesex Power Distribution Corporation

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

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

Smart Meter Capital Cost and Operational Expense Data

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

2.2.1 Maintenance

2.2.2 Other (please specify)

Total Incremental AMRC OM&A Costs

2.3 ADVANCED METERING CONTROL COMPUTER (AMCC)

2.3.1 Hardware Maintenance (may include server support, etc.)

2.3.2 Software Maintenance (may include maintenance support, etc.)

2.3.2 Other (please specify)

Total Incremental AMCC OM&A Costs

2.4 WIDE AREA NETWORK (WAN)

2.4.1 WAN Maintenance

2.4.2 Other (please specify)

Total Incremental AMRC OM&A Costs

2.5 OTHER AMI OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY

2.5.1 Business Process Redesign

2.5.2 Customer Communication (may include project communication, etc.)

2.5.3 Program Management

2.5.4 Change Management (may include training, etc.)

2.5.5 Administration Costs

2.5.6 Other AMI Expenses

(please specify)

Total Other AMI OM&A Costs Related to Minimum Functionality

TOTAL OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY

2.6 OM&A COSTS RELATED TO BEYOND MINIMUM FUNCTIONALITY

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

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

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

2.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDMR, etc.

Total OM&A Costs Beyond Minimum Functionality

Total Smart Meter OM&A Costs

	2006	2007	2008	2009	2010	2011	2012 and later	Total
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
								\$ -
								\$ -
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
			8,012	1,042	1,093	733	641	\$ 11,521
			17,574	4,058	3,043	1,977	14,555	\$ 41,207
								\$ -
	\$ -	\$ -	\$ 25,596	\$ 5,100	\$ 4,136	\$ 2,709	\$ 15,196	\$ 52,728
								\$ -
								\$ -
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
								\$ -
								\$ -
								\$ -
			35,958	137	0	0	0	\$ 36,095
			2,145	1,440	452	982	0	\$ 5,020
	\$ -	\$ -	\$ 38,103	\$ 1,578	\$ 452	\$ 982	\$ -	\$ 41,115
	\$ -	\$ -	\$ 73,262	\$ 15,826	\$ 11,939	\$ 14,993	\$ 15,196	\$ 131,216
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual		
								\$ -
								\$ -
			0	1,358	56,216	43,949	0	\$ 101,523
	\$ -	\$ -	\$ -	\$ 1,358	\$ 56,216	\$ 43,949	\$ -	\$ 101,523
	\$ -	\$ -	\$ 73,262	\$ 17,184	\$ 68,154	\$ 58,942	\$ 15,196	\$ 232,739

3 Aggregate Smart Meter Costs by Category

3.1

Capital

3.1.1 Smart Meter

3.1.2 Computer Hardware

3.1.3 Computer Software

3.1.4 Tools & Equipment

3.1.5 Other Equipment

3.1.6 Applications Software

3.1.7 Total Capital Costs

3.2 OM&A Costs

3.2.1 Total OM&A Costs

\$ -	\$ -	\$ 91,228	\$ 11,131	\$ -	\$ -	\$ -	\$ -	\$ 102,359
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ 6,485	\$ 791	\$ -	\$ -	\$ -	\$ -	\$ 7,276
\$ -	\$ -	\$ 97,713	\$ 11,923	\$ -	\$ -	\$ -	\$ -	\$ 109,636
\$ -	\$ -	\$ 73,262	\$ 17,184	\$ 68,154	\$ 58,942	\$ 15,196		\$ 232,739



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation

	2006	2007	2008	2009	2010	2011	2012 and later
Cost of Capital							
Capital Structure¹							
Deemed Short-term Debt Capitalization							
Deemed Long-term Debt Capitalization	50.0%	50.0%	53.3%	56.7%	60.0%	60.0%	60.0%
Deemed Equity Capitalization	50.0%	50.0%	46.7%	43.3%	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							
Long-term Debt Rate (actual/embedded/deemed) ²	7.25%	7.25%	7.25%	7.25%	7.25%	7.25%	7.25%
Target Return on Equity (ROE)	9.0%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
Return on Preferred Shares							
WACC	8.13%	8.13%	8.07%	8.01%	7.95%	7.95%	7.95%
Working Capital Allowance							
Working Capital Allowance Rate (% of the sum of Cost of Power + controllable expenses)	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
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	50	50	50	50
Computer Equipment - CCA Rate	45%	55%	55%	55%	55%	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	12	12	12	12	12	12	12
Applications Software - CCA Rate	100%	100%	100%	100%	100%	100%	100%

Assumptions

¹ Planned smart meter installations occur evenly throughout the year.

² Fiscal calendar year (January 1 to December 31) used.

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



	2006	2007	2008	2009	2010	2011	2012 and later
Net Fixed Assets - Smart Meters							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ 91,228	\$ 102,359	\$ 102,359	\$ 102,359
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ 91,228	\$ 11,131	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ 91,228	\$ 102,359	\$ 102,359	\$ 102,359	\$ 102,359
Accumulated Depreciation							
Opening Balance		\$ -	\$ -	\$ 3,041	\$ 9,494	\$ 16,318	\$ 23,142
Amortization expense during year	\$ -	\$ -	\$ 3,041	\$ 6,453	\$ 6,824	\$ 6,824	\$ 6,824
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ 3,041	\$ 9,494	\$ 16,318	\$ 23,142	\$ 29,966
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ 88,187	\$ 92,865	\$ 86,041	\$ 79,218
Closing Balance	\$ -	\$ -	\$ 88,187	\$ 92,865	\$ 86,041	\$ 79,218	\$ 72,394
Average Net Book Value	\$ -	\$ -	\$ 44,094	\$ 90,526	\$ 89,453	\$ 82,629	\$ 75,806
Net Fixed Assets - Computer Hardware							
Gross Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Amortization expense during year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Average Net Book Value	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Fixed Assets - Computer Software (Including Applications Software)							
Gross Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ 6,485	\$ 7,276	\$ 7,276	\$ 7,276
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ 6,485	\$ 791	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ 6,485	\$ 7,276	\$ 7,276	\$ 7,276	\$ 7,276
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ 1,081	\$ 3,374	\$ 5,800	\$ 7,276
Amortization expense during year	\$ -	\$ -	\$ 1,081	\$ 2,294	\$ 2,425	\$ 1,477	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ 1,081	\$ 3,374	\$ 5,800	\$ 7,276	\$ 7,276
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ 5,404	\$ 3,902	\$ 1,477	\$ -
Closing Balance	\$ -	\$ -	\$ 5,404	\$ 3,902	\$ 1,477	\$ -	\$ -
Average Net Book Value	\$ -	\$ -	\$ 2,702	\$ 4,653	\$ 2,689	\$ 738	\$ -
Net Fixed Assets - Tools and Equipment							
Gross Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Amortization expense during year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Average Net Book Value	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Fixed Assets - Other Equipment							
Gross Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Amortization expense during year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Average Net Book Value	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation

	2006	2007	2008	2009	2010	2011	2012 and Later
Average Net Fixed Asset Values (from Sheet 4)							
Smart Meters	\$ -	\$ -	\$ 44,094	\$ 90,526	\$ 89,453	\$ 82,629	\$ 75,806
Computer Hardware	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Computer Software	\$ -	\$ -	\$ 2,702	\$ 4,653	\$ 2,689	\$ 738	\$ -
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Net Fixed Assets	\$ -	\$ -	\$ 46,796	\$ 95,179	\$ 92,143	\$ 83,368	\$ 75,806
Working Capital							
Operating Expenses (from Sheet 2)	\$ -	\$ -	\$ 73,262	\$ 17,184	\$ 68,154	\$ 58,942	\$ 15,196
Working Capital Factor (from Sheet 3)	15%	15%	15%	15%	15%	15%	15%
Working Capital Allowance	\$ -	\$ -	\$ 10,989	\$ 2,578	\$ 10,223	\$ 8,841	\$ 2,279
Incremental Smart Meter Rate Base	\$ -	\$ -	\$ 57,785	\$ 97,757	\$ 102,366	\$ 92,209	\$ 78,085
Return on Rate Base							
Capital Structure							
Deemed Short Term Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Deemed Long Term Debt	\$ -	\$ -	\$ 30,799	\$ 55,428	\$ 61,419	\$ 55,325	\$ 46,851
Equity	\$ -	\$ -	\$ 26,986	\$ 42,329	\$ 40,946	\$ 36,884	\$ 31,234
Preferred Shares	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Capitalization	\$ -	\$ -	\$ 57,785	\$ 97,757	\$ 102,366	\$ 92,209	\$ 78,085
Return on							
Deemed Short Term Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Deemed Long Term Debt	\$ -	\$ -	\$ 2,233	\$ 4,019	\$ 4,453	\$ 4,011	\$ 3,397
Equity	\$ -	\$ -	\$ 2,429	\$ 3,810	\$ 3,685	\$ 3,320	\$ 2,811
Preferred Shares	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Return on Capital	\$ -	\$ -	\$ 4,662	\$ 7,828	\$ 8,138	\$ 7,331	\$ 6,208
Operating Expenses	\$ -	\$ -	\$ 73,262	\$ 17,184	\$ 68,154	\$ 58,942	\$ 15,196
Amortization Expenses (from Sheet 4)							
Smart Meters	\$ -	\$ -	\$ 3,041	\$ 6,453	\$ 6,824	\$ 6,824	\$ 6,824
Computer Hardware	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Computer Software	\$ -	\$ -	\$ 1,081	\$ 2,294	\$ 2,425	\$ 1,477	\$ -
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Amortization Expense in Year	\$ -	\$ -	\$ 4,122	\$ 8,747	\$ 9,249	\$ 8,300	\$ 6,824
Incremental Revenue Requirement before Taxes/PILs	\$ -	\$ -	\$ 82,046	\$ 33,759	\$ 85,542	\$ 74,573	\$ 28,228
Calculation of Taxable Income							
Incremental Operating Expenses	\$ -	\$ -	\$ 73,262	\$ 17,184	\$ 68,154	\$ 58,942	\$ 15,196
Amortization Expense	\$ -	\$ -	\$ 4,122	\$ 8,747	\$ 9,249	\$ 8,300	\$ 6,824
Interest Expense	\$ -	\$ -	\$ 2,233	\$ 4,019	\$ 4,453	\$ 4,011	\$ 3,397
Net Income for Taxes/PILs	\$ -	\$ -	\$ 2,429	\$ 3,810	\$ 3,685	\$ 3,320	\$ 2,811
Grossed-up Taxes/PILs (from Sheet 7)	\$ -	\$ -	\$ 4.25	\$ 939.94	\$ 2,419.07	\$ 1,930.59	\$ 1,230.00
Revenue Requirement, including Grossed-up Taxes/PILs	\$ -	\$ -	\$ 82,042	\$ 34,699	\$ 87,961	\$ 76,503	\$ 29,458



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation

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	\$ -	\$ -	\$ -	\$ 87,578.85	\$ 91,258.56	\$ 83,957.88	\$ 77,241.25
Capital Additions	\$ -	\$ -	\$ 91,227.97	\$ 11,131.26	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
UCC Before Half Year Rule	\$ -	\$ -	\$ 91,227.97	\$ 98,710.12	\$ 91,258.56	\$ 83,957.88	\$ 77,241.25
Half Year Rule (1/2 Additions - Disposals)	\$ -	\$ -	\$ 45,613.99	\$ 5,565.63	\$ -	\$ -	\$ -
Reduced UCC	\$ -	\$ -	\$ 45,613.99	\$ 93,144.49	\$ 91,258.56	\$ 83,957.88	\$ 77,241.25
CCA Rate Class	47	47	47	47	47	47	47
CCA Rate	8%	8%	8%	8%	8%	8%	8%
CCA	\$ -	\$ -	\$ 3,649.12	\$ 7,451.56	\$ 7,300.68	\$ 6,716.63	\$ 6,179.30
Closing UCC	\$ -	\$ -	\$ 87,578.85	\$ 91,258.56	\$ 83,957.88	\$ 77,241.25	\$ 71,061.95

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	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions Computer Hardware	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions Computer Software	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
UCC Before Half Year Rule	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Half Year Rule (1/2 Additions - Disposals)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Reduced UCC	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CCA Rate Class	45	50	50	50	50	50	50
CCA Rate	45%	55%	55%	55%	55%	55%	55%
CCA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing UCC	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

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	\$ -	\$ -	\$ 2,428.71	\$ 3,809.59	\$ 3,685.17	\$ 3,319.52	\$ 2,811.06
Amortization	\$ -	\$ -	\$ 4,121.79	\$ 8,746.51	\$ 9,249.44	\$ 8,300.46	\$ 6,823.95
CCA - Smart Meters	\$ -	\$ -	\$ 3,649.12	\$ 7,451.56	\$ 7,300.68	\$ 6,716.63	\$ 6,179.30
CCA - Computers	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CCA - Applications Software	\$ -	\$ -	\$ 3,242.58	\$ 3,638.23	\$ 395.65	\$ -	\$ -
CCA - Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Change in taxable income	\$ -	\$ -	\$ 341.20	\$ 1,466.31	\$ 5,238.27	\$ 4,903.35	\$ 3,455.71
Tax Rate (from Sheet 3)	36.12%	36.12%	33.50%	33.00%	31.00%	28.25%	26.25%
Income Taxes Payable	\$ -	\$ -	\$ 114.30	\$ 483.88	\$ 1,623.86	\$ 1,385.20	\$ 907.12
ONTARIO CAPITAL TAX							
Smart Meters	\$ -	\$ -	\$ 88,187.04	\$ 92,865.40	\$ 86,041.45	\$ 79,217.50	\$ 72,393.55
Computer Hardware	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Computer Software	\$ -	\$ -	\$ 5,404.31	\$ 3,901.99	\$ 1,476.51	\$ -	\$ -
(Including Application Software)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Rate Base	\$ -	\$ -	\$ 93,591.35	\$ 96,767.39	\$ 87,517.96	\$ 79,217.50	\$ 72,393.55
Less: Exemption	\$ -	\$ -	\$ 19,086.90	\$ -	\$ -	\$ -	\$ -
Deemed Taxable Capital	\$ -	\$ -	\$ 74,504.44	\$ 96,767.39	\$ 87,517.96	\$ 79,217.50	\$ 72,393.55
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)	\$ -	\$ -	\$ 167.63	\$ 217.73	\$ 65.64	\$ -	\$ -
Change in Income Taxes Payable	\$ -	\$ -	\$ 114.30	\$ 483.88	\$ 1,623.86	\$ 1,385.20	\$ 907.12
Change in OCT	\$ -	\$ -	\$ 167.63	\$ 217.73	\$ 65.64	\$ -	\$ -
PILs	\$ -	\$ -	\$ 53.33	\$ 701.61	\$ 1,689.50	\$ 1,385.20	\$ 907.12
Gross Up PILs							
Tax Rate	36.12%	36.12%	33.50%	33.00%	31.00%	28.25%	26.25%
Change in Income Taxes Payable	\$ -	\$ -	\$ 171.88	\$ 722.21	\$ 2,353.43	\$ 1,930.59	\$ 1,230.00
Change in OCT	\$ -	\$ -	\$ 167.63	\$ 217.73	\$ 65.64	\$ -	\$ -
PILs	\$ -	\$ -	\$ 4.25	\$ 939.94	\$ 2,419.07	\$ 1,930.59	\$ 1,230.00



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation

This worksheet calculates the funding adder revenues.

Account 1555 - Sub-account Funding Adder Revenues

Approved Deferral and Variance						Opening Balance	Funding Adder	Interest				Board Approved
Interest Rates	Accounts	CWIP	Date	Year	Quarter	(Principal)	Revenues	Rate	Interest	Closing Balance	Annual amounts	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	\$ -		4.59%	\$ -	\$ -		
2008 Q1	5.14%	5.18%	Sep-06	2006	Q3	\$ -		4.59%	\$ -	\$ -		
2008 Q2	4.08%	5.18%	Oct-06	2006	Q4	\$ -		4.59%	\$ -	\$ -		
2008 Q3	3.35%	5.43%	Nov-06	2006	Q4	\$ -		4.59%	\$ -	\$ -		
2008 Q4	3.35%	5.43%	Dec-06	2006	Q4	\$ -		4.59%	\$ -	\$ -	\$ -	
2009 Q1	2.45%	6.61%	Jan-07	2007	Q1	\$ -		4.59%	\$ -	\$ -		
2009 Q2	1.00%	6.61%	Feb-07	2007	Q1	\$ -		4.59%	\$ -	\$ -		
2009 Q3	0.55%	5.67%	Mar-07	2007	Q1	\$ -		4.59%	\$ -	\$ -		
2009 Q4	0.55%	4.66%	Apr-07	2007	Q2	\$ -		4.59%	\$ -	\$ -		
2010 Q1	0.55%	4.34%	May-07	2007	Q2	\$ -		4.59%	\$ -	\$ -		
2010 Q2	0.55%	4.34%	Jun-07	2007	Q2	\$ -		4.59%	\$ -	\$ -		
2010 Q3	0.89%	4.66%	Jul-07	2007	Q3	\$ -		4.59%	\$ -	\$ -		
2010 Q4	1.20%	4.01%	Aug-07	2007	Q3	\$ -		4.59%	\$ -	\$ -		
2011 Q1	1.47%	4.29%	Sep-07	2007	Q3	\$ -		4.59%	\$ -	\$ -		
2011 Q2	1.47%	4.29%	Oct-07	2007	Q4	\$ -		5.14%	\$ -	\$ -		
2011 Q3	1.47%	4.29%	Nov-07	2007	Q4	\$ -	\$ -	5.14%	\$ -	\$ -		
2011 Q4	1.47%	4.29%	Dec-07	2007	Q4	\$ -	\$ -	5.14%	\$ -	\$ -	\$ -	
2012 Q1	1.47%	4.29%	Jan-08	2008	Q1	\$ -	\$ -	5.14%	\$ -	\$ -	\$ -	
2012 Q2	1.47%	4.29%	Feb-08	2008	Q1	\$ -	\$ -	5.14%	\$ -	\$ -		
2012 Q3	1.47%	4.29%	Mar-08	2008	Q1	\$ -	\$ -	5.14%	\$ -	\$ -		
2012 Q4	1.47%	4.29%	Apr-08	2008	Q2	\$ -	\$ -	4.08%	\$ -	\$ -		
			May-08	2008	Q2	\$ -	\$ -	4.08%	\$ -	\$ -		
			Jun-08	2008	Q2	\$ -	\$ -	4.08%	\$ -	\$ -		
			Jul-08	2008	Q3	\$ -	\$ -	3.35%	\$ -	\$ -		
			Aug-08	2008	Q3	\$ -	\$ -	3.35%	\$ -	\$ -		
			Sep-08	2008	Q3	\$ -	\$ -	3.35%	\$ -	\$ -		
			Oct-08	2008	Q4	\$ -	\$ -	3.35%	\$ -	\$ -		
			Nov-08	2008	Q4	\$ -	\$ 7,959.44	3.35%	\$ -	\$ 7,959.44	\$ 15,596.89	\$ 1.26
			Dec-08	2008	Q4	\$ 7,959.44	\$ 7,615.23	3.35%	\$ 22.22	\$ 15,596.89	\$ 15,596.89	\$ 1.26
			Jan-09	2009	Q1	\$ 15,574.67	\$ 7,857.46	2.45%	\$ 31.80	\$ 23,463.93	\$ 23,463.93	\$ 1.26
			Feb-09	2009	Q1	\$ 23,432.13	\$ 7,837.44	2.45%	\$ 47.84	\$ 31,317.41	\$ 31,317.41	\$ 1.26
			Mar-09	2009	Q1	\$ 31,269.57	\$ 7,860.78	2.45%	\$ 63.84	\$ 39,194.19	\$ 39,194.19	\$ 1.26
			Apr-09	2009	Q2	\$ 39,130.35	\$ 7,849.43	1.00%	\$ 32.61	\$ 47,012.39	\$ 47,012.39	\$ 1.26
			May-09	2009	Q2	\$ 46,979.78	\$ 7,865.23	1.00%	\$ 39.15	\$ 54,884.16	\$ 54,884.16	\$ 1.26
			Jun-09	2009	Q2	\$ 54,845.01	\$ 7,874.63	1.00%	\$ 45.70	\$ 62,765.34	\$ 62,765.34	\$ 1.26
			Jul-09	2009	Q3	\$ 62,719.64	\$ 7,853.82	0.55%	\$ 28.75	\$ 70,602.21	\$ 70,602.21	\$ 1.26
			Aug-09	2009	Q3	\$ 70,573.46	\$ 7,900.85	0.55%	\$ 32.35	\$ 78,506.66	\$ 78,506.66	\$ 1.26
			Sep-09	2009	Q3	\$ 78,474.31	\$ 7,872.89	0.55%	\$ 35.97	\$ 86,383.17	\$ 86,383.17	\$ 1.26
			Oct-09	2009	Q4	\$ 86,347.20	\$ 7,906.09	0.55%	\$ 39.58	\$ 94,292.87	\$ 94,292.87	\$ 1.26
			Nov-09	2009	Q4	\$ 94,253.29	\$ 7,891.41	0.55%	\$ 43.20	\$ 102,187.90	\$ 102,187.90	\$ 1.26
			Dec-09	2009	Q4	\$ 102,144.70	\$ 11,222.14	0.55%	\$ 46.82	\$ 113,413.66	\$ 113,413.66	\$ 1.26
			Jan-10	2010	Q1	\$ 113,366.84	\$ 7,922.95	0.55%	\$ 51.96	\$ 121,341.75	\$ 121,341.75	\$ 1.26
			Feb-10	2010	Q1	\$ 121,289.79	\$ 7,931.61	0.55%	\$ 55.59	\$ 129,276.99	\$ 129,276.99	\$ 1.26
			Mar-10	2010	Q1	\$ 129,221.40	\$ 7,937.20	0.55%	\$ 59.23	\$ 137,217.83	\$ 137,217.83	\$ 1.26
			Apr-10	2010	Q2	\$ 137,158.60	\$ 7,953.53	0.55%	\$ 62.86	\$ 145,174.99	\$ 145,174.99	\$ 1.26
			May-10	2010	Q2	\$ 145,112.13	\$ 7,938.90	0.55%	\$ 66.51	\$ 153,117.54	\$ 153,117.54	\$ 1.26
			Jun-10	2010	Q2	\$ 153,051.03	\$ 7,939.19	0.55%	\$ 70.15	\$ 161,060.37	\$ 161,060.37	\$ 1.26
			Jul-10	2010	Q3	\$ 160,990.22	\$ 7,956.92	0.89%	\$ 119.40	\$ 169,066.54	\$ 169,066.54	\$ 1.26
			Aug-10	2010	Q3	\$ 168,947.14	\$ 7,953.47	0.89%	\$ 125.30	\$ 177,025.91	\$ 177,025.91	\$ 1.26
			Sep-10	2010	Q3	\$ 176,900.61	\$ 7,983.28	0.89%	\$ 131.20	\$ 185,015.09	\$ 185,015.09	\$ 1.26
			Oct-10	2010	Q4	\$ 184,883.89	\$ 7,977.45	1.20%	\$ 184.88	\$ 193,046.22	\$ 193,046.22	\$ 1.26
			Nov-10	2010	Q4	\$ 192,861.34	\$ 7,982.20	1.20%	\$ 192.86	\$ 201,036.40	\$ 201,036.40	\$ 1.26
			Dec-10	2010	Q4	\$ 200,843.54	\$ 8,782.49	1.20%	\$ 200.84	\$ 209,826.87	\$ 209,826.87	\$ 1.26
			Jan-11	2011	Q1	\$ 209,626.03	\$ 8,010.08	1.47%	\$ 256.79	\$ 217,892.90	\$ 217,892.90	\$ 1.26
			Feb-11	2011	Q1	\$ 217,636.11	\$ 8,001.66	1.47%	\$ 266.60	\$ 225,904.37	\$ 225,904.37	\$ 1.26
			Mar-11	2011	Q1	\$ 225,637.77	\$ 7,997.60	1.47%	\$ 276.41	\$ 233,911.78	\$ 233,911.78	\$ 1.26
			Apr-11	2011	Q2	\$ 233,635.37	\$ 7,991.84	1.47%	\$ 286.20	\$ 241,913.41	\$ 241,913.41	\$ 1.26
			May-11	2011	Q2	\$ 241,627.21	\$ 7,994.25	1.47%	\$ 295.99	\$ 249,917.45	\$ 249,917.45	\$ 1.18
			Jun-11	2011	Q2	\$ 249,621.46	\$ 7,600.10	1.47%	\$ 305.79	\$ 257,527.35	\$ 257,527.35	\$ 1.18
			Jul-11	2011	Q3	\$ 257,221.56	\$ 7,516.99	1.47%	\$ 315.10	\$ 265,053.65	\$ 265,053.65	\$ 1.18
			Aug-11	2011	Q3	\$ 264,738.55	\$ 7,512.15	1.47%	\$ 324.30	\$ 272,575.00	\$ 272,575.00	\$ 1.18
			Sep-11	2011	Q3	\$ 272,250.70	\$ 7,532.28	1.47%	\$ 333.51	\$ 280,116.49	\$ 280,116.49	\$ 1.18
			Oct-11	2011	Q4	\$ 279,782.98	\$ 7,537.12	1.47%	\$ 342.73	\$ 287,662.83	\$ 287,662.83	\$ 1.18
			Nov-11	2011	Q4	\$ 287,320.10	\$ 7,518.65	1.47%	\$ 351.97	\$ 295,190.72	\$ 295,190.72	\$ 1.18
			Dec-11	2011	Q4	\$ 294,838.75	\$ 6,192.67	1.47%	\$ 361.18	\$ 301,392.60	\$ 95,121.96	\$ 1.18



This worksheet calculates the funding adder revenues.

Account 1555 - Sub-account Funding Adder Revenues

Interest Rates	Approved Deferral and Variance Accounts	CWIP				Opening Balance (Principal)	Funding Adder Revenues	Interest		Closing Balance	Annual amounts	Board Approved Smart Meter Funding Adder (from Tariff)
			Date	Year	Quarter			Rate	Interest			
			Jan-12	2012	Q1	\$ 301,031.42	\$ 7,541.78	1.47%	\$ 368.76	\$ 308,941.96		\$ 1.18
			Feb-12	2012	Q1	\$ 308,573.20	\$ 7,554.65	1.47%	\$ 378.00	\$ 316,505.85		\$ 1.18
			Mar-12	2012	Q1	\$ 316,127.85	\$ 7,566.04	1.47%	\$ 387.26	\$ 324,081.15		\$ 1.18
			Apr-12	2012	Q2	\$ 323,693.89	\$ 7,541.94	1.47%	\$ 396.53	\$ 331,632.36		\$ 1.18
			May-12	2012	Q2	\$ 331,235.83	\$ 413.50	1.47%	\$ 405.76	\$ 331,228.09		
			Jun-12	2012	Q2	\$ 330,822.33	\$ -	1.47%	\$ 405.26	\$ 331,227.59		
			Jul-12	2012	Q3	\$ 330,822.33	\$ -	1.47%	\$ 405.26	\$ 331,227.59		
			Aug-12	2012	Q3	\$ 330,822.33	\$ -	1.47%	\$ 405.26	\$ 331,227.59		
			Sep-12	2012	Q3	\$ 330,822.33	\$ -	1.47%	\$ 405.26	\$ 331,227.59		
			Oct-12	2012	Q4	\$ 330,822.33	\$ -	1.47%	\$ 405.26	\$ 331,227.59		
			Nov-12	2012	Q4	\$ 330,822.33	\$ -	1.47%	\$ 405.26	\$ 331,227.59		
			Dec-12	2012	Q4	\$ 330,822.33	\$ -	1.47%	\$ 405.26	\$ 331,227.59	\$ 34,564.04	
Total Funding Adder Revenues Collected						\$ 330,822.33			\$ 10,320.31	\$ 341,142.64	\$ 341,142.64	



Middlesex Power Distribution Corporation

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	-			-	5.14%	-	-
2012 Q1	1.47%	4.29%	Jan-08	2008	Q1	-			-	5.14%	-	-
2012 Q2	1.47%	4.29%	Feb-08	2008	Q1	-			-	5.14%	-	-
2012 Q3	1.47%	4.29%	Mar-08	2008	Q1	-			-	5.14%	-	-
2012 Q4	1.47%	4.29%	Apr-08	2008	Q2	-			-	4.08%	-	-
			May-08	2008	Q2	-			-	4.08%	-	-
			Jun-08	2008	Q2	-			-	4.08%	-	-
			Jul-08	2008	Q3	-			-	3.35%	-	-
			Aug-08	2008	Q3	-			-	3.35%	-	-
			Sep-08	2008	Q3	-			-	3.35%	-	-
			Oct-08	2008	Q4	-			-	3.35%	-	-
			Nov-08	2008	Q4	-			-	3.35%	-	-
			Dec-08	2008	Q4	-			-	3.35%	-	-
			Jan-09	2009	Q1	-			-	2.45%	-	-
			Feb-09	2009	Q1	-			-	2.45%	-	-
			Mar-09	2009	Q1	-			-	2.45%	-	-
			Apr-09	2009	Q2	-			-	1.00%	-	-
			May-09	2009	Q2	-			-	1.00%	-	-
			Jun-09	2009	Q2	-			-	1.00%	-	-
			Jul-09	2009	Q3	-			-	0.55%	-	-
			Aug-09	2009	Q3	-			-	0.55%	-	-
			Sep-09	2009	Q3	-			-	0.55%	-	-
			Oct-09	2009	Q4	-			-	0.55%	-	-
			Nov-09	2009	Q4	-			-	0.55%	-	-
			Dec-09	2009	Q4	-			-	0.55%	-	-
			Jan-10	2010	Q1	-			-	0.55%	-	-
			Feb-10	2010	Q1	-			-	0.55%	-	-
			Mar-10	2010	Q1	-			-	0.55%	-	-
			Apr-10	2010	Q2	-			-	0.55%	-	-
			May-10	2010	Q2	-			-	0.55%	-	-
			Jun-10	2010	Q2	-			-	0.55%	-	-
			Jul-10	2010	Q3	-			-	0.89%	-	-
			Aug-10	2010	Q3	-			-	0.89%	-	-
			Sep-10	2010	Q3	-			-	0.89%	-	-
			Oct-10	2010	Q4	-			-	1.20%	-	-
			Nov-10	2010	Q4	-			-	1.20%	-	-
			Dec-10	2010	Q4	-			-	1.20%	-	-
			Jan-11	2011	Q1	-			-	1.47%	-	-
			Feb-11	2011	Q1	-			-	1.47%	-	-
			Mar-11	2011	Q1	-			-	1.47%	-	-
			Apr-11	2011	Q2	-			-	1.47%	-	-
			May-11	2011	Q2	-			-	1.47%	-	-
			Jun-11	2011	Q2	-			-	1.47%	-	-
			Jul-11	2011	Q3	-			-	1.47%	-	-
			Aug-11	2011	Q3	-			-	1.47%	-	-
			Sep-11	2011	Q3	-			-	1.47%	-	-
			Oct-11	2011	Q4	-			-	1.47%	-	-
			Nov-11	2011	Q4	-			-	1.47%	-	-
			Dec-11	2011	Q4	-			-	1.47%	-	-
			Jan-12	2012	Q1	-			-	1.47%	-	-
			Feb-12	2012	Q1	-			-	1.47%	-	-
			Mar-12	2012	Q1	-			-	1.47%	-	-
			Apr-12	2012	Q2	-			-	1.47%	-	-
			May-12	2012	Q2	-			-	1.47%	-	-
			Jun-12	2012	Q2	-			-	1.47%	-	-
			Jul-12	2012	Q3	-			-	1.47%	-	-
			Aug-12	2012	Q3	-			-	1.47%	-	-
			Sep-12	2012	Q3	-			-	1.47%	-	-
			Oct-12	2012	Q4	-			-	1.47%	-	-
			Nov-12	2012	Q4	-			-	1.47%	-	-
			Dec-12	2012	Q4	-			-	1.47%	-	-
						\$	-	\$	-	\$	-	-



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation

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

Year	OM&A (from Sheet 5)	Amortization Expense (from Sheet 5)	Cumulative OM&A and Amortization Expense	Average Cumulative OM&A and Amortization Expense	Average Annual Prescribed Interest Rate for Deferral and Variance Accounts (from Sheets 8A and 8B)	Simple Interest on OM&A and Amortization Expenses
2006	\$ -	\$ -	\$ -	\$ -	4.37%	\$ -
2007	\$ -	\$ -	\$ -	\$ -	4.73%	\$ -
2008	\$ 73,262.48	\$ 4,121.79	\$ 77,384.27	\$ 38,692.13	3.98%	\$ 1,539.95
2009	\$ 17,184.29	\$ 8,746.51	\$ 103,315.07	\$ 90,349.67	1.14%	\$ 1,027.73
2010	\$ 68,154.26	\$ 9,249.44	\$ 180,718.76	\$ 142,016.91	0.80%	\$ 1,132.58
2011	\$ 58,941.83	\$ 8,300.46	\$ 247,961.05	\$ 214,339.91	1.47%	\$ 3,150.80
2012	\$ 15,196.11	\$ 6,823.95	\$ 269,981.11	\$ 258,971.08	1.47%	\$ 3,806.87
Cumulative Interest to 2011						\$ 6,851.06
Cumulative Interest to 2012						\$ 10,657.93



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

Check if applicable

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

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

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

	2006	2007	2008	2009	2010	2011	2012 and later	Total
Deferred and forecasted Smart Meter Incremental Revenue Requirement (from Sheet 5)	\$ -	\$ -	\$ 82,041.68	\$ 34,698.87	\$ 87,960.85	\$ 76,503.49	\$ 29,457.81	\$ 310,662.70
Interest on Deferred and forecasted OM&A and Amortization Expense (Sheet 8A/8B) (Check one of the boxes below)	\$ -	\$ -	\$ 1,539.95	\$ 1,027.73	\$ 1,132.58	\$ 3,150.80		\$ 6,851.06
<input type="checkbox"/> Sheet 8A (Interest calculated on monthly balances)								\$ -
<input checked="" type="checkbox"/> Sheet 8B (Interest calculated on average annual balances)	\$ -	\$ -	\$ 1,539.95	\$ 1,027.73	\$ 1,132.58	\$ 3,150.80		\$ 6,851.06
SMFA Revenues (from Sheet 8)	\$ -	\$ -	\$ 15,574.67	\$ 97,792.17	\$ 96,259.19	\$ 91,405.39	\$ 29,790.91	\$ 330,822.33
SMFA Interest (from Sheet 8)	\$ -	\$ -	\$ 22.22	\$ 487.61	\$ 1,320.78	\$ 3,716.57	\$ 4,773.13	\$ 10,320.31
Net Deferred Revenue Requirement	\$ -	\$ -	\$ 67,984.74	\$ 62,553.18	\$ 8,486.54	\$ 15,467.67	\$ 5,106.23	\$ 23,628.88
Number of Metered Customers (average for 2012 test year)							6422	

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

Years for collection or refunding	1	
Deferred Incremental Revenue Requirement from 2006 to December 31, 2011 plus Interest on OM&A and Amortization	\$ 288,055.95	
SMFA Revenues collected from 2006 to 2012 test year (inclusive) Plus Simple Interest on SMFA Revenues	\$ 341,142.64	
Net Deferred Revenue Requirement	-\$ 53,086.69	} Match
SMDR November 1, 2012 to October 31, 2013	-\$ 0.69	
Check: Forecasted SMDR Revenues	-\$ 53,174.16	

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

Incremental Revenue Requirement for 2012	\$ 29,457.81	} Match
SMIRR	\$ 0.38	
Check: Forecasted SMIRR Revenues	\$ 29,284.32	

Attachment H

SMP General Service less than 50 kW Smart Meter Model



Ontario Energy Board

Smart Meter Model

Choose Your Utility:

Middlesex Power Distribution Corporation

Middlesex Power Distribution Corporation - Dutton

Application Contact Information

Name: Andrya Eagen

Title: Senior Regulatory Specialist

Phone Number: 519-352-6300 Ext 243

Email Address: andryaeagen@ckenergy.com

We are applying for rates effective: November 1, 2012

Last COS Re-based Year 2006

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.



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

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

Smart Meter Capital Cost and Operational Expense Data	2006	2007	2008	2009	2010	2011	2012 and later	Total
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
Smart Meter Installation Plan								
Actual/Planned number of Smart Meters installed during the Calendar Year								
Residential								0
General Service < 50 kW			267	88	300	20		675
Actual/Planned number of Smart Meters installed (Residential and GS < 50 kW only)	0	0	267	88	300	20	0	675
Percentage of Residential and GS < 50 kW Smart Meter Installations Completed	0.00%	0.00%	39.56%	52.59%	97.04%	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	267	88	300	20	0	675
1 Capital Costs								
1.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)								
Asset Type								
1.1.1 Smart Meters (may include new meters and modules, etc.)	Smart Meter		86,331	28,454	97,002	6,467		\$ 218,254
1.1.2 Installation Costs (may include socket kits, labour, vehicle, benefits, etc.)	Smart Meter		17,148	5,652	19,267	1,284		\$ 43,351
1.1.3a Workforce Automation Hardware (may include fieldwork handhelds, barcode hardware, etc.)								\$ -
1.1.3b Workforce Automation Software (may include fieldwork handhelds, barcode hardware, etc.)								\$ -
Total Advanced Metering Communications Devices (AMCD)			\$ 103,479	\$ 34,106	\$ 116,269	\$ 7,751	\$ -	\$ 261,605
1.2 ADVANCED METERING REGIONAL COLLECTOR (AMRC) (includes LAN)								
Asset Type								
1.2.1 Collectors								\$ -
1.2.2 Repeaters (may include radio licence, etc.)	Computer Hardware		2,253	743	2,532	169		\$ 5,696
1.2.3 Installation (may include meter seals and rings, collector computer hardware, etc.)								\$ -
Total Advanced Metering Regional Collector (AMRC) (includes LAN)			\$ 2,253	\$ 743	\$ 2,532	\$ 169	\$ -	\$ 5,696
1.3 ADVANCED METERING CONTROL COMPUTER (AMCC)								
Asset Type								
1.3.1 Computer Hardware								\$ -
1.3.2 Computer Software	Computer Software		1,688	556	1,897	126		\$ 4,268
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)			\$ 1,688	\$ 556	\$ 1,897	\$ 126	\$ -	\$ 4,268
1.4 WIDE AREA NETWORK (WAN)								
Asset Type								
1.4.1 Activation Fees	Applications Software		1,954	644	2,195	146		\$ 4,939
Total Wide Area Network (WAN)			\$ 1,954	\$ 644	\$ 2,195	\$ 146	\$ -	\$ 4,939
1.5 OTHER AMI CAPITAL COSTS RELATED TO MINIMUM FUNCTIONALITY								
Asset Type								
1.5.1 Customer Equipment (including repair of damaged equipment)								\$ -
1.5.2 AMI Interface to CIS								\$ -
1.5.3 Professional Fees								\$ -
1.5.4 Integration								\$ -
1.5.5 Program Management								\$ -
1.5.6 Other AMI Capital								\$ -
Total Other AMI Capital Costs Related to Minimum Functionality			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Capital Costs Related to Minimum Functionality			\$ 109,375	\$ 36,049	\$ 122,893	\$ 8,193	\$ -	\$ 276,509
1.6 CAPITAL COSTS BEYOND MINIMUM FUNCTIONALITY								
Asset Type								
1.6.1 Costs related to technical capabilities in the smart meters or related communications infrastructure that exceed those specified in O.Reg 425/06	Computer Software							\$ -
1.6.2 Costs for deployment of smart meters to customers other than residential and small general service	Applications Software							\$ -
1.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDNR, etc.								\$ -
Total Capital Costs Beyond Minimum Functionality			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Smart Meter Capital Costs			\$ 109,375	\$ 36,049	\$ 122,893	\$ 8,193	\$ -	\$ 276,509
2 OM&A Expenses								
2.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)								
Asset Type								
2.1.1 Maintenance (may include meter re-verification costs, etc.)			960	917	737	1,133	0	\$ 3,747
2.1.2 Other (please specify)								\$ -
Total Incremental AMCD OM&A Costs			\$ 960	\$ 917	\$ 737	\$ 1,133	\$ -	\$ 3,747


Ontario Energy Board
Smart Meter Model

Middlesex Power Distribution Corporation

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

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

Smart Meter Capital Cost and Operational Expense Data

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

	2006	2007	2008	2009	2010	2011	2012 and later	Total
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
2.2.1 Maintenance								\$ -
2.2.2 Other (please specify)								\$ -
Total Incremental AMRC OM&A Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

2.3 ADVANCED METERING CONTROL COMPUTER (AMCC)

2.3.1 Hardware Maintenance (may include server support, etc.)			803	104	110	73	64	\$ 1,155
2.3.2 Software Maintenance (may include maintenance support, etc.)			1,762	407	305	198	1,459	\$ 4,131
2.3.2 Other (please specify)								\$ -
Total Incremental AMCC OM&A Costs	\$ -	\$ -	\$ 2,565	\$ 511	\$ 415	\$ 272	\$ 1,523	\$ 5,286

2.4 WIDE AREA NETWORK (WAN)

2.4.1 WAN Maintenance								\$ -
2.4.2 Other (please specify)								\$ -
Total Incremental AMRC OM&A Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

2.5 OTHER AMI OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY

2.5.1 Business Process Redesign								\$ -
2.5.2 Customer Communication (may include project communication, etc.)								\$ -
2.5.3 Program Management								\$ -
2.5.4 Change Management (may include training, etc.)								\$ -
2.5.5 Administration Costs			3,605	14	0	0	0	\$ 3,619
2.5.6 Other AMI Expenses (please specify)			215	144	45	98	0	\$ 503
Total Other AMI OM&A Costs Related to Minimum Functionality	\$ -	\$ -	\$ 3,820	\$ 158	\$ 45	\$ 98	\$ -	\$ 4,122
TOTAL OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY	\$ -	\$ -	\$ 7,345	\$ 1,587	\$ 1,197	\$ 1,503	\$ 1,523	\$ 13,155

2.6 OM&A COSTS RELATED TO BEYOND MINIMUM FUNCTIONALITY

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

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

2.6.2 Costs for deployment of smart meters to customers other than residential and small general service								\$ -
2.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDMR, etc.			0	136	5,636	4,406	0	\$ 10,178
Total OM&A Costs Beyond Minimum Functionality	\$ -	\$ -	\$ -	\$ 136	\$ 5,636	\$ 4,406	\$ -	\$ 10,178

Total Smart Meter OM&A Costs

3 Aggregate Smart Meter Costs by Category

3.1	Capital																
3.1.1	Smart Meter	\$	-	\$	-	\$	103,479	\$	34,105	\$	116,269	\$	7,751	\$	-	\$	261,605
3.1.2	Computer Hardware	\$	-	\$	-	\$	2,253	\$	743	\$	2,532	\$	169	\$	-	\$	5,696
3.1.3	Computer Software	\$	-	\$	-	\$	1,688	\$	556	\$	1,897	\$	126	\$	-	\$	4,268
3.1.4	Tools & Equipment	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
3.1.5	Other Equipment	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
3.1.6	Applications Software	\$	-	\$	-	\$	1,954	\$	644	\$	2,195	\$	146	\$	-	\$	4,939
3.1.7	Total Capital Costs	<u>\$</u>	<u>-</u>	<u>\$</u>	<u>-</u>	<u>\$</u>	<u>109,375</u>	<u>\$</u>	<u>36,049</u>	<u>\$</u>	<u>122,893</u>	<u>\$</u>	<u>8,193</u>	<u>\$</u>	<u>-</u>	<u>\$</u>	<u>276,509</u>
3.2	OM&A Costs																
3.2.1	Total OM&A Costs	<u>\$</u>	<u>-</u>	<u>\$</u>	<u>-</u>	<u>\$</u>	<u>7,345</u>	<u>\$</u>	<u>1,723</u>	<u>\$</u>	<u>6,833</u>	<u>\$</u>	<u>5,909</u>	<u>\$</u>	<u>1,523</u>	<u>\$</u>	<u>23,333</u>



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation

	2006	2007	2008	2009	2010	2011	2012 and later
Cost of Capital							
Capital Structure¹							
Deemed Short-term Debt Capitalization							
Deemed Long-term Debt Capitalization	50.0%	50.0%	53.3%	56.7%	60.0%	60.0%	60.0%
Deemed Equity Capitalization	50.0%	50.0%	46.7%	43.3%	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							
Long-term Debt Rate (actual/embedded/deemed) ²	7.25%	7.25%	7.25%	7.25%	7.25%	7.25%	7.25%
Target Return on Equity (ROE)	9.0%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
Return on Preferred Shares							
WACC	8.13%	8.13%	8.07%	8.01%	7.95%	7.95%	7.95%
Working Capital Allowance							
Working Capital Allowance Rate (% of the sum of Cost of Power + controllable expenses)	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
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	50	50	50	50
Computer Equipment - CCA Rate	45%	55%	55%	55%	55%	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	12	12	12	12	12	12	12
Applications Software - CCA Rate	100%	100%	100%	100%	100%	100%	100%

Assumptions

¹ Planned smart meter installations occur evenly throughout the year.

² Fiscal calendar year (January 1 to December 31) used.

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



	2006	2007	2008	2009	2010	2011	2012 and later
Net Fixed Assets - Smart Meters							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ 103,479	\$ 137,585	\$ 253,853	\$ 261,605
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ 103,479	\$ 34,105	\$ 116,269	\$ 7,751	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ 103,479	\$ 137,585	\$ 253,853	\$ 261,605	\$ 261,605
Accumulated Depreciation							
Opening Balance		\$ -	\$ -	\$ 3,449	\$ 11,485	\$ 24,533	\$ 41,715
Amortization expense during year	\$ -	\$ -	\$ 3,449	\$ 8,035	\$ 13,048	\$ 17,182	\$ 17,440
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ 3,449	\$ 11,485	\$ 24,533	\$ 41,715	\$ 59,155
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ 100,030	\$ 126,100	\$ 229,321	\$ 219,890
Closing Balance	\$ -	\$ -	\$ 100,030	\$ 126,100	\$ 229,321	\$ 219,890	\$ 202,450
Average Net Book Value	\$ -	\$ -	\$ 50,015	\$ 113,065	\$ 177,710	\$ 224,605	\$ 211,170
Net Fixed Assets - Computer Hardware							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ 2,253	\$ 2,996	\$ 5,528	\$ 5,696
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ 2,253	\$ 743	\$ 2,532	\$ 169	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ 2,253	\$ 2,996	\$ 5,528	\$ 5,696	\$ 5,696
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ 225	\$ 750	\$ 1,603	\$ 2,725
Amortization expense during year	\$ -	\$ -	\$ 225	\$ 525	\$ 852	\$ 1,122	\$ 1,139
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ 225	\$ 750	\$ 1,603	\$ 2,725	\$ 3,864
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ 2,028	\$ 2,246	\$ 3,925	\$ 2,971
Closing Balance	\$ -	\$ -	\$ 2,028	\$ 2,246	\$ 3,925	\$ 2,971	\$ 1,832
Average Net Book Value	\$ -	\$ -	\$ 1,014	\$ 2,137	\$ 3,065	\$ 3,448	\$ 2,402
Net Fixed Assets - Computer Software (Including Applications Software)							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ 3,642	\$ 4,843	\$ 8,935	\$ 9,208
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ 3,642	\$ 1,200	\$ 4,092	\$ 273	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ 3,642	\$ 4,843	\$ 8,935	\$ 9,208	\$ 9,208
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ 607	\$ 2,021	\$ 4,317	\$ 7,341
Amortization expense during year	\$ -	\$ -	\$ 607	\$ 1,414	\$ 2,296	\$ 3,024	\$ 1,867
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ 607	\$ 2,021	\$ 4,317	\$ 7,341	\$ 9,208
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ 3,035	\$ 2,821	\$ 4,618	\$ 1,867
Closing Balance	\$ -	\$ -	\$ 3,035	\$ 2,821	\$ 4,618	\$ 1,867	\$ -
Average Net Book Value	\$ -	\$ -	\$ 1,518	\$ 2,928	\$ 3,720	\$ 3,242	\$ 933
Net Fixed Assets - Tools and Equipment							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Amortization expense during year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Average Net Book Value	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Fixed Assets - Other Equipment							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Amortization expense during year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Average Net Book Value	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation

	2006	2007	2008	2009	2010	2011	2012 and Later
Average Net Fixed Asset Values (from Sheet 4)							
Smart Meters	\$ -	\$ -	\$ 50,015	\$ 113,065	\$ 177,710	\$ 224,605	\$ 211,170
Computer Hardware	\$ -	\$ -	\$ 1,014	\$ 2,137	\$ 3,085	\$ 3,448	\$ 2,402
Computer Software	\$ -	\$ -	\$ 1,518	\$ 2,928	\$ 3,720	\$ 3,242	\$ 933
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Net Fixed Assets	\$ -	\$ -	\$ 52,546	\$ 118,130	\$ 184,515	\$ 231,296	\$ 214,505
Working Capital							
Operating Expenses (from Sheet 2)	\$ -	\$ -	\$ 7,345	\$ 1,723	\$ 6,833	\$ 5,909	\$ 1,523
Working Capital Factor (from Sheet 3)	15%	15%	15%	15%	15%	15%	15%
Working Capital Allowance	\$ -	\$ -	\$ 1,102	\$ 258	\$ 1,025	\$ 886	\$ 229
Incremental Smart Meter Rate Base	\$ -	\$ -	\$ 53,648	\$ 118,388	\$ 185,540	\$ 232,182	\$ 214,733
Return on Rate Base							
Capital Structure							
Deemed Short Term Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Deemed Long Term Debt	\$ -	\$ -	\$ 28,594	\$ 67,126	\$ 111,324	\$ 139,309	\$ 128,840
Equity	\$ -	\$ -	\$ 25,054	\$ 51,262	\$ 74,216	\$ 92,873	\$ 85,893
Preferred Shares	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Capitalization	\$ -	\$ -	\$ 53,648	\$ 118,388	\$ 185,540	\$ 232,182	\$ 214,733
Return on							
Deemed Short Term Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Deemed Long Term Debt	\$ -	\$ -	\$ 2,073	\$ 4,867	\$ 8,071	\$ 10,100	\$ 9,341
Equity	\$ -	\$ -	\$ 2,255	\$ 4,614	\$ 6,679	\$ 8,359	\$ 7,730
Preferred Shares	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Return on Capital	\$ -	\$ -	\$ 4,328	\$ 9,480	\$ 14,750	\$ 18,458	\$ 17,071
Operating Expenses	\$ -	\$ -	\$ 7,345	\$ 1,723	\$ 6,833	\$ 5,909	\$ 1,523
Amortization Expenses (from Sheet 4)							
Smart Meters	\$ -	\$ -	\$ 3,449	\$ 8,035	\$ 13,048	\$ 17,182	\$ 17,440
Computer Hardware	\$ -	\$ -	\$ 225	\$ 525	\$ 852	\$ 1,122	\$ 1,139
Computer Software	\$ -	\$ -	\$ 607	\$ 1,414	\$ 2,296	\$ 3,024	\$ 1,867
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Amortization Expense in Year	\$ -	\$ -	\$ 4,282	\$ 9,975	\$ 16,197	\$ 21,328	\$ 20,446
Incremental Revenue Requirement before Taxes/PILs	\$ -	\$ -	\$ 15,954	\$ 21,178	\$ 37,780	\$ 45,696	\$ 39,041
Calculation of Taxable Income							
Incremental Operating Expenses	\$ -	\$ -	\$ 7,345	\$ 1,723	\$ 6,833	\$ 5,909	\$ 1,523
Amortization Expense	\$ -	\$ -	\$ 4,282	\$ 9,975	\$ 16,197	\$ 21,328	\$ 20,446
Interest Expense	\$ -	\$ -	\$ 2,073	\$ 4,867	\$ 8,071	\$ 10,100	\$ 9,341
Net Income for Taxes/PILs	\$ -	\$ -	\$ 2,255	\$ 4,614	\$ 6,679	\$ 8,359	\$ 7,730
Grossed-up Taxes/PILs (from Sheet 7)	\$ -	\$ -	\$ 357.74	\$ 1,304.25	\$ 2,169.44	\$ 3,048.07	\$ 3,462.19
Revenue Requirement, including Grossed-up Taxes/PILs	\$ -	\$ -	\$ 16,312	\$ 22,482	\$ 39,949	\$ 48,744	\$ 42,503



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation

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	\$ -	\$ -	\$ -	\$ 99,339.99	\$ 124,134.06	\$ 225,821.30	\$ 215,196.79
Capital Additions	\$ -	\$ -	\$ 103,479.15	\$ 34,105.49	\$ 116,268.71	\$ 7,751.25	\$ -
Retirements/Removals (if applicable)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
UCC Before Half Year Rule	\$ -	\$ -	\$ 103,479.15	\$ 133,445.48	\$ 240,402.77	\$ 233,572.54	\$ 215,196.79
Half Year Rule (1/2 Additions - Disposals)	\$ -	\$ -	\$ 51,739.58	\$ 17,052.74	\$ 58,134.36	\$ 3,875.62	\$ -
Reduced UCC	\$ -	\$ -	\$ 51,739.58	\$ 116,392.73	\$ 182,268.41	\$ 229,696.92	\$ 215,196.79
CCA Rate Class	47	47	47	47	47	47	47
CCA Rate	8%	8%	8%	8%	8%	8%	8%
CCA	\$ -	\$ -	\$ 4,139.17	\$ 9,311.42	\$ 14,581.47	\$ 18,375.75	\$ 17,215.74
Closing UCC	\$ -	\$ -	\$ 99,339.99	\$ 124,134.06	\$ 225,821.30	\$ 215,196.79	\$ 197,981.05

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	\$ -	\$ -	\$ -	\$ 2,857.72	\$ 2,227.84	\$ 4,213.45	\$ 2,110.11
Capital Additions Computer Hardware	\$ -	\$ -	\$ 2,253.27	\$ 742.65	\$ 2,531.76	\$ 168.78	\$ -
Capital Additions Computer Software	\$ -	\$ -	\$ 1,688.42	\$ 556.48	\$ 1,897.10	\$ 126.47	\$ -
Retirements/Removals (if applicable)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
UCC Before Half Year Rule	\$ -	\$ -	\$ 3,941.68	\$ 4,156.85	\$ 6,656.70	\$ 4,508.71	\$ 2,110.11
Half Year Rule (1/2 Additions - Disposals)	\$ -	\$ -	\$ 1,970.84	\$ 649.57	\$ 2,214.43	\$ 147.63	\$ -
Reduced UCC	\$ -	\$ -	\$ 1,970.84	\$ 3,507.29	\$ 4,442.27	\$ 4,361.08	\$ 2,110.11
CCA Rate Class	45	50	50	50	50	50	50
CCA Rate	45%	55%	55%	55%	55%	55%	55%
CCA	\$ -	\$ -	\$ 1,083.96	\$ 1,929.01	\$ 2,443.25	\$ 2,398.59	\$ 1,160.56
Closing UCC	\$ -	\$ -	\$ 2,857.72	\$ 2,227.84	\$ 4,213.45	\$ 2,110.11	\$ 949.55

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	\$ -	\$ -	\$ 2,254.83	\$ 4,613.60	\$ 6,679.44	\$ 8,358.55	\$ 7,730.40
Amortization	\$ -	\$ -	\$ 4,281.67	\$ 9,974.52	\$ 16,196.57	\$ 21,328.16	\$ 20,446.18
CCA - Smart Meters	\$ -	\$ -	\$ 4,139.17	\$ 9,311.42	\$ 14,581.47	\$ 18,375.75	\$ 17,215.74
CCA - Computers	\$ -	\$ -	\$ 1,083.96	\$ 1,929.01	\$ 2,443.25	\$ 2,398.59	\$ 1,160.56
CCA - Applications Software	\$ -	\$ -	\$ 976.90	\$ 1,298.87	\$ 1,419.62	\$ 1,170.82	\$ 73.18
CCA - Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Change in taxable income	\$ -	\$ -	\$ 336.47	\$ 2,048.82	\$ 4,431.67	\$ 7,741.55	\$ 9,727.10
Tax Rate (from Sheet 3)	36.12%	36.12%	33.50%	33.00%	31.00%	28.25%	26.25%
Income Taxes Payable	\$ -	\$ -	\$ 112.72	\$ 676.11	\$ 1,373.82	\$ 2,186.99	\$ 2,553.36
ONTARIO CAPITAL TAX							
Smart Meters	\$ -	\$ -	\$ 100,029.85	\$ 126,099.88	\$ 229,320.66	\$ 219,889.97	\$ 202,449.66
Computer Hardware	\$ -	\$ -	\$ 2,027.94	\$ 2,245.67	\$ 3,925.07	\$ 2,971.44	\$ 1,832.15
Computer Software (Including Application Software)	\$ -	\$ -	\$ 3,035.18	\$ 2,821.47	\$ 4,617.57	\$ 1,866.58	\$ -
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Rate Base	\$ -	\$ -	\$ 105,092.97	\$ 131,167.02	\$ 237,863.29	\$ 224,727.99	\$ 204,281.81
Less: Exemption	\$ -	\$ -	\$ 21,432.53	\$ -	\$ -	\$ -	\$ -
Deemed Taxable Capital	\$ -	\$ -	\$ 83,660.44	\$ 131,167.02	\$ 237,863.29	\$ 224,727.99	\$ 204,281.81
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)	\$ -	\$ -	\$ 188.24	\$ 295.13	\$ 178.40	\$ -	\$ -
Change in Income Taxes Payable	\$ -	\$ -	\$ 112.72	\$ 676.11	\$ 1,373.82	\$ 2,186.99	\$ 2,553.36
Change in OCT	\$ -	\$ -	\$ 188.24	\$ 295.13	\$ 178.40	\$ -	\$ -
PILs	\$ -	\$ -	\$ 300.95	\$ 971.24	\$ 1,552.22	\$ 2,186.99	\$ 2,553.36
Gross Up PILs							
Tax Rate	36.12%	36.12%	33.50%	33.00%	31.00%	28.25%	26.25%
Change in Income Taxes Payable	\$ -	\$ -	\$ 169.50	\$ 1,009.12	\$ 1,991.04	\$ 3,048.07	\$ 3,462.19
Change in OCT	\$ -	\$ -	\$ 188.24	\$ 295.13	\$ 178.40	\$ -	\$ -
PILs	\$ -	\$ -	\$ 357.74	\$ 1,304.25	\$ 2,169.44	\$ 3,048.07	\$ 3,462.19



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation

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	\$ -		4.59%	\$ -	\$ -		
2008 Q1	5.14%	5.18%	Sep-06	2006	Q3	\$ -		4.59%	\$ -	\$ -		
2008 Q2	4.08%	5.18%	Oct-06	2006	Q4	\$ -		4.59%	\$ -	\$ -		
2008 Q3	3.35%	5.43%	Nov-06	2006	Q4	\$ -		4.59%	\$ -	\$ -		
2008 Q4	3.35%	5.43%	Dec-06	2006	Q4	\$ -		4.59%	\$ -	\$ -	\$ -	
2009 Q1	2.45%	6.61%	Jan-07	2007	Q1	\$ -		4.59%	\$ -	\$ -		
2009 Q2	1.00%	6.61%	Feb-07	2007	Q1	\$ -		4.59%	\$ -	\$ -		
2009 Q3	0.55%	5.67%	Mar-07	2007	Q1	\$ -		4.59%	\$ -	\$ -		
2009 Q4	0.55%	4.66%	Apr-07	2007	Q2	\$ -		4.59%	\$ -	\$ -		
2010 Q1	0.55%	4.34%	May-07	2007	Q2	\$ -		4.59%	\$ -	\$ -		
2010 Q2	0.55%	4.34%	Jun-07	2007	Q2	\$ -		4.59%	\$ -	\$ -		
2010 Q3	0.89%	4.66%	Jul-07	2007	Q3	\$ -		4.59%	\$ -	\$ -		
2010 Q4	1.20%	4.01%	Aug-07	2007	Q3	\$ -		4.59%	\$ -	\$ -		
2011 Q1	1.47%	4.29%	Sep-07	2007	Q3	\$ -		4.59%	\$ -	\$ -		
2011 Q2	1.47%	4.29%	Oct-07	2007	Q4	\$ -		5.14%	\$ -	\$ -		
2011 Q3	1.47%	4.29%	Nov-07	2007	Q4	\$ -	\$ -	5.14%	\$ -	\$ -		
2011 Q4	1.47%	4.29%	Dec-07	2007	Q4	\$ -	\$ -	5.14%	\$ -	\$ -	\$ -	
2012 Q1	1.47%	4.29%	Jan-08	2008	Q1	\$ -	\$ -	5.14%	\$ -	\$ -		
2012 Q2	1.47%	4.29%	Feb-08	2008	Q1	\$ -	\$ -	5.14%	\$ -	\$ -		
2012 Q3	1.47%	4.29%	Mar-08	2008	Q1	\$ -	\$ -	5.14%	\$ -	\$ -		
2012 Q4	1.47%	4.29%	Apr-08	2008	Q2	\$ -	\$ -	4.08%	\$ -	\$ -		
			May-08	2008	Q2	\$ -	\$ -	4.08%	\$ -	\$ -		
			Jun-08	2008	Q2	\$ -	\$ -	4.08%	\$ -	\$ -		
			Jul-08	2008	Q3	\$ -	\$ -	3.35%	\$ -	\$ -		
			Aug-08	2008	Q3	\$ -	\$ -	3.35%	\$ -	\$ -		
			Sep-08	2008	Q3	\$ -	\$ -	3.35%	\$ -	\$ -		
			Oct-08	2008	Q4	\$ -	\$ -	3.35%	\$ -	\$ -		
			Nov-08	2008	Q4	\$ -	\$ 831.49	3.35%	\$ -	\$ 831.49	\$ 1,641.11	\$ 1.26
			Dec-08	2008	Q4	\$ 831.49	\$ 807.30	3.35%	\$ 2.32	\$ 1,641.11	\$ 1,641.11	\$ 1.26
			Jan-09	2009	Q1	\$ 1,638.79	\$ 843.74	2.45%	\$ 3.35	\$ 2,485.88	\$ 2,485.88	\$ 1.26
			Feb-09	2009	Q1	\$ 2,482.53	\$ 840.33	2.45%	\$ 5.07	\$ 3,327.93	\$ 3,327.93	\$ 1.26
			Mar-09	2009	Q1	\$ 3,322.86	\$ 843.32	2.45%	\$ 6.78	\$ 4,172.96	\$ 4,172.96	\$ 1.26
			Apr-09	2009	Q2	\$ 4,166.18	\$ 840.42	1.00%	\$ 3.47	\$ 5,010.07	\$ 5,010.07	\$ 1.26
			May-09	2009	Q2	\$ 5,006.60	\$ 839.46	1.00%	\$ 4.17	\$ 5,850.23	\$ 5,850.23	\$ 1.26
			Jun-09	2009	Q2	\$ 5,846.06	\$ 843.36	1.00%	\$ 4.87	\$ 6,694.29	\$ 6,694.29	\$ 1.26
			Jul-09	2009	Q3	\$ 6,689.42	\$ 839.26	0.55%	\$ 3.07	\$ 7,531.75	\$ 7,531.75	\$ 1.26
			Aug-09	2009	Q3	\$ 7,528.68	\$ 838.03	0.55%	\$ 3.45	\$ 8,370.16	\$ 8,370.16	\$ 1.26
			Sep-09	2009	Q3	\$ 8,366.71	\$ 832.20	0.55%	\$ 3.83	\$ 9,202.74	\$ 9,202.74	\$ 1.26
			Oct-09	2009	Q4	\$ 9,198.91	\$ 836.63	0.55%	\$ 4.22	\$ 10,039.76	\$ 10,039.76	\$ 1.26
			Nov-09	2009	Q4	\$ 10,035.54	\$ 829.84	0.55%	\$ 4.60	\$ 10,869.98	\$ 10,869.98	\$ 1.26
			Dec-09	2009	Q4	\$ 10,865.38	\$ 1,186.91	0.55%	\$ 4.98	\$ 12,057.27	\$ 12,057.27	\$ 1.26
			Jan-10	2010	Q1	\$ 12,052.29	\$ 835.96	0.55%	\$ 5.52	\$ 12,893.77	\$ 12,893.77	\$ 1.26
			Feb-10	2010	Q1	\$ 12,888.25	\$ 837.34	0.55%	\$ 5.91	\$ 13,731.50	\$ 13,731.50	\$ 1.26
			Mar-10	2010	Q1	\$ 13,725.59	\$ 841.50	0.55%	\$ 6.29	\$ 14,573.38	\$ 14,573.38	\$ 1.26
			Apr-10	2010	Q2	\$ 14,567.09	\$ 841.17	0.55%	\$ 6.68	\$ 15,414.94	\$ 15,414.94	\$ 1.26
			May-10	2010	Q2	\$ 15,408.26	\$ 835.93	0.55%	\$ 7.06	\$ 16,251.25	\$ 16,251.25	\$ 1.26
			Jun-10	2010	Q2	\$ 16,244.19	\$ 836.79	0.55%	\$ 7.45	\$ 17,088.43	\$ 17,088.43	\$ 1.26
			Jul-10	2010	Q3	\$ 17,080.98	\$ 840.18	0.89%	\$ 12.67	\$ 17,933.83	\$ 17,933.83	\$ 1.26
			Aug-10	2010	Q3	\$ 17,921.16	\$ 837.18	0.89%	\$ 13.29	\$ 18,771.63	\$ 18,771.63	\$ 1.26
			Sep-10	2010	Q3	\$ 18,758.34	\$ 837.23	0.89%	\$ 13.91	\$ 19,609.48	\$ 19,609.48	\$ 1.26
			Oct-10	2010	Q4	\$ 19,595.57	\$ 837.14	1.20%	\$ 19.60	\$ 20,452.31	\$ 20,452.31	\$ 1.26
			Nov-10	2010	Q4	\$ 20,432.71	\$ 836.23	1.20%	\$ 20.43	\$ 21,289.37	\$ 21,289.37	\$ 1.26
			Dec-10	2010	Q4	\$ 21,268.94	\$ 907.00	1.20%	\$ 21.27	\$ 22,197.21	\$ 22,197.21	\$ 1.26
			Jan-11	2011	Q1	\$ 22,175.94	\$ 846.14	1.47%	\$ 27.17	\$ 23,049.25	\$ 23,049.25	\$ 1.26
			Feb-11	2011	Q1	\$ 23,022.08	\$ 844.21	1.47%	\$ 28.20	\$ 23,894.49	\$ 23,894.49	\$ 1.26
			Mar-11	2011	Q1	\$ 23,866.29	\$ 844.69	1.47%	\$ 29.24	\$ 24,740.22	\$ 24,740.22	\$ 1.26
			Apr-11	2011	Q2	\$ 24,710.98	\$ 843.95	1.47%	\$ 30.27	\$ 25,585.20	\$ 25,585.20	\$ 1.26
			May-11	2011	Q2	\$ 25,554.93	\$ 835.24	1.47%	\$ 31.30	\$ 26,421.47	\$ 26,421.47	\$ 1.18
			Jun-11	2011	Q2	\$ 26,390.17	\$ 794.93	1.47%	\$ 32.33	\$ 27,217.43	\$ 27,217.43	\$ 1.18
			Jul-11	2011	Q3	\$ 27,185.10	\$ 783.84	1.47%	\$ 33.30	\$ 28,002.24	\$ 28,002.24	\$ 1.18
			Aug-11	2011	Q3	\$ 27,968.94	\$ 790.75	1.47%	\$ 34.26	\$ 28,793.95	\$ 28,793.95	\$ 1.18
			Sep-11	2011	Q3	\$ 28,759.69	\$ 786.29	1.47%	\$ 35.23	\$ 29,581.21	\$ 29,581.21	\$ 1.18
			Oct-11	2011	Q4	\$ 29,545.98	\$ 785.75	1.47%	\$ 36.19	\$ 30,367.92	\$ 30,367.92	\$ 1.18
			Nov-11	2011	Q4	\$ 30,331.73	\$ 780.86	1.47%	\$ 37.16	\$ 31,149.75	\$ 31,149.75	\$ 1.18
			Dec-11	2011	Q4	\$ 31,112.59	\$ 634.80	1.47%	\$ 38.11	\$ 31,785.50	\$ 31,785.50	\$ 9,964.21



This worksheet calculates the funding adder revenues.

Account 1555 - Sub-account Funding Adder Revenues

Interest Rates	Approved Deferral and Variance Accounts	CWIP				Opening Balance (Principal)	Funding Adder Revenues	Interest		Closing Balance	Annual amounts	Board Approved Smart Meter Funding Adder (from Tariff)
			Date	Year	Quarter			Rate	Interest			
			Jan-12	2012	Q1	\$ 31,747.39	\$ 770.19	1.47%	\$ 38.89	\$ 32,556.47		\$ 1.18
			Feb-12	2012	Q1	\$ 32,517.58	\$ 781.98	1.47%	\$ 39.83	\$ 33,339.39		\$ 1.18
			Mar-12	2012	Q1	\$ 33,299.56	\$ 781.31	1.47%	\$ 40.79	\$ 34,121.66		\$ 1.18
			Apr-12	2012	Q2	\$ 34,080.87	\$ 782.89	1.47%	\$ 41.75	\$ 34,905.51		\$ 1.18
			May-12	2012	Q2	\$ 34,863.76	\$ 36.96	1.47%	\$ 42.71	\$ 34,869.51		
			Jun-12	2012	Q2	\$ 34,826.80	\$ -	1.47%	\$ 42.66	\$ 34,869.46		
			Jul-12	2012	Q3	\$ 34,826.80	\$ -	1.47%	\$ 42.66	\$ 34,869.46		
			Aug-12	2012	Q3	\$ 34,826.80	\$ -	1.47%	\$ 42.66	\$ 34,869.46		
			Sep-12	2012	Q3	\$ 34,826.80	\$ -	1.47%	\$ 42.66	\$ 34,869.46		
			Oct-12	2012	Q4	\$ 34,826.80	\$ -	1.47%	\$ 42.66	\$ 34,869.46		
			Nov-12	2012	Q4	\$ 34,826.80	\$ -	1.47%	\$ 42.66	\$ 34,869.46		
			Dec-12	2012	Q4	\$ 34,826.80	\$ -	1.47%	\$ 42.66	\$ 34,869.46	\$ 3,582.00	
Total Funding Adder Revenues Collected						\$ 34,826.80			\$ 1,089.61	\$ 35,916.41	\$ 35,916.41	



Middlesex Power Distribution Corporation

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	-			-	5.14%	-	-
2012 Q1	1.47%	4.29%	Jan-08	2008	Q1	-			-	5.14%	-	-
2012 Q2	1.47%	4.29%	Feb-08	2008	Q1	-			-	5.14%	-	-
2012 Q3	1.47%	4.29%	Mar-08	2008	Q1	-			-	5.14%	-	-
2012 Q4	1.47%	4.29%	Apr-08	2008	Q2	-			-	4.08%	-	-
			May-08	2008	Q2	-			-	4.08%	-	-
			Jun-08	2008	Q2	-			-	4.08%	-	-
			Jul-08	2008	Q3	-			-	3.35%	-	-
			Aug-08	2008	Q3	-			-	3.35%	-	-
			Sep-08	2008	Q3	-			-	3.35%	-	-
			Oct-08	2008	Q4	-			-	3.35%	-	-
			Nov-08	2008	Q4	-			-	3.35%	-	-
			Dec-08	2008	Q4	-			-	3.35%	-	-
			Jan-09	2009	Q1	-			-	2.45%	-	-
			Feb-09	2009	Q1	-			-	2.45%	-	-
			Mar-09	2009	Q1	-			-	2.45%	-	-
			Apr-09	2009	Q2	-			-	1.00%	-	-
			May-09	2009	Q2	-			-	1.00%	-	-
			Jun-09	2009	Q2	-			-	1.00%	-	-
			Jul-09	2009	Q3	-			-	0.55%	-	-
			Aug-09	2009	Q3	-			-	0.55%	-	-
			Sep-09	2009	Q3	-			-	0.55%	-	-
			Oct-09	2009	Q4	-			-	0.55%	-	-
			Nov-09	2009	Q4	-			-	0.55%	-	-
			Dec-09	2009	Q4	-			-	0.55%	-	-
			Jan-10	2010	Q1	-			-	0.55%	-	-
			Feb-10	2010	Q1	-			-	0.55%	-	-
			Mar-10	2010	Q1	-			-	0.55%	-	-
			Apr-10	2010	Q2	-			-	0.55%	-	-
			May-10	2010	Q2	-			-	0.55%	-	-
			Jun-10	2010	Q2	-			-	0.55%	-	-
			Jul-10	2010	Q3	-			-	0.89%	-	-
			Aug-10	2010	Q3	-			-	0.89%	-	-
			Sep-10	2010	Q3	-			-	0.89%	-	-
			Oct-10	2010	Q4	-			-	1.20%	-	-
			Nov-10	2010	Q4	-			-	1.20%	-	-
			Dec-10	2010	Q4	-			-	1.20%	-	-
			Jan-11	2011	Q1	-			-	1.47%	-	-
			Feb-11	2011	Q1	-			-	1.47%	-	-
			Mar-11	2011	Q1	-			-	1.47%	-	-
			Apr-11	2011	Q2	-			-	1.47%	-	-
			May-11	2011	Q2	-			-	1.47%	-	-
			Jun-11	2011	Q2	-			-	1.47%	-	-
			Jul-11	2011	Q3	-			-	1.47%	-	-
			Aug-11	2011	Q3	-			-	1.47%	-	-
			Sep-11	2011	Q3	-			-	1.47%	-	-
			Oct-11	2011	Q4	-			-	1.47%	-	-
			Nov-11	2011	Q4	-			-	1.47%	-	-
			Dec-11	2011	Q4	-			-	1.47%	-	-
			Jan-12	2012	Q1	-			-	1.47%	-	-
			Feb-12	2012	Q1	-			-	1.47%	-	-
			Mar-12	2012	Q1	-			-	1.47%	-	-
			Apr-12	2012	Q2	-			-	1.47%	-	-
			May-12	2012	Q2	-			-	1.47%	-	-
			Jun-12	2012	Q2	-			-	1.47%	-	-
			Jul-12	2012	Q3	-			-	1.47%	-	-
			Aug-12	2012	Q3	-			-	1.47%	-	-
			Sep-12	2012	Q3	-			-	1.47%	-	-
			Oct-12	2012	Q4	-			-	1.47%	-	-
			Nov-12	2012	Q4	-			-	1.47%	-	-
			Dec-12	2012	Q4	-			-	1.47%	-	-
						\$	-	\$	-	\$	-	-



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation

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

Year	OM&A (from Sheet 5)	Amortization Expense (from Sheet 5)	Cumulative OM&A and Amortization Expense	Average Cumulative OM&A and Amortization Expense	Average Annual Prescribed Interest Rate for Deferral and Variance Accounts (from Sheets 8A and 8B)	Simple Interest on OM&A and Amortization Expenses
2006	\$ -	\$ -	\$ -	\$ -	4.37%	\$ -
2007	\$ -	\$ -	\$ -	\$ -	4.73%	\$ -
2008	\$ 7,344.75	\$ 4,281.67	\$ 11,626.41	\$ 5,813.21	3.98%	\$ 231.37
2009	\$ 1,722.77	\$ 9,974.52	\$ 23,323.70	\$ 17,475.06	1.14%	\$ 198.78
2010	\$ 6,832.63	\$ 16,196.57	\$ 46,352.91	\$ 34,838.31	0.80%	\$ 277.84
2011	\$ 5,909.07	\$ 21,328.16	\$ 73,590.13	\$ 59,971.52	1.47%	\$ 881.58
2012	\$ 1,523.45	\$ 20,446.18	\$ 95,559.76	\$ 84,574.95	1.47%	\$ 1,243.25
Cumulative Interest to 2011						\$ 1,589.56
Cumulative Interest to 2012						\$ 2,832.81



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

Check if applicable

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

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

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

	2006	2007	2008	2009	2010	2011	2012 and later	Total
Deferred and forecasted Smart Meter Incremental Revenue Requirement (from Sheet 5)	\$ -	\$ -	\$ 16,312.08	\$ 22,481.78	\$ 39,949.08	\$ 48,743.76	\$ 42,503.12	\$ 169,989.83
Interest on Deferred and forecasted OM&A and Amortization Expense (Sheet 8A/8B) (Check one of the boxes below)	\$ -	\$ -	\$ 231.37	\$ 198.78	\$ 277.84	\$ 881.58		\$ 1,589.56
<input type="checkbox"/> Sheet 8A (Interest calculated on monthly balances)								\$ -
<input checked="" type="checkbox"/> Sheet 8B (Interest calculated on average annual balances)	\$ -	\$ -	\$ 231.37	\$ 198.78	\$ 277.84	\$ 881.58		\$ 1,589.56
SMFA Revenues (from Sheet 8)	\$ -	\$ -	\$ 1,638.79	\$ 10,413.50	\$ 10,123.65	\$ 9,571.45	\$ 3,079.41	\$ 34,826.80
SMFA Interest (from Sheet 8)	\$ -	\$ -	\$ 2.32	\$ 51.86	\$ 140.08	\$ 392.76	\$ 502.59	\$ 1,089.61
Net Deferred Revenue Requirement	\$ -	\$ -	\$ 14,902.34	\$ 12,215.20	\$ 29,963.19	\$ 39,661.13	\$ 38,921.12	\$ 135,662.98
Number of Metered Customers (average for 2012 test year)							662	

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

Years for collection or refunding	3.5	
Deferred Incremental Revenue Requirement from 2006 to December 31, 2011 plus Interest on OM&A and Amortization	\$ 129,076.27	
SMFA Revenues collected from 2006 to 2012 test year (inclusive) Plus Simple Interest on SMFA Revenues	\$ 35,916.41	
Net Deferred Revenue Requirement	\$ 93,159.86	
SMDR November 1, 2012 to April 30, 2016	\$ 3.35	Match
Check: Forecasted SMDR Revenues	\$ 93,143.40	

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

Incremental Revenue Requirement for 2012	\$ 42,503.12	
SMIRR	\$ 5.35	Match
Check: Forecasted SMIRR Revenues	\$ 42,500.40	

Attachment I

SMP General Service Greater than 50 kW Smart Meter Model



Ontario Energy Board

Smart Meter Model

Choose Your Utility:

Middlesex Power Distribution Corporation

Middlesex Power Distribution Corporation - Dutton

Application Contact Information

Name: Andrya Eagen

Title: Senior Regulatory Specialist

Phone Number: 519-352-6300 Ext 243

Email Address: andryaeagen@ckenergy.com

We are applying for rates effective: November 1, 2012

Last COS Re-based Year 2006

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.



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

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

Smart Meter Capital Cost and Operational Expense Data	2006	2007	2008	2009	2010	2011	2012 and later	Total
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
Smart Meter Installation Plan								
Actual/Planned number of Smart Meters installed during the Calendar Year								
Residential								0
General Service < 50 kW								0
Actual/Planned number of Smart Meters installed (Residential and GS < 50 kW only)	0	0	0	0	0	0	0	0
Percentage of Residential and GS < 50 kW Smart Meter Installations Completed	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Actual/Planned number of GS > 50 kW meters installed				21	42	18		81
Other (please identify)								0
Total Number of Smart Meters installed or planned to be installed	0	0	0	21	42	18	0	81
1 Capital Costs								
1.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)								
Asset Type								
Asset type must be selected to enable calculations								
1.1.1 Smart Meters (may include new meters and modules, etc.)	Smart Meter		0	12,354	24,708	10,589		\$ 47,651
1.1.2 Installation Costs (may include socket kits, labour, vehicle, benefits, etc.)	Smart Meter		0	3,958	7,917	3,393		\$ 15,268
1.1.3a Workforce Automation Hardware (may include fieldwork handhelds, barcode hardware, etc.)								\$ -
1.1.3b Workforce Automation Software (may include fieldwork handhelds, barcode hardware, etc.)								\$ -
Total Advanced Metering Communications Devices (AMCD)				\$ 16,312	\$ 32,625	\$ 13,982		\$ 62,919
1.2 ADVANCED METERING REGIONAL COLLECTOR (AMRC) (includes LAN)								
Asset Type								
1.2.1 Collectors								\$ -
1.2.2 Repeaters (may include radio licence, etc.)								\$ -
1.2.3 Installation (may include meter seals and rings, collector computer hardware, etc.)								\$ -
Total Advanced Metering Regional Collector (AMRC) (includes LAN)								\$ -
1.3 ADVANCED METERING CONTROL COMPUTER (AMCC)								
Asset Type								
1.3.1 Computer Hardware								\$ -
1.3.2 Computer Software								\$ -
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)								\$ -
1.4 WIDE AREA NETWORK (WAN)								
Asset Type								
1.4.1 Activation Fees	Applications Software		0	2,423	4,845	2,077		\$ 9,345
Total Wide Area Network (WAN)				\$ 2,423	\$ 4,845	\$ 2,077		\$ 9,345
1.5 OTHER AMI CAPITAL COSTS RELATED TO MINIMUM FUNCTIONALITY								
Asset Type								
1.5.1 Customer Equipment (including repair of damaged equipment)								\$ -
1.5.2 AMI Interface to CIS								\$ -
1.5.3 Professional Fees								\$ -
1.5.4 Integration								\$ -
1.5.5 Program Management								\$ -
1.5.6 Other AMI Capital								\$ -
Total Other AMI Capital Costs Related to Minimum Functionality								\$ -
Total Capital Costs Related to Minimum Functionality				\$ 18,735	\$ 37,470	\$ 16,059		\$ 72,264
1.6 CAPITAL COSTS BEYOND MINIMUM FUNCTIONALITY								
Asset Type								
1.6.1 Costs related to technical capabilities in the smart meters or related communications infrastructure that exceed those specified in O.Reg 425/06	Computer Software							\$ -
1.6.2 Costs for deployment of smart meters to customers other than residential and small general service	Applications Software							\$ -
1.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDNR, etc.								\$ -
Total Capital Costs Beyond Minimum Functionality								\$ -
Total Smart Meter Capital Costs				\$ 18,735	\$ 37,470	\$ 16,059		\$ 72,264
2 OM&A Expenses								
2.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)								
2.1.1 Maintenance (may include meter reverification costs, etc.)			115	110	88	136	0	\$ 450
2.1.2 Other (please specify)								\$ -
Total Incremental AMCD OM&A Costs			\$ 115	\$ 110	\$ 88	\$ 136	\$ -	\$ 450



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.

	2006	2007	2008	2009	2010	2011	2012 and later	Total
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
Smart Meter Capital Cost and Operational Expense Data								
2.2 ADVANCED METERING REGIONAL COLLECTOR (AMRC) (includes LAN)								
2.2.1 Maintenance								\$ -
2.2.2 Other (please specify)								\$ -
Total Incremental AMRC OM&A Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3 ADVANCED METERING CONTROL COMPUTER (AMCC)								
2.3.1 Hardware Maintenance (may include server support, etc.)			96	13	13	9	8	\$ 139
2.3.2 Software Maintenance (may include maintenance support, etc.)			211	49	37	24	175	\$ 496
2.3.2 Other (please specify)								\$ -
Total Incremental AMCC OM&A Costs	\$ -	\$ -	\$ 308	\$ 61	\$ 50	\$ 33	\$ 183	\$ 634
2.4 WIDE AREA NETWORK (WAN)								
2.4.1 WAN Maintenance								\$ -
2.4.2 Other (please specify)								\$ -
Total Incremental AMRC OM&A Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5 OTHER AMI OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY								
2.5.1 Business Process Redesign								\$ -
2.5.2 Customer Communication (may include project communication, etc.)								\$ -
2.5.3 Program Management								\$ -
2.5.4 Change Management (may include training, etc.)								\$ -
2.5.5 Administration Costs			433	2	0	0	0	\$ 434
2.5.6 Other AMI Expenses (please specify)			26	17	5	12	0	\$ 60
Total Other AMI OM&A Costs Related to Minimum Functionality	\$ -	\$ -	\$ 459	\$ 19	\$ 5	\$ 12	\$ -	\$ 495
TOTAL OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY	\$ -	\$ -	\$ 881	\$ 190	\$ 144	\$ 180	\$ 183	\$ 1,579
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 MDMR, etc.			0	0	0	0	0	\$ -
Total OM&A Costs Beyond Minimum Functionality	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Smart Meter OM&A Costs	\$ -	\$ -	\$ 881	\$ 190	\$ 144	\$ 180	\$ 183	\$ 1,579
3 Aggregate Smart Meter Costs by Category								
3.1 Capital								
3.1.1 Smart Meter	\$ -	\$ -	\$ -	\$ 16,312	\$ 32,625	\$ 13,982	\$ -	\$ 62,919
3.1.2 Computer Hardware	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1.3 Computer Software	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1.4 Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1.5 Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1.6 Applications Software	\$ -	\$ -	\$ -	\$ 2,423	\$ 4,845	\$ 2,077	\$ -	\$ 9,345
3.1.7 Total Capital Costs	\$ -	\$ -	\$ -	\$ 18,735	\$ 37,470	\$ 16,059	\$ -	\$ 72,264
3.2 OM&A Costs								
3.2.1 Total OM&A Costs	\$ -	\$ -	\$ 881	\$ 190	\$ 144	\$ 180	\$ 183	\$ 1,579



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation

	2006	2007	2008	2009	2010	2011	2012 and later
Cost of Capital							
Capital Structure¹							
Deemed Short-term Debt Capitalization					4.0%	4.0%	4.0%
Deemed Long-term Debt Capitalization	50.0%	50.0%	53.3%	56.7%	56.0%	56.0%	56.0%
Deemed Equity Capitalization	50.0%	50.0%	46.7%	43.3%	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					2.07%	2.07%	2.07%
Long-term Debt Rate (actual/embedded/deemed) ²	7.25%	7.25%	7.25%	7.25%	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							
WACC	8.13%	8.13%	8.07%	8.01%	7.31%	7.31%	7.31%
Working Capital Allowance							
Working Capital Allowance Rate (% of the sum of Cost of Power + controllable expenses)	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
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	50	50	50	50
Computer Equipment - CCA Rate	45%	55%	55%	55%	55%	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	12	12	12	12	12	12	12
Applications Software - CCA Rate	100%	100%	100%	100%	100%	100%	100%

Assumptions

¹ Planned smart meter installations occur evenly throughout the year.

² Fiscal calendar year (January 1 to December 31) used.

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



	2006	2007	2008	2009	2010	2011	2012 and later
Net Fixed Assets - Smart Meters							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ 16,312	\$ 48,937	\$ 62,919
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ 16,312	\$ 32,625	\$ 13,982	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 16,312	\$ 48,937	\$ 62,919	\$ 62,919
Accumulated Depreciation							
Opening Balance		\$ -	\$ -	\$ -	\$ 544	\$ 2,719	\$ 6,447
Amortization expense during year	\$ -	\$ -	\$ -	\$ 544	\$ 2,175	\$ 3,729	\$ 4,195
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 544	\$ 2,719	\$ 6,447	\$ 10,642
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 15,769	\$ 46,218	\$ 56,472
Closing Balance	\$ -	\$ -	\$ -	\$ 15,769	\$ 46,218	\$ 56,472	\$ 52,277
Average Net Book Value	\$ -	\$ -	\$ -	\$ 7,884	\$ 30,994	\$ 51,345	\$ 54,375
Net Fixed Assets - Computer Hardware							
Gross Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Amortization expense during year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Average Net Book Value	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Fixed Assets - Computer Software (Including Applications Software)							
Gross Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 2,423	\$ 7,268	\$ 9,345
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ 2,423	\$ 4,845	\$ 2,077	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 2,423	\$ 7,268	\$ 9,345	\$ 9,345
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 404	\$ 2,019	\$ 4,788
Amortization expense during year	\$ -	\$ -	\$ -	\$ 404	\$ 1,615	\$ 2,769	\$ 3,115
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 404	\$ 2,019	\$ 4,788	\$ 7,903
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 2,019	\$ 5,249	\$ 4,557
Closing Balance	\$ -	\$ -	\$ -	\$ 2,019	\$ 5,249	\$ 4,557	\$ 1,442
Average Net Book Value	\$ -	\$ -	\$ -	\$ 1,009	\$ 3,634	\$ 4,903	\$ 3,000
Net Fixed Assets - Tools and Equipment							
Gross Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Amortization expense during year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Average Net Book Value	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Fixed Assets - Other Equipment							
Gross Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Amortization expense during year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Average Net Book Value	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation

	2006	2007	2008	2009	2010	2011	2012 and Later
Average Net Fixed Asset Values (from Sheet 4)							
Smart Meters	\$ -	\$ -	\$ -	\$ 7,884	\$ 30,994	\$ 51,345	\$ 54,375
Computer Hardware	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Computer Software	\$ -	\$ -	\$ -	\$ 1,009	\$ 3,634	\$ 4,903	\$ 3,000
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Net Fixed Assets	\$ -	\$ -	\$ -	\$ 8,894	\$ 34,628	\$ 56,248	\$ 57,374
Working Capital							
Operating Expenses (from Sheet 2)	\$ -	\$ -	\$ 881	\$ 190	\$ 144	\$ 180	\$ 183
Working Capital Factor (from Sheet 3)	15%	15%	15%	15%	15%	15%	15%
Working Capital Allowance	\$ -	\$ -	\$ 132	\$ 29	\$ 22	\$ 27	\$ 27
Incremental Smart Meter Rate Base	\$ -	\$ -	\$ 132	\$ 8,922	\$ 34,649	\$ 56,275	\$ 57,402
Return on Rate Base							
Capital Structure							
Deemed Short Term Debt	\$ -	\$ -	\$ -	\$ -	\$ 1,386	\$ 2,251	\$ 2,296
Deemed Long Term Debt	\$ -	\$ -	\$ 70	\$ 5,059	\$ 19,403	\$ 31,514	\$ 32,145
Equity	\$ -	\$ -	\$ 62	\$ 3,863	\$ 13,860	\$ 22,510	\$ 22,961
Preferred Shares	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Capitalization	\$ -	\$ -	\$ 132	\$ 8,922	\$ 34,649	\$ 56,275	\$ 57,402
Return on							
Deemed Short Term Debt	\$ -	\$ -	\$ -	\$ -	\$ 29	\$ 47	\$ 48
Deemed Long Term Debt	\$ -	\$ -	\$ 5	\$ 367	\$ 1,139	\$ 1,850	\$ 1,887
Equity	\$ -	\$ -	\$ 6	\$ 348	\$ 1,365	\$ 2,217	\$ 2,262
Preferred Shares	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Return on Capital	\$ -	\$ -	\$ 11	\$ 714	\$ 2,533	\$ 4,114	\$ 4,196
Operating Expenses	\$ -	\$ -	\$ 881	\$ 190	\$ 144	\$ 180	\$ 183
Amortization Expenses (from Sheet 4)							
Smart Meters	\$ -	\$ -	\$ -	\$ 544	\$ 2,175	\$ 3,729	\$ 4,195
Computer Hardware	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Computer Software	\$ -	\$ -	\$ -	\$ 404	\$ 1,615	\$ 2,769	\$ 3,115
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Amortization Expense in Year	\$ -	\$ -	\$ -	\$ 948	\$ 3,790	\$ 6,497	\$ 7,309
Incremental Revenue Requirement before Taxes/PILs	\$ -	\$ -	\$ 892	\$ 1,852	\$ 6,467	\$ 10,791	\$ 11,688
Calculation of Taxable Income							
Incremental Operating Expenses	\$ -	\$ -	\$ 881	\$ 190	\$ 144	\$ 180	\$ 183
Amortization Expense	\$ -	\$ -	\$ -	\$ 948	\$ 3,790	\$ 6,497	\$ 7,309
Interest Expense	\$ -	\$ -	\$ 5	\$ 367	\$ 1,168	\$ 1,896	\$ 1,934
Net Income for Taxes/PILs	\$ -	\$ -	\$ 6	\$ 348	\$ 1,365	\$ 2,217	\$ 2,262
Grossed-up Taxes/PILs (from Sheet 7)	\$ -	\$ -	\$ 2.80	\$ 240.04	\$ 427.09	\$ 407.97	\$ 1,457.01
Revenue Requirement, including Grossed-up Taxes/PILs	\$ -	\$ -	\$ 895	\$ 1,612	\$ 6,039	\$ 11,199	\$ 13,145



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	\$ -	\$ -	\$ -	\$ -	\$ 15,659.88	\$ 45,726.86	\$ 55,491.47
Capital Additions	\$ -	\$ -	\$ -	\$ 16,312.38	\$ 32,624.76	\$ 13,982.04	\$ -
Retirements/Removals (if applicable)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
UCC Before Half Year Rule	\$ -	\$ -	\$ -	\$ 16,312.38	\$ 48,284.64	\$ 59,708.90	\$ 55,491.47
Half Year Rule (1/2 Additions - Disposals)	\$ -	\$ -	\$ -	\$ 8,156.19	\$ 16,312.38	\$ 6,991.02	\$ -
Reduced UCC	\$ -	\$ -	\$ -	\$ 8,156.19	\$ 31,972.26	\$ 52,717.88	\$ 55,491.47
CCA Rate Class	47	47	47	47	47	47	47
CCA Rate	8%	8%	8%	8%	8%	8%	8%
CCA	\$ -	\$ -	\$ -	\$ 652.50	\$ 2,557.78	\$ 4,217.43	\$ 4,439.32
Closing UCC	\$ -	\$ -	\$ -	\$ 15,659.88	\$ 45,726.86	\$ 55,491.47	\$ 51,052.15

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	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions Computer Hardware	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions Computer Software	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
UCC Before Half Year Rule	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Half Year Rule (1/2 Additions - Disposals)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Reduced UCC	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CCA Rate Class	45	50	50	50	50	50	50
CCA Rate	45%	55%	55%	55%	55%	55%	55%
CCA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing UCC	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

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	\$ -	\$ -	\$ 5.56	\$ 347.70	\$ 1,365.17	\$ 2,217.25	\$ 2,261.62
Amortization	\$ -	\$ -	\$ -	\$ 947.53	\$ 3,790.11	\$ 6,497.33	\$ 7,309.50
CCA - Smart Meters	\$ -	\$ -	\$ -	\$ 652.50	\$ 2,557.78	\$ 4,217.43	\$ 4,439.32
CCA - Computers	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CCA - Applications Software	\$ -	\$ -	\$ -	\$ 1,211.34	\$ 3,634.03	\$ 3,460.98	\$ 1,038.29
CCA - Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Change in taxable income	\$ -	\$ -	\$ 5.56	\$ 568.61	\$ 1,036.53	\$ 1,036.16	\$ 4,093.50
Tax Rate (from Sheet 3)	36.12%	36.12%	33.50%	33.00%	31.00%	28.25%	26.25%
Income Taxes Payable	\$ -	\$ -	\$ 1.86	\$ 187.64	\$ 321.32	\$ 292.72	\$ 1,074.54
ONTARIO CAPITAL TAX							
Smart Meters	\$ -	\$ -	\$ -	\$ 15,768.63	\$ 46,218.41	\$ 56,471.90	\$ 52,277.29
Computer Hardware	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Computer Software (Including Application Software)	\$ -	\$ -	\$ -	\$ 2,018.91	\$ 5,249.16	\$ 4,556.96	\$ 1,442.08
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Rate Base	\$ -	\$ -	\$ -	\$ 17,787.54	\$ 51,467.56	\$ 61,028.86	\$ 53,719.37
Less: Exemption	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Deemed Taxable Capital	\$ -	\$ -	\$ -	\$ 17,787.54	\$ 51,467.56	\$ 61,028.86	\$ 53,719.37
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)	\$ -	\$ -	\$ -	\$ 40.02	\$ 38.60	\$ -	\$ -
Change in Income Taxes Payable	\$ -	\$ -	\$ 1.86	\$ 187.64	\$ 321.32	\$ 292.72	\$ 1,074.54
Change in OCT	\$ -	\$ -	\$ -	\$ 40.02	\$ 38.60	\$ -	\$ -
PILs	\$ -	\$ -	\$ 1.86	\$ 147.62	\$ 282.72	\$ 292.72	\$ 1,074.54
Gross Up PILs							
Tax Rate	36.12%	36.12%	33.50%	33.00%	31.00%	28.25%	26.25%
Change in Income Taxes Payable	\$ -	\$ -	\$ 2.80	\$ 280.06	\$ 465.69	\$ 407.97	\$ 1,457.01
Change in OCT	\$ -	\$ -	\$ -	\$ 40.02	\$ 38.60	\$ -	\$ -
PILs	\$ -	\$ -	\$ 2.80	\$ 240.04	\$ 427.09	\$ 407.97	\$ 1,457.01



Middlesex Power Distribution Corporation

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	\$ -		4.59%	\$ -	\$ -		
2008 Q1	5.14%	5.18%	Sep-06	2006	Q3	\$ -		4.59%	\$ -	\$ -		
2008 Q2	4.08%	5.18%	Oct-06	2006	Q4	\$ -		4.59%	\$ -	\$ -		
2008 Q3	3.35%	5.43%	Nov-06	2006	Q4	\$ -		4.59%	\$ -	\$ -		
2008 Q4	3.35%	5.43%	Dec-06	2006	Q4	\$ -		4.59%	\$ -	\$ -	\$ -	
2009 Q1	2.45%	6.61%	Jan-07	2007	Q1	\$ -		4.59%	\$ -	\$ -		
2009 Q2	1.00%	6.61%	Feb-07	2007	Q1	\$ -		4.59%	\$ -	\$ -		
2009 Q3	0.55%	5.67%	Mar-07	2007	Q1	\$ -		4.59%	\$ -	\$ -		
2009 Q4	0.55%	4.66%	Apr-07	2007	Q2	\$ -		4.59%	\$ -	\$ -		
2010 Q1	0.55%	4.34%	May-07	2007	Q2	\$ -		4.59%	\$ -	\$ -		
2010 Q2	0.55%	4.34%	Jun-07	2007	Q2	\$ -		4.59%	\$ -	\$ -		
2010 Q3	0.89%	4.66%	Jul-07	2007	Q3	\$ -		4.59%	\$ -	\$ -		
2010 Q4	1.20%	4.01%	Aug-07	2007	Q3	\$ -		4.59%	\$ -	\$ -		
2011 Q1	1.47%	4.29%	Sep-07	2007	Q3	\$ -		4.59%	\$ -	\$ -		
2011 Q2	1.47%	4.29%	Oct-07	2007	Q4	\$ -		5.14%	\$ -	\$ -		
2011 Q3	1.47%	4.29%	Nov-07	2007	Q4	\$ -	\$ -	5.14%	\$ -	\$ -		
2011 Q4	1.47%	4.29%	Dec-07	2007	Q4	\$ -	\$ -	5.14%	\$ -	\$ -	\$ -	
2012 Q1	1.47%	4.29%	Jan-08	2008	Q1	\$ -	\$ -	5.14%	\$ -	\$ -		
2012 Q2	1.47%	4.29%	Feb-08	2008	Q1	\$ -	\$ -	5.14%	\$ -	\$ -		
2012 Q3	1.47%	4.29%	Mar-08	2008	Q1	\$ -	\$ -	5.14%	\$ -	\$ -		
2012 Q4	1.47%	4.29%	Apr-08	2008	Q2	\$ -	\$ -	4.08%	\$ -	\$ -		
			May-08	2008	Q2	\$ -	\$ -	4.08%	\$ -	\$ -		
			Jun-08	2008	Q2	\$ -	\$ -	4.08%	\$ -	\$ -		
			Jul-08	2008	Q3	\$ -	\$ -	3.35%	\$ -	\$ -		
			Aug-08	2008	Q3	\$ -	\$ -	3.35%	\$ -	\$ -		
			Sep-08	2008	Q3	\$ -	\$ -	3.35%	\$ -	\$ -		
			Oct-08	2008	Q4	\$ -	\$ -	3.35%	\$ -	\$ -	0.00	
			Nov-08	2008	Q4	\$ -	\$ 122.21	3.35%	\$ -	\$ 122.21	\$ 231.92	\$ 1.26
			Dec-08	2008	Q4	\$ 122.21	\$ 109.37	3.35%	\$ 0.34	\$ 231.92	\$ 231.92	\$ 1.26
			Jan-09	2009	Q1	\$ 231.58	\$ 118.02	2.45%	\$ 0.47	\$ 350.07		\$ 1.26
			Feb-09	2009	Q1	\$ 349.60	\$ 117.68	2.45%	\$ 0.71	\$ 467.99		\$ 1.26
			Mar-09	2009	Q1	\$ 467.28	\$ 123.19	2.45%	\$ 0.95	\$ 591.42		\$ 1.26
			Apr-09	2009	Q2	\$ 590.47	\$ 122.22	1.00%	\$ 0.49	\$ 713.18		\$ 1.26
			May-09	2009	Q2	\$ 712.69	\$ 122.22	1.00%	\$ 0.59	\$ 835.50		\$ 1.26
			Jun-09	2009	Q2	\$ 834.91	\$ 122.31	1.00%	\$ 0.70	\$ 957.92		\$ 1.26
			Jul-09	2009	Q3	\$ 957.22	\$ 122.22	0.55%	\$ 0.44	\$ 1,079.88		\$ 1.26
			Aug-09	2009	Q3	\$ 1,079.44	\$ 122.22	0.55%	\$ 0.49	\$ 1,202.15		\$ 1.26
			Sep-09	2009	Q3	\$ 1,201.66	\$ 122.22	0.55%	\$ 0.55	\$ 1,324.43		\$ 1.26
			Oct-09	2009	Q4	\$ 1,323.88	\$ 122.22	0.55%	\$ 0.61	\$ 1,446.71		\$ 1.26
			Nov-09	2009	Q4	\$ 1,446.10	\$ 122.22	0.55%	\$ 0.66	\$ 1,568.98		\$ 1.26
			Dec-09	2009	Q4	\$ 1,568.32	\$ 178.56	0.55%	\$ 0.72	\$ 1,747.60	\$ 1,522.68	\$ 1.26
			Jan-10	2010	Q1	\$ 1,746.88	\$ 119.66	0.55%	\$ 0.80	\$ 1,867.34		\$ 1.26
			Feb-10	2010	Q1	\$ 1,866.54	\$ 124.90	0.55%	\$ 0.86	\$ 1,992.30		\$ 1.26
			Mar-10	2010	Q1	\$ 1,991.44	\$ 122.22	0.55%	\$ 0.91	\$ 2,114.57		\$ 1.26
			Apr-10	2010	Q2	\$ 2,113.66	\$ 120.96	0.55%	\$ 0.97	\$ 2,235.59		\$ 1.26
			May-10	2010	Q2	\$ 2,234.62	\$ 121.00	0.55%	\$ 1.02	\$ 2,356.64		\$ 1.26
			Jun-10	2010	Q2	\$ 2,355.62	\$ 123.44	0.55%	\$ 1.08	\$ 2,480.14		\$ 1.26
			Jul-10	2010	Q3	\$ 2,479.06	\$ 123.48	0.89%	\$ 1.84	\$ 2,604.38		\$ 1.26
			Aug-10	2010	Q3	\$ 2,602.54	\$ 122.22	0.89%	\$ 1.93	\$ 2,726.69		\$ 1.26
			Sep-10	2010	Q3	\$ 2,724.76	\$ 120.62	0.89%	\$ 2.02	\$ 2,847.40		\$ 1.26
			Oct-10	2010	Q4	\$ 2,845.38	\$ 125.46	1.20%	\$ 2.85	\$ 2,973.69		\$ 1.26
			Nov-10	2010	Q4	\$ 2,970.84	\$ 119.53	1.20%	\$ 2.97	\$ 3,093.34		\$ 1.26
			Dec-10	2010	Q4	\$ 3,090.37	\$ 145.09	1.20%	\$ 3.09	\$ 3,238.55	\$ 1,508.92	\$ 1.26
			Jan-11	2011	Q1	\$ 3,235.46	\$ 123.48	1.47%	\$ 3.96	\$ 3,362.90		\$ 1.26
			Feb-11	2011	Q1	\$ 3,358.94	\$ 123.48	1.47%	\$ 4.11	\$ 3,486.53		\$ 1.26
			Mar-11	2011	Q1	\$ 3,482.42	\$ 123.48	1.47%	\$ 4.27	\$ 3,610.17		\$ 1.26
			Apr-11	2011	Q2	\$ 3,605.90	\$ 123.48	1.47%	\$ 4.42	\$ 3,733.80		\$ 1.26
			May-11	2011	Q2	\$ 3,729.38	\$ 121.80	1.47%	\$ 4.57	\$ 3,855.75		\$ 1.18
			Jun-11	2011	Q2	\$ 3,851.18	\$ 113.54	1.47%	\$ 4.72	\$ 3,969.44		\$ 1.18
			Jul-11	2011	Q3	\$ 3,964.72	\$ 118.23	1.47%	\$ 4.86	\$ 4,087.81		\$ 1.18
			Aug-11	2011	Q3	\$ 4,082.95	\$ 115.64	1.47%	\$ 5.00	\$ 4,203.59		\$ 1.18
			Sep-11	2011	Q3	\$ 4,198.59	\$ 115.64	1.47%	\$ 5.14	\$ 4,319.37		\$ 1.18
			Oct-11	2011	Q4	\$ 4,314.23	\$ 115.64	1.47%	\$ 5.28	\$ 4,435.15		\$ 1.18
			Nov-11	2011	Q4	\$ 4,429.87	\$ 115.50	1.47%	\$ 5.43	\$ 4,550.80		\$ 1.18
			Dec-11	2011	Q4	\$ 4,545.37	\$ 94.40	1.47%	\$ 5.57	\$ 4,645.34	\$ 1,461.64	\$ 1.18



This worksheet calculates the funding adder revenues.

Account 1555 - Sub-account Funding Adder Revenues

Interest Rates	Approved Deferral and Variance Accounts	CWIP				Opening Balance (Principal)	Funding Adder Revenues	Interest		Closing Balance	Annual amounts	Board Approved Smart Meter Funding Adder (from Tariff)
			Date	Year	Quarter			Rate	Interest			
			Jan-12	2012	Q1	\$ 4,639.77	\$ 114.66	1.47%	\$ 5.68	\$ 4,760.11		\$ 1.18
			Feb-12	2012	Q1	\$ 4,754.43	\$ 114.46	1.47%	\$ 5.82	\$ 4,874.71		\$ 1.18
			Mar-12	2012	Q1	\$ 4,868.89	\$ 115.64	1.47%	\$ 5.96	\$ 4,990.49		\$ 1.18
			Apr-12	2012	Q2	\$ 4,984.53	\$ 115.64	1.47%	\$ 6.11	\$ 5,106.28		\$ 1.18
			May-12	2012	Q2	\$ 5,100.17	\$ 19.46	1.47%	\$ 6.25	\$ 5,125.88		
			Jun-12	2012	Q2	\$ 5,119.63	\$ -	1.47%	\$ 6.27	\$ 5,125.90		
			Jul-12	2012	Q3	\$ 5,119.63	\$ -	1.47%	\$ 6.27	\$ 5,125.90		
			Aug-12	2012	Q3	\$ 5,119.63	\$ -	1.47%	\$ 6.27	\$ 5,125.90		
			Sep-12	2012	Q3	\$ 5,119.63	\$ -	1.47%	\$ 6.27	\$ 5,125.90		
			Oct-12	2012	Q4	\$ 5,119.63	\$ -	1.47%	\$ 6.27	\$ 5,125.90		
			Nov-12	2012	Q4	\$ 5,119.63	\$ -	1.47%	\$ 6.27	\$ 5,125.90		
			Dec-12	2012	Q4	\$ 5,119.63	\$ -	1.47%	\$ 6.27	\$ 5,125.90	\$ 553.57	
Total Funding Adder Revenues Collected						\$	5,119.63		\$ 159.10	\$ 5,278.73	\$ 5,278.73	



Middlesex Power Distribution Corporation

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	-			-	5.14%	-	-
2012 Q1	1.47%	4.29%	Jan-08	2008	Q1	-			-	5.14%	-	-
2012 Q2	1.47%	4.29%	Feb-08	2008	Q1	-			-	5.14%	-	-
2012 Q3	1.47%	4.29%	Mar-08	2008	Q1	-			-	5.14%	-	-
2012 Q4	1.47%	4.29%	Apr-08	2008	Q2	-			-	4.08%	-	-
			May-08	2008	Q2	-			-	4.08%	-	-
			Jun-08	2008	Q2	-			-	4.08%	-	-
			Jul-08	2008	Q3	-			-	3.35%	-	-
			Aug-08	2008	Q3	-			-	3.35%	-	-
			Sep-08	2008	Q3	-			-	3.35%	-	-
			Oct-08	2008	Q4	-			-	3.35%	-	-
			Nov-08	2008	Q4	-			-	3.35%	-	-
			Dec-08	2008	Q4	-			-	3.35%	-	-
			Jan-09	2009	Q1	-			-	2.45%	-	-
			Feb-09	2009	Q1	-			-	2.45%	-	-
			Mar-09	2009	Q1	-			-	2.45%	-	-
			Apr-09	2009	Q2	-			-	1.00%	-	-
			May-09	2009	Q2	-			-	1.00%	-	-
			Jun-09	2009	Q2	-			-	1.00%	-	-
			Jul-09	2009	Q3	-			-	0.55%	-	-
			Aug-09	2009	Q3	-			-	0.55%	-	-
			Sep-09	2009	Q3	-			-	0.55%	-	-
			Oct-09	2009	Q4	-			-	0.55%	-	-
			Nov-09	2009	Q4	-			-	0.55%	-	-
			Dec-09	2009	Q4	-			-	0.55%	-	-
			Jan-10	2010	Q1	-			-	0.55%	-	-
			Feb-10	2010	Q1	-			-	0.55%	-	-
			Mar-10	2010	Q1	-			-	0.55%	-	-
			Apr-10	2010	Q2	-			-	0.55%	-	-
			May-10	2010	Q2	-			-	0.55%	-	-
			Jun-10	2010	Q2	-			-	0.55%	-	-
			Jul-10	2010	Q3	-			-	0.89%	-	-
			Aug-10	2010	Q3	-			-	0.89%	-	-
			Sep-10	2010	Q3	-			-	0.89%	-	-
			Oct-10	2010	Q4	-			-	1.20%	-	-
			Nov-10	2010	Q4	-			-	1.20%	-	-
			Dec-10	2010	Q4	-			-	1.20%	-	-
			Jan-11	2011	Q1	-			-	1.47%	-	-
			Feb-11	2011	Q1	-			-	1.47%	-	-
			Mar-11	2011	Q1	-			-	1.47%	-	-
			Apr-11	2011	Q2	-			-	1.47%	-	-
			May-11	2011	Q2	-			-	1.47%	-	-
			Jun-11	2011	Q2	-			-	1.47%	-	-
			Jul-11	2011	Q3	-			-	1.47%	-	-
			Aug-11	2011	Q3	-			-	1.47%	-	-
			Sep-11	2011	Q3	-			-	1.47%	-	-
			Oct-11	2011	Q4	-			-	1.47%	-	-
			Nov-11	2011	Q4	-			-	1.47%	-	-
			Dec-11	2011	Q4	-			-	1.47%	-	-
			Jan-12	2012	Q1	-			-	1.47%	-	-
			Feb-12	2012	Q1	-			-	1.47%	-	-
			Mar-12	2012	Q1	-			-	1.47%	-	-
			Apr-12	2012	Q2	-			-	1.47%	-	-
			May-12	2012	Q2	-			-	1.47%	-	-
			Jun-12	2012	Q2	-			-	1.47%	-	-
			Jul-12	2012	Q3	-			-	1.47%	-	-
			Aug-12	2012	Q3	-			-	1.47%	-	-
			Sep-12	2012	Q3	-			-	1.47%	-	-
			Oct-12	2012	Q4	-			-	1.47%	-	-
			Nov-12	2012	Q4	-			-	1.47%	-	-
			Dec-12	2012	Q4	-			-	1.47%	-	-
						\$ -	\$ -	\$ -	\$ -			



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation

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

Year	OM&A (from Sheet 5)	Amortization Expense (from Sheet 5)	Cumulative OM&A and Amortization Expense	Average Cumulative OM&A and Amortization Expense	Average Annual Prescribed Interest Rate for Deferral and Variance Accounts (from Sheets 8A and 8B)	Simple Interest on OM&A and Amortization Expenses
2006	\$ -	\$ -	\$ -	\$ -	4.37%	\$ -
2007	\$ -	\$ -	\$ -	\$ -	4.73%	\$ -
2008	\$ 881.37	\$ -	\$ 881.37	\$ 440.68	3.98%	\$ 17.54
2009	\$ 190.39	\$ 947.53	\$ 2,019.29	\$ 1,450.33	1.14%	\$ 16.50
2010	\$ 143.62	\$ 3,790.11	\$ 5,953.02	\$ 3,986.16	0.80%	\$ 31.79
2011	\$ 180.37	\$ 6,497.33	\$ 12,630.72	\$ 9,291.87	1.47%	\$ 136.59
2012	\$ 182.81	\$ 7,309.50	\$ 20,123.03	\$ 16,376.88	1.47%	\$ 240.74
Cumulative Interest to 2011						\$ 202.42
Cumulative Interest to 2012						\$ 443.16



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

Check if applicable

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

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

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

	2006	2007	2008	2009	2010	2011	2012 and later	Total
Deferred and forecasted Smart Meter Incremental Revenue Requirement (from Sheet 5)	\$ -	\$ -	\$ 894.83	\$ 1,612.36	\$ 6,039.50	\$ 11,199.39	\$ 13,145.37	\$ 32,891.45
Interest on Deferred and forecasted OM&A and Amortization Expense (Sheet 8A/8B) (Check one of the boxes below)	\$ -	\$ -	\$ 17.54	\$ 16.50	\$ 31.79	\$ 136.59		\$ 202.42
<input type="checkbox"/> Sheet 8A (Interest calculated on monthly balances)								\$ -
<input checked="" type="checkbox"/> Sheet 8B (Interest calculated on average annual balances)	\$ -	\$ -	\$ 17.54	\$ 16.50	\$ 31.79	\$ 136.59		\$ 202.42
SMFA Revenues (from Sheet 8)	\$ -	\$ -	\$ 231.58	\$ 1,515.30	\$ 1,488.58	\$ 1,404.31	\$ 479.86	\$ 5,119.63
SMFA Interest (from Sheet 8)	\$ -	\$ -	\$ 0.34	\$ 7.38	\$ 20.34	\$ 57.33	\$ 73.71	\$ 159.10
Net Deferred Revenue Requirement	\$ -	\$ -	\$ 660.45	\$ 106.18	\$ 4,562.37	\$ 9,874.34	\$ 12,591.80	\$ 27,815.13
Number of Metered Customers (average for 2012 test year)							89	

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

Years for collection or refunding	1	
Deferred Incremental Revenue Requirement from 2006 to December 31, 2011 plus Interest on OM&A and Amortization	\$ 19,948.49	
SMFA Revenues collected from 2006 to 2012 test year (inclusive) Plus Simple Interest on SMFA Revenues	\$ 5,278.73	
Net Deferred Revenue Requirement	\$ 14,669.76	
SMDR November 1, 2012 to October 31, 2013	\$ 13.74	Match
Check: Forecasted SMDR Revenues	\$ 14,674.32	

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

Incremental Revenue Requirement for 2012	\$ 13,145.37	
SMIRR	\$ 12.31	Match
Check: Forecasted SMIRR Revenues	\$ 13,147.08	

Attachment J

Dutton Residential Smart Meter Model



Ontario Energy Board

Smart Meter Model

Choose Your Utility:

Middlesex Power Distribution Corporation

Middlesex Power Distribution Corporation - Dutton

Application Contact Information

Name: Andrya Eagen

Title: Senior Regulatory Specialist

Phone Number: 519-352-6300 Ext 243

Email Address: andryaeagen@ckenergy.com

We are applying for rates effective: November 1, 2012

Last COS Re-based Year 2006

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.



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

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

Smart Meter Capital Cost and Operational Expense Data	2006	2007	2008	2009	2010	2011	2012 and later	Total
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
Smart Meter Installation Plan								
Actual/Planned number of Smart Meters installed during the Calendar Year								
Residential				512	4			516
General Service < 50 kW								0
Actual/Planned number of Smart Meters installed (Residential and GS < 50 kW only)	0	0	0	512	4	0	0	516
Percentage of Residential and GS < 50 kW Smart Meter Installations Completed	0.00%	0.00%	0.00%	99.22%	100.00%	0.00%	100.00%	100.00%
Actual/Planned number of GS > 50 kW meters installed								0
Other (please identify)								0
Total Number of Smart Meters installed or planned to be installed	0	0	0	512	4	0	0	516
1 Capital Costs								
1.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)								
Asset Type	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			60,466	472	0		\$ 60,939
1.1.2 Installation Costs (may include socket kits, labour, vehicle, benefits, etc.)	Smart Meter			17,783	139	0		\$ 17,922
1.1.3a Workforce Automation Hardware (may include fieldwork handhelds, barcode hardware, etc.)								\$ -
1.1.3b Workforce Automation Software (may include fieldwork handhelds, barcode hardware, etc.)								\$ -
Total Advanced Metering Communications Devices (AMCD)	\$ -	\$ -	\$ -	\$ 78,249	\$ 611	\$ -	\$ -	\$ 78,860
1.2 ADVANCED METERING REGIONAL COLLECTOR (AMRC) (includes LAN)								
Asset Type	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
1.2.1 Collectors								\$ -
1.2.2 Repeaters (may include radio licence, etc.)	Computer Hardware			8,571	67	0		\$ 8,638
1.2.3 Installation (may include meter seals and rings, collector computer hardware, etc.)								\$ -
Total Advanced Metering Regional Collector (AMRC) (includes LAN)	\$ -	\$ -	\$ -	\$ 8,571	\$ 67	\$ -	\$ -	\$ 8,638
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								\$ -
1.3.2 Computer Software				0	0	0		\$ -
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)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1.4 WIDE AREA NETWORK (WAN)								
Asset Type	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
1.4.1 Activation Fees	Applications Software			916	7	0		\$ 923
Total Wide Area Network (WAN)	\$ -	\$ -	\$ -	\$ 916	\$ 7	\$ -	\$ -	\$ 923
1.5 OTHER AMI CAPITAL COSTS RELATED TO MINIMUM FUNCTIONALITY								
Asset Type	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
1.5.1 Customer Equipment (including repair of damaged equipment)								\$ -
1.5.2 AMI Interface to CIS								\$ -
1.5.3 Professional Fees								\$ -
1.5.4 Integration								\$ -
1.5.5 Program Management								\$ -
1.5.6 Other AMI Capital								\$ -
Total Other AMI Capital Costs Related to Minimum Functionality	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Capital Costs Related to Minimum Functionality	\$ -	\$ -	\$ -	\$ 87,736	\$ 685	\$ -	\$ -	\$ 88,421
1.6 CAPITAL COSTS BEYOND MINIMUM FUNCTIONALITY								
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	Computer Software							\$ -
1.6.2 Costs for deployment of smart meters to customers other than residential and small general service	Applications Software							\$ -
1.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDNR, etc.								\$ -
Total Capital Costs Beyond Minimum Functionality	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Smart Meter Capital Costs	\$ -	\$ -	\$ -	\$ 87,736	\$ 685	\$ -	\$ -	\$ 88,421
2 OM&A Expenses								
2.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)								
Asset Type	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
2.1.1 Maintenance (may include meter reverification costs, etc.)				701	563	866	0	\$ 2,130
2.1.2 Other (please specify)								\$ -
Total Incremental AMCD OM&A Costs	\$ -	\$ -	\$ -	\$ 701	\$ 563	\$ 866	\$ -	\$ 2,130



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.

	2006	2007	2008	2009	2010	2011	2012 and later	Total
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
Smart Meter Capital Cost and Operational Expense Data								
2.2 ADVANCED METERING REGIONAL COLLECTOR (AMRC) (includes LAN)								
2.2.1 Maintenance								\$ -
2.2.2 Other (please specify)								\$ -
Total Incremental AMRC OM&A Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3 ADVANCED METERING CONTROL COMPUTER (AMCC)								
2.3.1 Hardware Maintenance (may include server support, etc.)				80	84	56	49	\$ 269
2.3.2 Software Maintenance (may include maintenance support, etc.)				311	233	151	1,115	\$ 1,811
2.3.2 Other (please specify)								\$ -
Total Incremental AMCC OM&A Costs	\$ -	\$ -	\$ -	\$ 391	\$ 317	\$ 208	\$ 1,165	\$ 2,080
2.4 WIDE AREA NETWORK (WAN)								
2.4.1 WAN Maintenance								\$ -
2.4.2 Other (please specify)								\$ -
Total Incremental AMRC OM&A Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5 OTHER AMI OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY								
2.5.1 Business Process Redesign								\$ -
2.5.2 Customer Communication (may include project communication, etc.)								\$ -
2.5.3 Program Management								\$ -
2.5.4 Change Management (may include training, etc.)								\$ -
2.5.5 Administration Costs				11	0	0	0	\$ 11
2.5.6 Other AM Expenses (please specify)				110	35	75	0	\$ 220
Total Other AMI OM&A Costs Related to Minimum Functionality	\$ -	\$ -	\$ -	\$ 121	\$ 35	\$ 75	\$ -	\$ 231
TOTAL OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY	\$ -	\$ -	\$ -	\$ 1,213	\$ 915	\$ 1,149	\$ 1,165	\$ 4,441
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 MDMR, etc.				104	4,308	3,368	0	\$ 7,780
Total OM&A Costs Beyond Minimum Functionality	\$ -	\$ -	\$ -	\$ 104	\$ 4,308	\$ 3,368	\$ -	\$ 7,780
Total Smart Meter OM&A Costs	\$ -	\$ -	\$ -	\$ 1,317	\$ 5,223	\$ 4,517	\$ 1,165	\$ 12,222
3 Aggregate Smart Meter Costs by Category								
3.1 Capital								
3.1.1 Smart Meter	\$ -	\$ -	\$ -	\$ 78,249	\$ 611	\$ -	\$ -	\$ 78,860
3.1.2 Computer Hardware	\$ -	\$ -	\$ -	\$ 8,571	\$ 67	\$ -	\$ -	\$ 8,638
3.1.3 Computer Software	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1.4 Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1.5 Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1.6 Applications Software	\$ -	\$ -	\$ -	\$ 916	\$ 7	\$ -	\$ -	\$ 923
3.1.7 Total Capital Costs	\$ -	\$ -	\$ -	\$ 87,736	\$ 685	\$ -	\$ -	\$ 88,421
3.2 OM&A Costs								
3.2.1 Total OM&A Costs	\$ -	\$ -	\$ -	\$ 1,317	\$ 5,223	\$ 4,517	\$ 1,165	\$ 12,222



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation - Dutton

	2006	2007	2008	2009	2010	2011	2012 and later
Cost of Capital							
Capital Structure¹							
Deemed Short-term Debt Capitalization							
Deemed Long-term Debt Capitalization	57.0%	57.0%	60.0%	60.0%	60.0%	60.0%	60.0%
Deemed Equity Capitalization	43.0%	43.0%	40.0%	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							
Long-term Debt Rate (actual/embedded/deemed) ²	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%
Target Return on Equity (ROE)	9.0%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
Return on Preferred Shares							
WACC	7.43%	7.43%	7.35%	7.35%	7.35%	7.35%	7.35%
Working Capital Allowance							
Working Capital Allowance Rate (% of the sum of Cost of Power + controllable expenses)	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
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	50	50	50	50
Computer Equipment - CCA Rate	45%	55%	55%	55%	55%	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	12	12	12	12	12	12	12
Applications Software - CCA Rate	100%	100%	100%	100%	100%	100%	100%

Assumptions

¹ Planned smart meter installations occur evenly throughout the year.

² Fiscal calendar year (January 1 to December 31) used.

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



	2006	2007	2008	2009	2010	2011	2012 and later
Net Fixed Assets - Smart Meters							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ 78,249	\$ 78,860	\$ 78,860
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ 78,249	\$ 611	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 78,249	\$ 78,860	\$ 78,860	\$ 78,860
Accumulated Depreciation							
Opening Balance		\$ -	\$ -	\$ -	\$ 2,608	\$ 7,845	\$ 13,103
Amortization expense during year	\$ -	\$ -	\$ -	\$ 2,608	\$ 5,237	\$ 5,257	\$ 5,257
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 2,608	\$ 7,845	\$ 13,103	\$ 18,360
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 75,641	\$ 71,015	\$ 65,758
Closing Balance	\$ -	\$ -	\$ -	\$ 75,641	\$ 71,015	\$ 65,758	\$ 60,500
Average Net Book Value	\$ -	\$ -	\$ -	\$ 37,820	\$ 73,328	\$ 68,387	\$ 63,129
Net Fixed Assets - Computer Hardware							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ 8,571	\$ 8,638	\$ 8,638
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ 8,571	\$ 67	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 8,571	\$ 8,638	\$ 8,638	\$ 8,638
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 857	\$ 2,578	\$ 4,305
Amortization expense during year	\$ -	\$ -	\$ -	\$ 857	\$ 1,721	\$ 1,728	\$ 1,728
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 857	\$ 2,578	\$ 4,305	\$ 6,033
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 7,714	\$ 6,060	\$ 4,332
Closing Balance	\$ -	\$ -	\$ -	\$ 7,714	\$ 6,060	\$ 4,332	\$ 2,605
Average Net Book Value	\$ -	\$ -	\$ -	\$ 3,857	\$ 6,867	\$ 5,196	\$ 3,468
Net Fixed Assets - Computer Software (Including Applications Software)							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ 916	\$ 923	\$ 923
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ 916	\$ 7	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 916	\$ 923	\$ 923	\$ 923
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 153	\$ 459	\$ 767
Amortization expense during year	\$ -	\$ -	\$ -	\$ 153	\$ 306	\$ 308	\$ 156
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 153	\$ 459	\$ 767	\$ 923
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 763	\$ 464	\$ 156
Closing Balance	\$ -	\$ -	\$ -	\$ 763	\$ 464	\$ 156	\$ -
Average Net Book Value	\$ -	\$ -	\$ -	\$ 382	\$ 614	\$ 310	\$ 78
Net Fixed Assets - Tools and Equipment							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Amortization expense during year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Average Net Book Value	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Fixed Assets - Other Equipment							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Amortization expense during year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Average Net Book Value	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -



Middlesex Power Distribution Corporation - Dutton

	2006	2007	2008	2009	2010	2011	2012 and Later
Average Net Fixed Asset Values (from Sheet 4)							
Smart Meters	\$ -	\$ -	\$ -	\$ 37,820	\$ 73,328	\$ 68,387	\$ 63,129
Computer Hardware	\$ -	\$ -	\$ -	\$ 3,857	\$ 6,887	\$ 5,196	\$ 3,468
Computer Software	\$ -	\$ -	\$ -	\$ 382	\$ 614	\$ 310	\$ 78
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Net Fixed Assets	\$ -	\$ -	\$ -	\$ 42,059	\$ 80,828	\$ 73,893	\$ 66,676
Working Capital							
Operating Expenses (from Sheet 2)	\$ -	\$ -	\$ -	\$ 1,317	\$ 5,223	\$ 4,517	\$ 1,165
Working Capital Factor (from Sheet 3)	15%	15%	15%	15%	15%	15%	15%
Working Capital Allowance	\$ -	\$ -	\$ -	\$ 198	\$ 783	\$ 678	\$ 175
Incremental Smart Meter Rate Base	\$ -	\$ -	\$ -	\$ 42,256	\$ 81,612	\$ 74,570	\$ 66,850
Return on Rate Base							
Capital Structure							
Deemed Short Term Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Deemed Long Term Debt	\$ -	\$ -	\$ -	\$ 25,354	\$ 48,967	\$ 44,742	\$ 40,110
Equity	\$ -	\$ -	\$ -	\$ 16,903	\$ 32,645	\$ 29,828	\$ 26,740
Preferred Shares	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Capitalization	\$ -	\$ -	\$ -	\$ 42,256	\$ 81,612	\$ 74,570	\$ 66,850
Return on							
Deemed Short Term Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Deemed Long Term Debt	\$ -	\$ -	\$ -	\$ 1,585	\$ 3,060	\$ 2,796	\$ 2,507
Equity	\$ -	\$ -	\$ -	\$ 1,521	\$ 2,938	\$ 2,685	\$ 2,407
Preferred Shares	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Return on Capital	\$ -	\$ -	\$ -	\$ 3,106	\$ 5,998	\$ 5,481	\$ 4,914
Operating Expenses	\$ -	\$ -	\$ -	\$ 1,317	\$ 5,223	\$ 4,517	\$ 1,165
Amortization Expenses (from Sheet 4)							
Smart Meters	\$ -	\$ -	\$ -	\$ 2,608	\$ 5,237	\$ 5,257	\$ 5,257
Computer Hardware	\$ -	\$ -	\$ -	\$ 857	\$ 1,721	\$ 1,728	\$ 1,728
Computer Software	\$ -	\$ -	\$ -	\$ 153	\$ 306	\$ 308	\$ 156
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Amortization Expense in Year	\$ -	\$ -	\$ -	\$ 3,618	\$ 7,264	\$ 7,293	\$ 7,141
Incremental Revenue Requirement before Taxes/PILs	\$ -	\$ -	\$ -	\$ 8,041	\$ 18,486	\$ 17,291	\$ 13,219
Calculation of Taxable Income							
Incremental Operating Expenses	\$ -	\$ -	\$ -	\$ 1,317	\$ 5,223	\$ 4,517	\$ 1,165
Amortization Expense	\$ -	\$ -	\$ -	\$ 3,618	\$ 7,264	\$ 7,293	\$ 7,141
Interest Expense	\$ -	\$ -	\$ -	\$ 1,585	\$ 3,060	\$ 2,796	\$ 2,507
Net Income for Taxes/PILs	\$ -	\$ -	\$ -	\$ 1,521	\$ 2,938	\$ 2,685	\$ 2,407
Grossed-up Taxes/PILs (from Sheet 7)	\$ -	\$ -	\$ -	\$ 207.53	\$ 179.84	\$ 1,115.51	\$ 1,321.93
Revenue Requirement, including Grossed-up Taxes/PILs	\$ -	\$ -	\$ -	\$ 7,833	\$ 18,666	\$ 18,406	\$ 14,541



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation - Dutton

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	\$ -	\$ -	\$ -	\$ -	\$ 75,119.20	\$ 69,696.53	\$ 64,120.81
Capital Additions	\$ -	\$ -	\$ -	\$ 78,249.17	\$ 611.32	\$ -	\$ -
Retirements/Removals (if applicable)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
UCC Before Half Year Rule	\$ -	\$ -	\$ -	\$ 78,249.17	\$ 75,730.52	\$ 69,696.53	\$ 64,120.81
Half Year Rule (1/2 Additions - Disposals)	\$ -	\$ -	\$ -	\$ 39,124.58	\$ 305.66	\$ -	\$ -
Reduced UCC	\$ -	\$ -	\$ -	\$ 39,124.58	\$ 75,424.86	\$ 69,696.53	\$ 64,120.81
CCA Rate Class	47	47	47	47	47	47	47
CCA Rate	8%	8%	8%	8%	8%	8%	8%
CCA	\$ -	\$ -	\$ -	\$ 3,129.97	\$ 6,033.99	\$ 5,575.72	\$ 5,129.66
Closing UCC	\$ -	\$ -	\$ -	\$ 75,119.20	\$ 69,696.53	\$ 64,120.81	\$ 58,991.15

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	\$ -	\$ -	\$ -	\$ -	\$ 6,213.78	\$ 2,844.75	\$ 1,280.14
Capital Additions Computer Hardware	\$ -	\$ -	\$ -	\$ 8,570.74	\$ 66.96	\$ -	\$ -
Capital Additions Computer Software	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
UCC Before Half Year Rule	\$ -	\$ -	\$ -	\$ 8,570.74	\$ 6,280.74	\$ 2,844.75	\$ 1,280.14
Half Year Rule (1/2 Additions - Disposals)	\$ -	\$ -	\$ -	\$ 4,285.37	\$ 33.48	\$ -	\$ -
Reduced UCC	\$ -	\$ -	\$ -	\$ 4,285.37	\$ 6,247.26	\$ 2,844.75	\$ 1,280.14
CCA Rate Class	45	50	50	50	50	50	50
CCA Rate	45%	55%	55%	55%	55%	55%	55%
CCA	\$ -	\$ -	\$ -	\$ 2,356.95	\$ 3,435.99	\$ 1,564.61	\$ 704.08
Closing UCC	\$ -	\$ -	\$ -	\$ 6,213.78	\$ 2,844.75	\$ 1,280.14	\$ 576.06

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	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation - Dutton

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	\$ -	\$ -	\$ -	\$ 1,521.23	\$ 2,938.02	\$ 2,684.53	\$ 2,406.62
Amortization	\$ -	\$ -	\$ -	\$ 3,618.03	\$ 7,264.32	\$ 7,292.59	\$ 7,141.13
CCA - Smart Meters	\$ -	\$ -	\$ -	\$ 3,129.97	\$ 6,033.99	\$ 5,575.72	\$ 5,129.66
CCA - Computers	\$ -	\$ -	\$ -	\$ 2,356.95	\$ 3,435.99	\$ 1,564.61	\$ 704.08
CCA - Applications Software	\$ -	\$ -	\$ -	\$ 457.95	\$ 461.52	\$ 3.58	\$ -
CCA - Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Change in taxable income	\$ -	\$ -	\$ -	\$ 805.61	\$ 270.84	\$ 2,833.20	\$ 3,714.01
Tax Rate (from Sheet 3)	36.12%	36.12%	33.50%	33.00%	31.00%	28.25%	26.25%
Income Taxes Payable	\$ -	\$ -	\$ -	\$ 265.85	\$ 83.96	\$ 800.38	\$ 974.93
ONTARIO CAPITAL TAX							
Smart Meters	\$ -	\$ -	\$ -	\$ 75,640.86	\$ 71,015.20	\$ 65,757.83	\$ 60,500.46
Computer Hardware	\$ -	\$ -	\$ -	\$ 7,713.66	\$ 6,059.78	\$ 4,332.24	\$ 2,604.70
Computer Software (Including Application Software)	\$ -	\$ -	\$ -	\$ 763.24	\$ 463.91	\$ 156.23	\$ -
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Rate Base	\$ -	\$ -	\$ -	\$ 84,117.77	\$ 77,538.88	\$ 70,246.30	\$ 63,105.16
Less: Exemption	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Deemed Taxable Capital	\$ -	\$ -	\$ -	\$ 84,117.77	\$ 77,538.88	\$ 70,246.30	\$ 63,105.16
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)	\$ -	\$ -	\$ -	\$ 189.26	\$ 58.15	\$ -	\$ -
Change in Income Taxes Payable	\$ -	\$ -	\$ -	\$ 265.85	\$ 83.96	\$ 800.38	\$ 974.93
Change in OCT	\$ -	\$ -	\$ -	\$ 189.26	\$ 58.15	\$ -	\$ -
PILs	\$ -	\$ -	\$ -	\$ 76.59	\$ 142.11	\$ 800.38	\$ 974.93
Gross Up PILs							
Tax Rate	36.12%	36.12%	33.50%	33.00%	31.00%	28.25%	26.25%
Change in Income Taxes Payable	\$ -	\$ -	\$ -	\$ 396.79	\$ 121.68	\$ 1,115.51	\$ 1,321.93
Change in OCT	\$ -	\$ -	\$ -	\$ 189.26	\$ 58.15	\$ -	\$ -
PILs	\$ -	\$ -	\$ -	\$ 207.53	\$ 179.84	\$ 1,115.51	\$ 1,321.93



Middlesex Power Distribution Corporation - Dutton

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	\$ -		4.59%	\$ -	\$ -		
2008 Q1	5.14%	5.18%	Sep-06	2006	Q3	\$ -		4.59%	\$ -	\$ -		
2008 Q2	4.08%	5.18%	Oct-06	2006	Q4	\$ -		4.59%	\$ -	\$ -		
2008 Q3	3.35%	5.43%	Nov-06	2006	Q4	\$ -		4.59%	\$ -	\$ -		
2008 Q4	3.35%	5.43%	Dec-06	2006	Q4	\$ -		4.59%	\$ -	\$ -	\$ -	
2009 Q1	2.45%	6.61%	Jan-07	2007	Q1	\$ -		4.59%	\$ -	\$ -		
2009 Q2	1.00%	6.61%	Feb-07	2007	Q1	\$ -		4.59%	\$ -	\$ -		
2009 Q3	0.55%	5.67%	Mar-07	2007	Q1	\$ -		4.59%	\$ -	\$ -		
2009 Q4	0.55%	4.66%	Apr-07	2007	Q2	\$ -		4.59%	\$ -	\$ -		
2010 Q1	0.55%	4.34%	May-07	2007	Q2	\$ -		4.59%	\$ -	\$ -		
2010 Q2	0.55%	4.34%	Jun-07	2007	Q2	\$ -		4.59%	\$ -	\$ -		
2010 Q3	0.89%	4.66%	Jul-07	2007	Q3	\$ -		4.59%	\$ -	\$ -		
2010 Q4	1.20%	4.01%	Aug-07	2007	Q3	\$ -		4.59%	\$ -	\$ -		
2011 Q1	1.47%	4.29%	Sep-07	2007	Q3	\$ -		4.59%	\$ -	\$ -		
2011 Q2	1.47%	4.29%	Oct-07	2007	Q4	\$ -		5.14%	\$ -	\$ -		
2011 Q3	1.47%	4.29%	Nov-07	2007	Q4	\$ -		5.14%	\$ -	\$ -		
2011 Q4	1.47%	4.29%	Dec-07	2007	Q4	\$ -		5.14%	\$ -	\$ -	\$ -	
2012 Q1	1.47%	4.29%	Jan-08	2008	Q1	\$ -		5.14%	\$ -	\$ -		
2012 Q2	1.47%	4.29%	Feb-08	2008	Q1	\$ -		5.14%	\$ -	\$ -		
2012 Q3	1.47%	4.29%	Mar-08	2008	Q1	\$ -		5.14%	\$ -	\$ -		
2012 Q4	1.47%	4.29%	Apr-08	2008	Q2	\$ -		4.08%	\$ -	\$ -		
			May-08	2008	Q2	\$ -		4.08%	\$ -	\$ -		
			Jun-08	2008	Q2	\$ -		4.08%	\$ -	\$ -		
			Jul-08	2008	Q3	\$ -		3.35%	\$ -	\$ -		
			Aug-08	2008	Q3	\$ -		3.35%	\$ -	\$ -		
			Sep-08	2008	Q3	\$ -		3.35%	\$ -	\$ -		
			Oct-08	2008	Q4	\$ -		3.35%	\$ -	\$ -		
			Nov-08	2008	Q4	\$ -		3.35%	\$ -	\$ -		
			Dec-08	2008	Q4	\$ -		3.35%	\$ -	\$ -	\$ -	
			Jan-09	2009	Q1	\$ -		2.45%	\$ -	\$ -		
			Feb-09	2009	Q1	\$ -		2.45%	\$ -	\$ -		
			Mar-09	2009	Q1	\$ -		2.45%	\$ -	\$ -		
			Apr-09	2009	Q2	\$ -		1.00%	\$ -	\$ -		
			May-09	2009	Q2	\$ -		1.00%	\$ -	\$ -		
			Jun-09	2009	Q2	\$ -		1.00%	\$ -	\$ -		
			Jul-09	2009	Q3	\$ -		0.55%	\$ -	\$ -		
			Aug-09	2009	Q3	\$ -		0.55%	\$ -	\$ -		
			Sep-09	2009	Q3	\$ -		0.55%	\$ -	\$ -		
			Oct-09	2009	Q4	\$ -		0.55%	\$ -	\$ -		
			Nov-09	2009	Q4	\$ -		0.55%	\$ -	\$ -		
			Dec-09	2009	Q4	\$ -		0.55%	\$ -	\$ -	\$ -	
			Jan-10	2010	Q1	\$ -		0.55%	\$ -	\$ -		
			Feb-10	2010	Q1	\$ -		0.55%	\$ -	\$ -		
			Mar-10	2010	Q1	\$ -		0.55%	\$ -	\$ -		
			Apr-10	2010	Q2	\$ -		0.55%	\$ -	\$ -		
			May-10	2010	Q2	\$ -		0.55%	\$ -	\$ -		
			Jun-10	2010	Q2	\$ -		0.55%	\$ -	\$ -		
			Jul-10	2010	Q3	\$ -		0.89%	\$ -	\$ -		
			Aug-10	2010	Q3	\$ -		0.89%	\$ -	\$ -		
			Sep-10	2010	Q3	\$ -		0.89%	\$ -	\$ -		
			Oct-10	2010	Q4	\$ -		1.20%	\$ -	\$ -		
			Nov-10	2010	Q4	\$ -	\$ 0.23	1.20%	\$ -	\$ 0.23		\$ 1.00
			Dec-10	2010	Q4	\$ 0.23	\$ 1,294.05	1.20%	\$ -	\$ 1,294.28	\$ 1,294.28	\$ 1.00
			Jan-11	2011	Q1	\$ 1,294.28	\$ 516.20	1.47%	\$ 1.59	\$ 1,812.07		\$ 1.00
			Feb-11	2011	Q1	\$ 1,810.48	\$ 515.59	1.47%	\$ 2.22	\$ 2,328.29		\$ 1.00
			Mar-11	2011	Q1	\$ 2,326.07	\$ 519.12	1.47%	\$ 2.85	\$ 2,848.04		\$ 1.00
			Apr-11	2011	Q2	\$ 2,845.19	\$ 516.88	1.47%	\$ 3.49	\$ 3,365.56		\$ 1.00
			May-11	2011	Q2	\$ 3,362.07	\$ 517.90	1.47%	\$ 4.12	\$ 3,884.09		\$ 2.50
			Jun-11	2011	Q2	\$ 3,879.97	\$ 965.30	1.47%	\$ 4.75	\$ 4,850.02		\$ 2.50
			Jul-11	2011	Q3	\$ 4,845.27	\$ 1,293.49	1.47%	\$ 5.94	\$ 6,144.70		\$ 2.50
			Aug-11	2011	Q3	\$ 6,138.76	\$ 1,293.51	1.47%	\$ 7.52	\$ 7,439.79		\$ 2.50
			Sep-11	2011	Q3	\$ 7,432.27	\$ 1,297.16	1.47%	\$ 9.10	\$ 8,738.53		\$ 2.50
			Oct-11	2011	Q4	\$ 8,729.43	\$ 1,305.51	1.47%	\$ 10.69	\$ 10,045.63		\$ 2.50
			Nov-11	2011	Q4	\$ 10,034.94	\$ 1,301.81	1.47%	\$ 12.29	\$ 11,349.04		\$ 2.50
			Dec-11	2011	Q4	\$ 11,336.75	\$ 2,269.55	1.47%	\$ 13.89	\$ 13,620.19	\$ 12,390.47	\$ 2.50



This worksheet calculates the funding adder revenues.

Account 1555 - Sub-account Funding Adder Revenues

Interest Rates	Approved Deferral and Variance Accounts	CWIP				Opening Balance (Principal)	Funding Adder Revenues	Interest		Closing Balance	Annual amounts	Board Approved Smart Meter Funding Adder (from Tariff)
			Date	Year	Quarter			Rate	Interest			
			Jan-12	2012	Q1	\$ 13,606.30	\$ 1,309.02	1.47%	\$ 16.67	\$ 14,931.99		\$ 2.50
			Feb-12	2012	Q1	\$ 14,915.32	\$ 1,310.08	1.47%	\$ 18.27	\$ 16,243.67		\$ 2.50
			Mar-12	2012	Q1	\$ 16,225.40	\$ 1,308.26	1.47%	\$ 19.88	\$ 17,553.54		\$ 2.50
			Apr-12	2012	Q2	\$ 17,533.66	\$ 1,313.00	1.47%	\$ 21.48	\$ 18,868.14		
			May-12	2012	Q2	\$ 18,846.66	-\$ 108.01	1.47%	\$ 23.09	\$ 18,761.74		
			Jun-12	2012	Q2	\$ 18,738.65		1.47%	\$ 22.95	\$ 18,761.60		
			Jul-12	2012	Q3	\$ 18,738.65		1.47%	\$ 22.95	\$ 18,761.60		
			Aug-12	2012	Q3	\$ 18,738.65		1.47%	\$ 22.95	\$ 18,761.60		
			Sep-12	2012	Q3	\$ 18,738.65		1.47%	\$ 22.95	\$ 18,761.60		
			Oct-12	2012	Q4	\$ 18,738.65		1.47%	\$ 22.95	\$ 18,761.60		
			Nov-12	2012	Q4	\$ 18,738.65		1.47%	\$ 22.95	\$ 18,761.60		
			Dec-12	2012	Q4	\$ 18,738.65		1.47%	\$ 22.95	\$ 18,761.60	\$ 5,392.39	
Total Funding Adder Revenues Collected						\$ 18,738.65			\$ 338.49	\$ 19,077.14	\$ 19,077.14	



Middlesex Power Distribution Corporation - Dutton

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	-			-	5.14%	-	-
2012 Q1	1.47%	4.29%	Jan-08	2008	Q1	-			-	5.14%	-	-
2012 Q2	1.47%	4.29%	Feb-08	2008	Q1	-			-	5.14%	-	-
2012 Q3	1.47%	4.29%	Mar-08	2008	Q1	-			-	5.14%	-	-
2012 Q4	1.47%	4.29%	Apr-08	2008	Q2	-			-	4.08%	-	-
			May-08	2008	Q2	-			-	4.08%	-	-
			Jun-08	2008	Q2	-			-	4.08%	-	-
			Jul-08	2008	Q3	-			-	3.35%	-	-
			Aug-08	2008	Q3	-			-	3.35%	-	-
			Sep-08	2008	Q3	-			-	3.35%	-	-
			Oct-08	2008	Q4	-			-	3.35%	-	-
			Nov-08	2008	Q4	-			-	3.35%	-	-
			Dec-08	2008	Q4	-			-	3.35%	-	-
			Jan-09	2009	Q1	-			-	2.45%	-	-
			Feb-09	2009	Q1	-			-	2.45%	-	-
			Mar-09	2009	Q1	-			-	2.45%	-	-
			Apr-09	2009	Q2	-			-	1.00%	-	-
			May-09	2009	Q2	-			-	1.00%	-	-
			Jun-09	2009	Q2	-			-	1.00%	-	-
			Jul-09	2009	Q3	-			-	0.55%	-	-
			Aug-09	2009	Q3	-			-	0.55%	-	-
			Sep-09	2009	Q3	-			-	0.55%	-	-
			Oct-09	2009	Q4	-			-	0.55%	-	-
			Nov-09	2009	Q4	-			-	0.55%	-	-
			Dec-09	2009	Q4	-			-	0.55%	-	-
			Jan-10	2010	Q1	-			-	0.55%	-	-
			Feb-10	2010	Q1	-			-	0.55%	-	-
			Mar-10	2010	Q1	-			-	0.55%	-	-
			Apr-10	2010	Q2	-			-	0.55%	-	-
			May-10	2010	Q2	-			-	0.55%	-	-
			Jun-10	2010	Q2	-			-	0.55%	-	-
			Jul-10	2010	Q3	-			-	0.89%	-	-
			Aug-10	2010	Q3	-			-	0.89%	-	-
			Sep-10	2010	Q3	-			-	0.89%	-	-
			Oct-10	2010	Q4	-			-	1.20%	-	-
			Nov-10	2010	Q4	-			-	1.20%	-	-
			Dec-10	2010	Q4	-			-	1.20%	-	-
			Jan-11	2011	Q1	-			-	1.47%	-	-
			Feb-11	2011	Q1	-			-	1.47%	-	-
			Mar-11	2011	Q1	-			-	1.47%	-	-
			Apr-11	2011	Q2	-			-	1.47%	-	-
			May-11	2011	Q2	-			-	1.47%	-	-
			Jun-11	2011	Q2	-			-	1.47%	-	-
			Jul-11	2011	Q3	-			-	1.47%	-	-
			Aug-11	2011	Q3	-			-	1.47%	-	-
			Sep-11	2011	Q3	-			-	1.47%	-	-
			Oct-11	2011	Q4	-			-	1.47%	-	-
			Nov-11	2011	Q4	-			-	1.47%	-	-
			Dec-11	2011	Q4	-			-	1.47%	-	-
			Jan-12	2012	Q1	-			-	1.47%	-	-
			Feb-12	2012	Q1	-			-	1.47%	-	-
			Mar-12	2012	Q1	-			-	1.47%	-	-
			Apr-12	2012	Q2	-			-	1.47%	-	-
			May-12	2012	Q2	-			-	1.47%	-	-
			Jun-12	2012	Q2	-			-	1.47%	-	-
			Jul-12	2012	Q3	-			-	1.47%	-	-
			Aug-12	2012	Q3	-			-	1.47%	-	-
			Sep-12	2012	Q3	-			-	1.47%	-	-
			Oct-12	2012	Q4	-			-	1.47%	-	-
			Nov-12	2012	Q4	-			-	1.47%	-	-
			Dec-12	2012	Q4	-			-	1.47%	-	-
						\$	-	\$	-	\$	-	-



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation - Dutton

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

Year	OM&A (from Sheet 5)	Amortization Expense (from Sheet 5)	Cumulative OM&A and Amortization Expense	Average Cumulative OM&A and Amortization Expense	Average Annual Prescribed Interest Rate for Deferral and Variance Accounts (from Sheets 8A and 8B)	Simple Interest on OM&A and Amortization Expenses
2006	\$ -	\$ -	\$ -	\$ -	4.37%	\$ -
2007	\$ -	\$ -	\$ -	\$ -	4.73%	\$ -
2008	\$ -	\$ -	\$ -	\$ -	3.98%	\$ -
2009	\$ 1,316.96	\$ 3,618.03	\$ 4,934.99	\$ 2,467.49	1.14%	\$ 28.07
2010	\$ 5,223.17	\$ 7,264.32	\$ 17,422.48	\$ 11,178.73	0.80%	\$ 89.15
2011	\$ 4,517.15	\$ 7,292.59	\$ 29,232.22	\$ 23,327.35	1.47%	\$ 342.91
2012	\$ 1,164.59	\$ 7,141.13	\$ 37,537.94	\$ 33,385.08	1.47%	\$ 490.76
Cumulative Interest to 2011						\$ 460.13
Cumulative Interest to 2012						\$ 950.89



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation - Dutton

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

Check if applicable

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

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

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

	2006	2007	2008	2009	2010	2011	2012 and later	Total
Deferred and forecasted Smart Meter Incremental Revenue Requirement (from Sheet 5)	\$ -	\$ -	\$ -	\$ 7,833.31	\$ 18,665.79	\$ 18,406.16	\$ 14,541.16	\$ 59,446.43
Interest on Deferred and forecasted OM&A and Amortization Expense (Sheet 8A/8B) (Check one of the boxes below)	\$ -	\$ -	\$ -	\$ 28.07	\$ 89.15	\$ 342.91		\$ 460.13
<input type="checkbox"/> Sheet 8A (Interest calculated on monthly balances)								\$ -
<input checked="" type="checkbox"/> Sheet 8B (Interest calculated on average annual balances)	\$ -	\$ -	\$ -	\$ 28.07	\$ 89.15	\$ 342.91		\$ 460.13
SMFA Revenues (from Sheet 8)	\$ -	\$ -	\$ -	\$ -	\$ 1,294.28	\$ 12,312.02	\$ 5,132.35	\$ 18,738.65
SMFA Interest (from Sheet 8)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 78.45	\$ 260.04	\$ 338.49
Net Deferred Revenue Requirement	\$ -	\$ -	\$ -	\$ 7,861.38	\$ 17,460.66	\$ 6,358.60	\$ 9,148.77	\$ 40,829.42
Number of Metered Customers (average for 2012 test year)							521	

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

Years for collection or refunding	3.5	
Deferred Incremental Revenue Requirement from 2006 to December 31, 2011 plus Interest on OM&A and Amortization	\$ 45,365.39	
SMFA Revenues collected from 2006 to 2012 test year (inclusive) Plus Simple Interest on SMFA Revenues	\$ 19,077.14	
Net Deferred Revenue Requirement	\$ 26,288.25	
SMDR November 1, 2012 to April 30, 2013	\$ 1.20	Match
Check: Forecasted SMDR Revenues	\$ 26,258.40	

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

Incremental Revenue Requirement for 2012	\$ 14,541.16	
SMIRR	\$ 2.33	Match
Check: Forecasted SMIRR Revenues	\$ 14,567.16	

Attachment K

Dutton General Service less than 50 kW Smart Meter Model



Ontario Energy Board

Smart Meter Model

Choose Your Utility:

Middlesex Power Distribution Corporation

Middlesex Power Distribution Corporation - Dutton

Application Contact Information

Name: Andrya Eagen

Title: Senior Regulatory Specialist

Phone Number: 519-352-6300 Ext 243

Email Address: andryaeagen@ckenergy.com

We are applying for rates effective: November 1, 2012

Last COS Re-based Year 2006

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.



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

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

Smart Meter Capital Cost and Operational Expense Data	2006	2007	2008	2009	2010	2011	2012 and later	Total
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
Smart Meter Installation Plan								
Actual/Planned number of Smart Meters installed during the Calendar Year								
Residential								0
General Service < 50 kW				77	12			89
Actual/Planned number of Smart Meters installed (Residential and GS < 50 kW only)	0	0	0	77	12	0	0	89
Percentage of Residential and GS < 50 kW Smart Meter Installations Completed	0.00%	0.00%	0.00%	86.52%	100.00%	0.00%	100.00%	100.00%
Actual/Planned number of GS > 50 kW meters installed								0
Other (please identify)								0
Total Number of Smart Meters installed or planned to be installed	0	0	0	77	12	0	0	89
1 Capital Costs								
1.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)								
1.1.1 Smart Meters (may include new meters and modules, etc.)	Smart Meter			16,103	2,510	0		\$ 18,613
1.1.2 Installation Costs (may include socket kits, labour, vehicle, benefits, etc.)	Smart Meter			5,736	894	0		\$ 6,630
1.1.3a Workforce Automation Hardware (may include fieldwork handhelds, barcode hardware, etc.)								\$ -
1.1.3b Workforce Automation Software (may include fieldwork handhelds, barcode hardware, etc.)								\$ -
Total Advanced Metering Communications Devices (AMCD)				\$ 21,839	\$ 3,404	\$ -	\$ -	\$ 25,243
1.2 ADVANCED METERING REGIONAL COLLECTOR (AMRC) (includes LAN)								
1.2.1 Collectors								\$ -
1.2.2 Repeaters (may include radio licence, etc.)	Computer Hardware			1,261	197	0		\$ 1,458
1.2.3 Installation (may include meter seals and rings, collector computer hardware, etc.)								\$ -
Total Advanced Metering Regional Collector (AMRC) (includes LAN)				\$ 1,261	\$ 197	\$ -	\$ -	\$ 1,458
1.3 ADVANCED METERING CONTROL COMPUTER (AMCC)								
1.3.1 Computer Hardware								\$ -
1.3.2 Computer Software								\$ -
1.3.3 Computer Software Licences & Installation (includes hardware and software) (may include AS400 disk space, backup and recovery computer, UPS, etc.)								\$ -
Total Advanced Metering Control Computer (AMCC)				\$ -	\$ -	\$ -	\$ -	\$ -
1.4 WIDE AREA NETWORK (WAN)								
1.4.1 Activation Fees	Applications Software			130	20	0		\$ 151
Total Wide Area Network (WAN)				\$ 130	\$ 20	\$ -	\$ -	\$ 151
1.5 OTHER AMI CAPITAL COSTS RELATED TO MINIMUM FUNCTIONALITY								
1.5.1 Customer Equipment (including repair of damaged equipment)								\$ -
1.5.2 AMI Interface to CIS								\$ -
1.5.3 Professional Fees								\$ -
1.5.4 Integration								\$ -
1.5.5 Program Management								\$ -
1.5.6 Other AMI Capital								\$ -
Total Other AMI Capital Costs Related to Minimum Functionality				\$ -	\$ -	\$ -	\$ -	\$ -
Total Capital Costs Related to Minimum Functionality				\$ 23,231	\$ 3,620	\$ -	\$ -	\$ 26,851
1.6 CAPITAL COSTS BEYOND MINIMUM FUNCTIONALITY (Please provide a descriptive title and identify nature of beyond minimum functionality costs)								
1.6.1 Costs related to technical capabilities in the smart meters or related communications infrastructure that exceed those specified in O.Reg 425/06	Computer Software							\$ -
1.6.2 Costs for deployment of smart meters to customers other than residential and small general service	Applications Software							\$ -
1.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDNR, etc.								\$ -
Total Capital Costs Beyond Minimum Functionality				\$ -	\$ -	\$ -	\$ -	\$ -
Total Smart Meter Capital Costs				\$ 23,231	\$ 3,620	\$ -	\$ -	\$ 26,851
2 OM&A Expenses								
2.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)								
2.1.1 Maintenance (may include meter reverification costs, etc.)				120	96	148	0	\$ 363
2.1.2 Other (please specify)								\$ -
Total Incremental AMCD OM&A Costs				\$ 120	\$ 96	\$ 148	\$ -	\$ 363



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

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

Smart Meter Capital Cost and Operational Expense Data

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

2.2.1 Maintenance

2.2.2 Other (please specify)

Total Incremental AMRC OM&A Costs

2.3 ADVANCED METERING CONTROL COMPUTER (AMCC)

2.3.1 Hardware Maintenance (may include server support, etc.)

2.3.2 Software Maintenance (may include maintenance support, etc.)

2.3.2 Other (please specify)

Total Incremental AMCC OM&A Costs

2.4 WIDE AREA NETWORK (WAN)

2.4.1 WAN Maintenance

2.4.2 Other (please specify)

Total Incremental AMRC OM&A Costs

2.5 OTHER AMI OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY

2.5.1 Business Process Redesign

2.5.2 Customer Communication (may include project communication, etc.)

2.5.3 Program Management

2.5.4 Change Management (may include training, etc.)

2.5.5 Administration Costs

2.5.6 Other AMI Expenses

(please specify)

Total Other AMI OM&A Costs Related to Minimum Functionality

TOTAL OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY

2.6 OM&A COSTS RELATED TO BEYOND MINIMUM FUNCTIONALITY

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

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

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

2.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDMR, etc.

Total OM&A Costs Beyond Minimum Functionality

Total Smart Meter OM&A Costs

	2006	2007	2008	2009	2010	2011	2012 and later	Total
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
								\$ -
								\$ -
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
				14	14	10	8	\$ 46
				53	40	26	190	\$ 309
								\$ -
	\$ -	\$ -	\$ -	67	54	35	199	\$ 355
								\$ -
								\$ -
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
								\$ -
								\$ -
								\$ -
				2	0	0	0	\$ 2
				19	6	13	0	\$ 38
	\$ -	\$ -	\$ -	21	6	13	-	\$ 39
	\$ -	\$ -	\$ -	207	156	196	199	\$ 757
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual		
								\$ -
								\$ -
				18	735	574	0	\$ 1,327
	\$ -	\$ -	\$ -	18	735	574	-	\$ 1,327
	\$ -	\$ -	\$ -	225	891	770	199	\$ 2,084

3 Aggregate Smart Meter Costs by Category

3.1

Capital

3.1.1 Smart Meter

3.1.2 Computer Hardware

3.1.3 Computer Software

3.1.4 Tools & Equipment

3.1.5 Other Equipment

3.1.6 Applications Software

3.1.7 Total Capital Costs

3.2 OM&A Costs

3.2.1 Total OM&A Costs

\$ -	\$ -	\$ -	\$ 21,839	\$ 3,404	\$ -	\$ -	\$ 25,243
\$ -	\$ -	\$ -	\$ 1,261	\$ 197	\$ -	\$ -	\$ 1,458
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ 130	\$ 20	\$ -	\$ -	\$ 151
\$ -	\$ -	\$ -	\$ 23,231	\$ 3,620	\$ -	\$ -	\$ 26,851
\$ -	\$ -	\$ -	\$ 225	\$ 891	\$ 770	\$ 199	\$ 2,084



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation - Dutton

	2006	2007	2008	2009	2010	2011	2012 and later
Cost of Capital							
Capital Structure¹							
Deemed Short-term Debt Capitalization							
Deemed Long-term Debt Capitalization	57.0%	57.0%	60.0%	60.0%	60.0%	60.0%	60.0%
Deemed Equity Capitalization	43.0%	43.0%	40.0%	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							
Long-term Debt Rate (actual/embedded/deemed) ²	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%
Target Return on Equity (ROE)	9.0%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
Return on Preferred Shares							
WACC	7.43%	7.43%	7.35%	7.35%	7.35%	7.35%	7.35%
Working Capital Allowance							
Working Capital Allowance Rate (% of the sum of Cost of Power + controllable expenses)	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
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	50	50	50	50
Computer Equipment - CCA Rate	45%	55%	55%	55%	55%	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	12	12	12	12	12	12	12
Applications Software - CCA Rate	100%	100%	100%	100%	100%	100%	100%

Assumptions

¹ Planned smart meter installations occur evenly throughout the year.

² Fiscal calendar year (January 1 to December 31) used.

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



	2006	2007	2008	2009	2010	2011	2012 and later
Net Fixed Assets - Smart Meters							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ 21,839	\$ 25,243	\$ 25,243
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ 21,839	\$ 3,404	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 21,839	\$ 25,243	\$ 25,243	\$ 25,243
Accumulated Depreciation							
Opening Balance		\$ -	\$ -	\$ -	\$ 728	\$ 2,297	\$ 3,980
Amortization expense during year	\$ -	\$ -	\$ -	\$ 728	\$ 1,569	\$ 1,683	\$ 1,683
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 728	\$ 2,297	\$ 3,980	\$ 5,663
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 21,111	\$ 22,945	\$ 21,262
Closing Balance	\$ -	\$ -	\$ -	\$ 21,111	\$ 22,945	\$ 21,262	\$ 19,580
Average Net Book Value	\$ -	\$ -	\$ -	\$ 10,556	\$ 22,028	\$ 22,104	\$ 20,421
Net Fixed Assets - Computer Hardware							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ 1,261	\$ 1,458	\$ 1,458
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ 1,261	\$ 197	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 1,261	\$ 1,458	\$ 1,458	\$ 1,458
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 126	\$ 398	\$ 690
Amortization expense during year	\$ -	\$ -	\$ -	\$ 126	\$ 272	\$ 292	\$ 292
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 126	\$ 398	\$ 690	\$ 981
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 1,135	\$ 1,060	\$ 768
Closing Balance	\$ -	\$ -	\$ -	\$ 1,135	\$ 1,060	\$ 768	\$ 477
Average Net Book Value	\$ -	\$ -	\$ -	\$ 568	\$ 1,097	\$ 914	\$ 622
Net Fixed Assets - Computer Software (Including Applications Software)							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ 130	\$ 151	\$ 151
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ 130	\$ 20	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 130	\$ 151	\$ 151	\$ 151
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 22	\$ 69	\$ 119
Amortization expense during year	\$ -	\$ -	\$ -	\$ 22	\$ 47	\$ 50	\$ 32
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 22	\$ 69	\$ 119	\$ 151
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 109	\$ 82	\$ 32
Closing Balance	\$ -	\$ -	\$ -	\$ 109	\$ 82	\$ 32	\$ -
Average Net Book Value	\$ -	\$ -	\$ -	\$ 54	\$ 95	\$ 57	\$ 16
Net Fixed Assets - Tools and Equipment							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Amortization expense during year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Average Net Book Value	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Fixed Assets - Other Equipment							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Amortization expense during year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Average Net Book Value	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation - Dutton

	2006	2007	2008	2009	2010	2011	2012 and Later
Average Net Fixed Asset Values (from Sheet 4)							
Smart Meters	\$ -	\$ -	\$ -	\$ 10,556	\$ 22,028	\$ 22,104	\$ 20,421
Computer Hardware	\$ -	\$ -	\$ -	\$ 568	\$ 1,097	\$ 914	\$ 622
Computer Software	\$ -	\$ -	\$ -	\$ 54	\$ 95	\$ 57	\$ 16
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Net Fixed Assets	\$ -	\$ -	\$ -	\$ 11,177	\$ 23,221	\$ 23,075	\$ 21,059
Working Capital							
Operating Expenses (from Sheet 2)	\$ -	\$ -	\$ -	\$ 225	\$ 891	\$ 770	\$ 199
Working Capital Factor (from Sheet 3)	15%	15%	15%	15%	15%	15%	15%
Working Capital Allowance	\$ -	\$ -	\$ -	\$ 34	\$ 134	\$ 116	\$ 30
Incremental Smart Meter Rate Base	\$ -	\$ -	\$ -	\$ 11,211	\$ 23,355	\$ 23,190	\$ 21,089
Return on Rate Base							
Capital Structure							
Deemed Short Term Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Deemed Long Term Debt	\$ -	\$ -	\$ -	\$ 6,727	\$ 14,013	\$ 13,914	\$ 12,654
Equity	\$ -	\$ -	\$ -	\$ 4,484	\$ 9,342	\$ 9,276	\$ 8,436
Preferred Shares	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Capitalization	\$ -	\$ -	\$ -	\$ 11,211	\$ 23,355	\$ 23,190	\$ 21,089
Return on							
Deemed Short Term Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Deemed Long Term Debt	\$ -	\$ -	\$ -	\$ 420	\$ 876	\$ 870	\$ 791
Equity	\$ -	\$ -	\$ -	\$ 404	\$ 841	\$ 835	\$ 759
Preferred Shares	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Return on Capital	\$ -	\$ -	\$ -	\$ 824	\$ 1,717	\$ 1,704	\$ 1,550
Operating Expenses	\$ -	\$ -	\$ -	\$ 225	\$ 891	\$ 770	\$ 199
Amortization Expenses (from Sheet 4)							
Smart Meters	\$ -	\$ -	\$ -	\$ 728	\$ 1,569	\$ 1,683	\$ 1,683
Computer Hardware	\$ -	\$ -	\$ -	\$ 126	\$ 272	\$ 292	\$ 292
Computer Software	\$ -	\$ -	\$ -	\$ 22	\$ 47	\$ 50	\$ 32
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Amortization Expense in Year	\$ -	\$ -	\$ -	\$ 876	\$ 1,888	\$ 2,025	\$ 2,006
Incremental Revenue Requirement before Taxes/PILs	\$ -	\$ -	\$ -	\$ 1,924	\$ 4,495	\$ 4,499	\$ 3,755
Calculation of Taxable Income							
Incremental Operating Expenses	\$ -	\$ -	\$ -	\$ 225	\$ 891	\$ 770	\$ 199
Amortization Expense	\$ -	\$ -	\$ -	\$ 876	\$ 1,888	\$ 2,025	\$ 2,006
Interest Expense	\$ -	\$ -	\$ -	\$ 420	\$ 876	\$ 870	\$ 791
Net Income for Taxes/PILs	\$ -	\$ -	\$ -	\$ 404	\$ 841	\$ 835	\$ 759
Grossed-up Taxes/PILs (from Sheet 7)	\$ -	\$ -	\$ -	\$ 47.28	\$ 145.31	\$ 291.42	\$ 344.64
Revenue Requirement, including Grossed-up Taxes/PILs	\$ -	\$ -	\$ -	\$ 1,972	\$ 4,641	\$ 4,791	\$ 4,100



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation - Dutton

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	\$ -	\$ -	\$ -	\$ -	\$ 20,965.60	\$ 22,555.72	\$ 20,751.26
Capital Additions	\$ -	\$ -	\$ -	\$ 21,839.17	\$ 3,403.51	\$ -	\$ -
Retirements/Removals (if applicable)							
UCC Before Half Year Rule	\$ -	\$ -	\$ -	\$ 21,839.17	\$ 24,369.11	\$ 22,555.72	\$ 20,751.26
Half Year Rule (1/2 Additions - Disposals)	\$ -	\$ -	\$ -	\$ 10,919.58	\$ 1,701.75	\$ -	\$ -
Reduced UCC	\$ -	\$ -	\$ -	\$ 10,919.58	\$ 22,667.36	\$ 22,555.72	\$ 20,751.26
CCA Rate Class	47	47	47	47	47	47	47
CCA Rate	8%	8%	8%	8%	8%	8%	8%
CCA	\$ -	\$ -	\$ -	\$ 873.57	\$ 1,813.39	\$ 1,804.46	\$ 1,660.10
Closing UCC	\$ -	\$ -	\$ -	\$ 20,965.60	\$ 22,555.72	\$ 20,751.26	\$ 19,091.16

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	\$ -	\$ -	\$ -	\$ -	\$ 914.39	\$ 553.98	\$ 249.29
Capital Additions Computer Hardware	\$ -	\$ -	\$ -	\$ 1,261.22	\$ 196.55	\$ -	\$ -
Capital Additions Computer Software	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
UCC Before Half Year Rule	\$ -	\$ -	\$ -	\$ 1,261.22	\$ 1,110.94	\$ 553.98	\$ 249.29
Half Year Rule (1/2 Additions - Disposals)	\$ -	\$ -	\$ -	\$ 630.61	\$ 98.28	\$ -	\$ -
Reduced UCC	\$ -	\$ -	\$ -	\$ 630.61	\$ 1,012.66	\$ 553.98	\$ 249.29
CCA Rate Class	45	50	50	50	50	50	50
CCA Rate	45%	55%	55%	55%	55%	55%	55%
CCA	\$ -	\$ -	\$ -	\$ 346.84	\$ 556.96	\$ 304.69	\$ 137.11
Closing UCC	\$ -	\$ -	\$ -	\$ 914.39	\$ 553.98	\$ 249.29	\$ 112.18

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	\$ -	\$ -	\$ -	\$ 403.60	\$ 840.77	\$ 834.85	\$ 759.21
Amortization	\$ -	\$ -	\$ -	\$ 875.81	\$ 1,888.11	\$ 2,024.59	\$ 2,006.27
CCA - Smart Meters	\$ -	\$ -	\$ -	\$ 873.57	\$ 1,813.39	\$ 1,804.46	\$ 1,660.10
CCA - Computers	\$ -	\$ -	\$ -	\$ 346.84	\$ 556.96	\$ 304.69	\$ 137.11
CCA - Applications Software	\$ -	\$ -	\$ -	\$ 65.14	\$ 75.29	\$ 10.15	\$ -
CCA - Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Change in taxable income	\$ -	\$ -	\$ -	\$ 6.13	\$ 283.23	\$ 740.15	\$ 968.27
Tax Rate (from Sheet 3)	36.12%	36.12%	33.50%	33.00%	31.00%	28.25%	26.25%
Income Taxes Payable	\$ -	\$ -	\$ -	\$ 2.02	\$ 87.80	\$ 209.09	\$ 254.17
ONTARIO CAPITAL TAX							
Smart Meters	\$ -	\$ -	\$ -	\$ 21,111.20	\$ 22,945.31	\$ 21,262.46	\$ 19,579.62
Computer Hardware	\$ -	\$ -	\$ -	\$ 1,135.10	\$ 1,059.75	\$ 768.20	\$ 476.64
Computer Software (Including Application Software)	\$ -	\$ -	\$ -	\$ 108.57	\$ 82.06	\$ 31.86	\$ -
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Rate Base	\$ -	\$ -	\$ -	\$ 22,354.86	\$ 24,087.12	\$ 22,062.53	\$ 20,056.26
Less: Exemption	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Deemed Taxable Capital	\$ -	\$ -	\$ -	\$ 22,354.86	\$ 24,087.12	\$ 22,062.53	\$ 20,056.26
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)	\$ -	\$ -	\$ -	\$ 50.30	\$ 18.07	\$ -	\$ -
Change in Income Taxes Payable	\$ -	\$ -	\$ -	\$ 2.02	\$ 87.80	\$ 209.09	\$ 254.17
Change in OCT	\$ -	\$ -	\$ -	\$ 50.30	\$ 18.07	\$ -	\$ -
PILs	\$ -	\$ -	\$ -	\$ 48.27	\$ 105.87	\$ 209.09	\$ 254.17
Gross Up PILs							
Tax Rate	36.12%	36.12%	33.50%	33.00%	31.00%	28.25%	26.25%
Change in Income Taxes Payable	\$ -	\$ -	\$ -	\$ 3.02	\$ 127.25	\$ 291.42	\$ 344.64
Change in OCT	\$ -	\$ -	\$ -	\$ 50.30	\$ 18.07	\$ -	\$ -
PILs	\$ -	\$ -	\$ -	\$ 47.28	\$ 145.31	\$ 291.42	\$ 344.64



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation - Dutton

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	\$ -		4.59%	\$ -	\$ -		
2008 Q1	5.14%	5.18%	Sep-06	2006	Q3	\$ -		4.59%	\$ -	\$ -		
2008 Q2	4.08%	5.18%	Oct-06	2006	Q4	\$ -		4.59%	\$ -	\$ -		
2008 Q3	3.35%	5.43%	Nov-06	2006	Q4	\$ -		4.59%	\$ -	\$ -		
2008 Q4	3.35%	5.43%	Dec-06	2006	Q4	\$ -		4.59%	\$ -	\$ -	\$ -	
2009 Q1	2.45%	6.61%	Jan-07	2007	Q1	\$ -		4.59%	\$ -	\$ -		
2009 Q2	1.00%	6.61%	Feb-07	2007	Q1	\$ -		4.59%	\$ -	\$ -		
2009 Q3	0.55%	5.67%	Mar-07	2007	Q1	\$ -		4.59%	\$ -	\$ -		
2009 Q4	0.55%	4.66%	Apr-07	2007	Q2	\$ -		4.59%	\$ -	\$ -		
2010 Q1	0.55%	4.34%	May-07	2007	Q2	\$ -		4.59%	\$ -	\$ -		
2010 Q2	0.55%	4.34%	Jun-07	2007	Q2	\$ -		4.59%	\$ -	\$ -		
2010 Q3	0.89%	4.66%	Jul-07	2007	Q3	\$ -		4.59%	\$ -	\$ -		
2010 Q4	1.20%	4.01%	Aug-07	2007	Q3	\$ -		4.59%	\$ -	\$ -		
2011 Q1	1.47%	4.29%	Sep-07	2007	Q3	\$ -		4.59%	\$ -	\$ -		
2011 Q2	1.47%	4.29%	Oct-07	2007	Q4	\$ -		5.14%	\$ -	\$ -		
2011 Q3	1.47%	4.29%	Nov-07	2007	Q4	\$ -		5.14%	\$ -	\$ -		
2011 Q4	1.47%	4.29%	Dec-07	2007	Q4	\$ -		5.14%	\$ -	\$ -	\$ -	
2012 Q1	1.47%	4.29%	Jan-08	2008	Q1	\$ -		5.14%	\$ -	\$ -		
2012 Q2	1.47%	4.29%	Feb-08	2008	Q1	\$ -		5.14%	\$ -	\$ -		
2012 Q3	1.47%	4.29%	Mar-08	2008	Q1	\$ -		5.14%	\$ -	\$ -		
2012 Q4	1.47%	4.29%	Apr-08	2008	Q2	\$ -		4.08%	\$ -	\$ -		
			May-08	2008	Q2	\$ -		4.08%	\$ -	\$ -		
			Jun-08	2008	Q2	\$ -		4.08%	\$ -	\$ -		
			Jul-08	2008	Q3	\$ -		3.35%	\$ -	\$ -		
			Aug-08	2008	Q3	\$ -		3.35%	\$ -	\$ -		
			Sep-08	2008	Q3	\$ -		3.35%	\$ -	\$ -		
			Oct-08	2008	Q4	\$ -		3.35%	\$ -	\$ -		
			Nov-08	2008	Q4	\$ -		3.35%	\$ -	\$ -		
			Dec-08	2008	Q4	\$ -		3.35%	\$ -	\$ -	\$ -	
			Jan-09	2009	Q1	\$ -		2.45%	\$ -	\$ -		
			Feb-09	2009	Q1	\$ -		2.45%	\$ -	\$ -		
			Mar-09	2009	Q1	\$ -		2.45%	\$ -	\$ -		
			Apr-09	2009	Q2	\$ -		1.00%	\$ -	\$ -		
			May-09	2009	Q2	\$ -		1.00%	\$ -	\$ -		
			Jun-09	2009	Q2	\$ -		1.00%	\$ -	\$ -		
			Jul-09	2009	Q3	\$ -		0.55%	\$ -	\$ -		
			Aug-09	2009	Q3	\$ -		0.55%	\$ -	\$ -		
			Sep-09	2009	Q3	\$ -		0.55%	\$ -	\$ -		
			Oct-09	2009	Q4	\$ -		0.55%	\$ -	\$ -		
			Nov-09	2009	Q4	\$ -		0.55%	\$ -	\$ -		
			Dec-09	2009	Q4	\$ -		0.55%	\$ -	\$ -	\$ -	
			Jan-10	2010	Q1	\$ -		0.55%	\$ -	\$ -		
			Feb-10	2010	Q1	\$ -		0.55%	\$ -	\$ -		
			Mar-10	2010	Q1	\$ -		0.55%	\$ -	\$ -		
			Apr-10	2010	Q2	\$ -		0.55%	\$ -	\$ -		
			May-10	2010	Q2	\$ -		0.55%	\$ -	\$ -		
			Jun-10	2010	Q2	\$ -		0.55%	\$ -	\$ -		
			Jul-10	2010	Q3	\$ -		0.89%	\$ -	\$ -		
			Aug-10	2010	Q3	\$ -		0.89%	\$ -	\$ -		
			Sep-10	2010	Q3	\$ -		0.89%	\$ -	\$ -		
			Oct-10	2010	Q4	\$ -		1.20%	\$ -	\$ -		
			Nov-10	2010	Q4	\$ -		1.20%	\$ -	\$ -		
			Dec-10	2010	Q4	\$ -	\$ 225.17	1.20%	\$ -	\$ 225.17	\$ 225.17	\$ 1.00
			Jan-11	2011	Q1	\$ 225.17	\$ 89.00	1.47%	\$ 0.28	\$ 314.45	\$ -	\$ 1.00
			Feb-11	2011	Q1	\$ 314.17	\$ 89.00	1.47%	\$ 0.38	\$ 403.55	\$ -	\$ 1.00
			Mar-11	2011	Q1	\$ 403.17	\$ 89.40	1.47%	\$ 0.49	\$ 493.06	\$ -	\$ 1.00
			Apr-11	2011	Q2	\$ 492.57	\$ 88.60	1.47%	\$ 0.60	\$ 581.77	\$ -	\$ 1.00
			May-11	2011	Q2	\$ 581.17	\$ 89.00	1.47%	\$ 0.71	\$ 670.88	\$ -	\$ 2.50
			Jun-11	2011	Q2	\$ 670.17	\$ 165.31	1.47%	\$ 0.82	\$ 836.30	\$ -	\$ 2.50
			Jul-11	2011	Q3	\$ 835.48	\$ 222.50	1.47%	\$ 1.02	\$ 1,059.00	\$ -	\$ 2.50
			Aug-11	2011	Q3	\$ 1,057.98	\$ 222.42	1.47%	\$ 1.30	\$ 1,281.70	\$ -	\$ 2.50
			Sep-11	2011	Q3	\$ 1,280.40	\$ 222.83	1.47%	\$ 1.57	\$ 1,504.80	\$ -	\$ 2.50
			Oct-11	2011	Q4	\$ 1,503.23	\$ 222.75	1.47%	\$ 1.84	\$ 1,727.82	\$ -	\$ 2.50
			Nov-11	2011	Q4	\$ 1,725.98	\$ 223.58	1.47%	\$ 2.11	\$ 1,951.67	\$ -	\$ 2.50
			Dec-11	2011	Q4	\$ 1,949.56	\$ 384.12	1.47%	\$ 2.39	\$ 2,336.07	\$ 2,122.02	\$ 2.50



This worksheet calculates the funding adder revenues.

Account 1555 - Sub-account Funding Adder Revenues

Interest Rates	Approved Deferral and Variance Accounts	CWIP				Opening Balance (Principal)	Funding Adder Revenues	Interest		Closing Balance	Annual amounts	Board Approved Smart Meter Funding Adder (from Tariff)
			Date	Year	Quarter			Rate	Interest			
			Jan-12	2012	Q1	\$ 2,333.68	\$ 222.50	1.47%	\$ 2.86	\$ 2,559.04		\$ 2.50
			Feb-12	2012	Q1	\$ 2,556.18	\$ 222.50	1.47%	\$ 3.13	\$ 2,781.81		\$ 2.50
			Mar-12	2012	Q1	\$ 2,778.68	\$ 222.50	1.47%	\$ 3.40	\$ 3,004.58		\$ 2.50
			Apr-12	2012	Q2	\$ 3,001.18	\$ 222.50	1.47%	\$ 3.68	\$ 3,227.36		
			May-12	2012	Q2	\$ 3,223.68	-\$ 22.73	1.47%	\$ 3.95	\$ 3,204.90		
			Jun-12	2012	Q2	\$ 3,200.95		1.47%	\$ 3.92	\$ 3,204.87		
			Jul-12	2012	Q3	\$ 3,200.95		1.47%	\$ 3.92	\$ 3,204.87		
			Aug-12	2012	Q3	\$ 3,200.95		1.47%	\$ 3.92	\$ 3,204.87		
			Sep-12	2012	Q3	\$ 3,200.95		1.47%	\$ 3.92	\$ 3,204.87		
			Oct-12	2012	Q4	\$ 3,200.95		1.47%	\$ 3.92	\$ 3,204.87		
			Nov-12	2012	Q4	\$ 3,200.95		1.47%	\$ 3.92	\$ 3,204.87		
			Dec-12	2012	Q4	\$ 3,200.95		1.47%	\$ 3.92	\$ 3,204.87	\$ 911.73	
Total Funding Adder Revenues Collected						\$ 3,200.95			\$ 57.97	\$ 3,258.92	\$ 3,258.92	



Middlesex Power Distribution Corporation - Dutton

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	-			-	5.14%	-	-
2012 Q1	1.47%	4.29%	Jan-08	2008	Q1	-			-	5.14%	-	-
2012 Q2	1.47%	4.29%	Feb-08	2008	Q1	-			-	5.14%	-	-
2012 Q3	1.47%	4.29%	Mar-08	2008	Q1	-			-	5.14%	-	-
2012 Q4	1.47%	4.29%	Apr-08	2008	Q2	-			-	4.08%	-	-
			May-08	2008	Q2	-			-	4.08%	-	-
			Jun-08	2008	Q2	-			-	4.08%	-	-
			Jul-08	2008	Q3	-			-	3.35%	-	-
			Aug-08	2008	Q3	-			-	3.35%	-	-
			Sep-08	2008	Q3	-			-	3.35%	-	-
			Oct-08	2008	Q4	-			-	3.35%	-	-
			Nov-08	2008	Q4	-			-	3.35%	-	-
			Dec-08	2008	Q4	-			-	3.35%	-	-
			Jan-09	2009	Q1	-			-	2.45%	-	-
			Feb-09	2009	Q1	-			-	2.45%	-	-
			Mar-09	2009	Q1	-			-	2.45%	-	-
			Apr-09	2009	Q2	-			-	1.00%	-	-
			May-09	2009	Q2	-			-	1.00%	-	-
			Jun-09	2009	Q2	-			-	1.00%	-	-
			Jul-09	2009	Q3	-			-	0.55%	-	-
			Aug-09	2009	Q3	-			-	0.55%	-	-
			Sep-09	2009	Q3	-			-	0.55%	-	-
			Oct-09	2009	Q4	-			-	0.55%	-	-
			Nov-09	2009	Q4	-			-	0.55%	-	-
			Dec-09	2009	Q4	-			-	0.55%	-	-
			Jan-10	2010	Q1	-			-	0.55%	-	-
			Feb-10	2010	Q1	-			-	0.55%	-	-
			Mar-10	2010	Q1	-			-	0.55%	-	-
			Apr-10	2010	Q2	-			-	0.55%	-	-
			May-10	2010	Q2	-			-	0.55%	-	-
			Jun-10	2010	Q2	-			-	0.55%	-	-
			Jul-10	2010	Q3	-			-	0.89%	-	-
			Aug-10	2010	Q3	-			-	0.89%	-	-
			Sep-10	2010	Q3	-			-	0.89%	-	-
			Oct-10	2010	Q4	-			-	1.20%	-	-
			Nov-10	2010	Q4	-			-	1.20%	-	-
			Dec-10	2010	Q4	-			-	1.20%	-	-
			Jan-11	2011	Q1	-			-	1.47%	-	-
			Feb-11	2011	Q1	-			-	1.47%	-	-
			Mar-11	2011	Q1	-			-	1.47%	-	-
			Apr-11	2011	Q2	-			-	1.47%	-	-
			May-11	2011	Q2	-			-	1.47%	-	-
			Jun-11	2011	Q2	-			-	1.47%	-	-
			Jul-11	2011	Q3	-			-	1.47%	-	-
			Aug-11	2011	Q3	-			-	1.47%	-	-
			Sep-11	2011	Q3	-			-	1.47%	-	-
			Oct-11	2011	Q4	-			-	1.47%	-	-
			Nov-11	2011	Q4	-			-	1.47%	-	-
			Dec-11	2011	Q4	-			-	1.47%	-	-
			Jan-12	2012	Q1	-			-	1.47%	-	-
			Feb-12	2012	Q1	-			-	1.47%	-	-
			Mar-12	2012	Q1	-			-	1.47%	-	-
			Apr-12	2012	Q2	-			-	1.47%	-	-
			May-12	2012	Q2	-			-	1.47%	-	-
			Jun-12	2012	Q2	-			-	1.47%	-	-
			Jul-12	2012	Q3	-			-	1.47%	-	-
			Aug-12	2012	Q3	-			-	1.47%	-	-
			Sep-12	2012	Q3	-			-	1.47%	-	-
			Oct-12	2012	Q4	-			-	1.47%	-	-
			Nov-12	2012	Q4	-			-	1.47%	-	-
			Dec-12	2012	Q4	-			-	1.47%	-	-
						\$	-	\$	-	\$	-	-



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation - Dutton

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

Year	OM&A (from Sheet 5)	Amortization Expense (from Sheet 5)	Cumulative OM&A and Amortization Expense	Average Cumulative OM&A and Amortization Expense	Average Annual Prescribed Interest Rate for Deferral and Variance Accounts (from Sheets 8A and 8B)	Simple Interest on OM&A and Amortization Expenses
2006	\$ -	\$ -	\$ -	\$ -	4.37%	\$ -
2007	\$ -	\$ -	\$ -	\$ -	4.73%	\$ -
2008	\$ -	\$ -	\$ -	\$ -	3.98%	\$ -
2009	\$ 224.60	\$ 875.81	\$ 1,100.41	\$ 550.20	1.14%	\$ 6.26
2010	\$ 890.77	\$ 1,888.11	\$ 3,879.28	\$ 2,489.84	0.80%	\$ 19.86
2011	\$ 770.37	\$ 2,024.59	\$ 6,674.25	\$ 5,276.76	1.47%	\$ 77.57
2012	\$ 198.61	\$ 2,006.27	\$ 8,879.12	\$ 7,776.68	1.47%	\$ 114.32
Cumulative Interest to 2011						\$ 103.68
Cumulative Interest to 2012						\$ 218.00



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

Check if applicable

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

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

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

	2006	2007	2008	2009	2010	2011	2012 and later	Total
Deferred and forecasted Smart Meter Incremental Revenue Requirement (from Sheet 5)	\$ -	\$ -	\$ -	\$ 1,971.70	\$ 4,640.75	\$ 4,790.87	\$ 4,099.57	\$ 15,502.90
Interest on Deferred and forecasted OM&A and Amortization Expense (Sheet 8A/8B) (Check one of the boxes below)	\$ -	\$ -	\$ -	\$ 6.26	\$ 19.86	\$ 77.57		\$ 103.68
<input type="checkbox"/> Sheet 8A (Interest calculated on monthly balances)								\$ -
<input checked="" type="checkbox"/> Sheet 8B (Interest calculated on average annual balances)	\$ -	\$ -	\$ -	\$ 6.26	\$ 19.86	\$ 77.57		\$ 103.68
SMFA Revenues (from Sheet 8)	\$ -	\$ -	\$ -	\$ -	\$ 225.17	\$ 2,108.51	\$ 867.27	\$ 3,200.95
SMFA Interest (from Sheet 8)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 13.51	\$ 44.46	\$ 57.97
Net Deferred Revenue Requirement	\$ -	\$ -	\$ -	\$ 1,977.96	\$ 4,435.44	\$ 2,746.42	\$ 3,187.84	\$ 12,347.66
Number of Metered Customers (average for 2012 test year)							89	

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

Years for collection or refunding	3.5	
Deferred Incremental Revenue Requirement from 2006 to December 31, 2011 plus Interest on OM&A and Amortization	\$ 11,507.01	
SMFA Revenues collected from 2006 to 2012 test year (inclusive) Plus Simple Interest on SMFA Revenues	\$ 3,258.92	
Net Deferred Revenue Requirement	\$ 8,248.09	
SMDR November 1, 2012 to April 30, 2013	\$ 2.21	Match
Check: Forecasted SMDR Revenues	\$ 8,260.98	

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

Incremental Revenue Requirement for 2012	\$ 4,099.57	
SMIRR	\$ 3.84	Match
Check: Forecasted SMIRR Revenues	\$ 4,101.12	

Attachment L

Newbury Residential Smart Meter Model



Ontario Energy Board

Smart Meter Model

Choose Your Utility:

Middlesex Power Distribution Corporation - Newbury

Midland Power Utility Corporation

Application Contact Information

Name: Andrya Eagen

Title: Senior Regulatory Specialist

Phone Number: 519-352-6300 Ext 243

Email Address: andryaeagen@ckenergy.com

We are applying for rates effective: November 1, 2012

Last COS Re-based Year 2006

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.



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

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

Smart Meter Capital Cost and Operational Expense Data	2006	2007	2008	2009	2010	2011	2012 and later	Total
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
Smart Meter Installation Plan								
Actual/Planned number of Smart Meters installed during the Calendar Year								
Residential				170				170
General Service < 50 kW								0
Actual/Planned number of Smart Meters installed (Residential and GS < 50 kW only)	0	0	0	170	0	0	0	170
Percentage of Residential and GS < 50 kW Smart Meter Installations Completed	0.00%	0.00%	0.00%	100.00%	0.00%	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	170	0	0	0	170
1 Capital Costs								
1.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)								
1.1.1 Smart Meters (may include new meters and modules, etc.)	Smart Meter			18,467	0	0		\$ 18,467
1.1.2 Installation Costs (may include socket kits, labour, vehicle, benefits, etc.)	Smart Meter			6,693	0	0		\$ 6,693
1.1.3a Workforce Automation Hardware (may include fieldwork handhelds, barcode hardware, etc.)								\$ -
1.1.3b Workforce Automation Software (may include fieldwork handhelds, barcode hardware, etc.)								\$ -
Total Advanced Metering Communications Devices (AMCD)				\$ 25,161				\$ 25,161
1.2 ADVANCED METERING REGIONAL COLLECTOR (AMRC) (includes LAN)								
1.2.1 Collectors								\$ -
1.2.2 Repeaters (may include radio licence, etc.)	Computer Hardware			2,974	0	0		\$ 2,974
1.2.3 Installation (may include meter seals and rings, collector computer hardware, etc.)								\$ -
Total Advanced Metering Regional Collector (AMRC) (includes LAN)				\$ 2,974				\$ 2,974
1.3 ADVANCED METERING CONTROL COMPUTER (AMCC)								
1.3.1 Computer Hardware								\$ -
1.3.2 Computer Software								\$ -
1.3.3 Computer Software Licences & Installation (includes hardware and software) (may include AS400 disk space, backup and recovery computer, UPS, etc.)								\$ -
Total Advanced Metering Control Computer (AMCC)								
1.4 WIDE AREA NETWORK (WAN)								
1.4.1 Activation Fees	Applications Software			321	0	0		\$ 321
Total Wide Area Network (WAN)				\$ 321				\$ 321
1.5 OTHER AMI CAPITAL COSTS RELATED TO MINIMUM FUNCTIONALITY								
1.5.1 Customer Equipment (including repair of damaged equipment)								\$ -
1.5.2 AMI Interface to CIS								\$ -
1.5.3 Professional Fees								\$ -
1.5.4 Integration								\$ -
1.5.5 Program Management								\$ -
1.5.6 Other AMI Capital								\$ -
Total Other AMI Capital Costs Related to Minimum Functionality								\$ -
Total Capital Costs Related to Minimum Functionality				\$ 28,455				\$ 28,455
1.6 CAPITAL COSTS BEYOND MINIMUM FUNCTIONALITY								
1.6.1 Costs related to technical capabilities in the smart meters or related communications infrastructure that exceed those specified in O.Reg 425/06	Computer Software							\$ -
1.6.2 Costs for deployment of smart meters to customers other than residential and small general service	Applications Software							\$ -
1.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDNR, etc.								\$ -
Total Capital Costs Beyond Minimum Functionality								\$ -
Total Smart Meter Capital Costs				\$ 28,455				\$ 28,455
2 OM&A Expenses								
2.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)								
2.1.1 Maintenance (may include meter reverification costs, etc.)				231	186	285	0	\$ 702
2.1.2 Other (please specify)								\$ -
Total Incremental AMCD OM&A Costs				\$ 231	\$ 186	\$ 285	\$ -	\$ 702



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

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

Smart Meter Capital Cost and Operational Expense Data

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

2.2.1 Maintenance

2.2.2 Other (please specify)

Total Incremental AMRC OM&A Costs

2.3 ADVANCED METERING CONTROL COMPUTER (AMCC)

2.3.1 Hardware Maintenance (may include server support, etc.)

2.3.2 Software Maintenance (may include maintenance support, etc.)

2.3.2 Other (please specify)

Total Incremental AMCC OM&A Costs

2.4 WIDE AREA NETWORK (WAN)

2.4.1 WAN Maintenance

2.4.2 Other (please specify)

Total Incremental AMRC OM&A Costs

2.5 OTHER AMI OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY

2.5.1 Business Process Redesign

2.5.2 Customer Communication (may include project communication, etc.)

2.5.3 Program Management

2.5.4 Change Management (may include training, etc.)

2.5.5 Administration Costs

2.5.6 Other AM Expenses

(please specify)

Total Other AMI OM&A Costs Related to Minimum Functionality

TOTAL OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY

2.6 OM&A COSTS RELATED TO BEYOND MINIMUM FUNCTIONALITY

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

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

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

2.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDMR, etc.

Total OM&A Costs Beyond Minimum Functionality

Total Smart Meter OM&A Costs

	2006	2007	2008	2009	2010	2011	2012 and later	Total
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
								\$ -
								\$ -
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
				26	28	19	16	\$ 89
				102	77	50	367	\$ 597
								\$ -
	\$ -	\$ -	\$ -	129	104	68	384	\$ 685
								\$ -
								\$ -
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
								\$ -
								\$ -
								\$ -
				3	0	0	0	\$ 3
				36	11	25	0	\$ 73
	\$ -	\$ -	\$ -	40	11	25	-	\$ 76
	\$ -	\$ -	\$ -	400	301	379	384	\$ 1,463
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual		
								\$ -
								\$ -
				34	1,419	1,110	0	\$ 2,563
	\$ -	\$ -	\$ -	34	1,419	1,110	-	\$ 2,563
	\$ -	\$ -	\$ -	434	1,721	1,488	384	\$ 4,027

3 Aggregate Smart Meter Costs by Category

3.1

Capital

3.1.1 Smart Meter

3.1.2 Computer Hardware

3.1.3 Computer Software

3.1.4 Tools & Equipment

3.1.5 Other Equipment

3.1.6 Applications Software

3.1.7 Total Capital Costs

3.2 OM&A Costs

3.2.1 Total OM&A Costs

\$ -	\$ -	\$ -	\$ 25,161	\$ -	\$ -	\$ -	\$ 25,161
\$ -	\$ -	\$ -	\$ 2,974	\$ -	\$ -	\$ -	\$ 2,974
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ 321	\$ -	\$ -	\$ -	\$ 321
\$ -	\$ -	\$ -	\$ 28,455	\$ -	\$ -	\$ -	\$ 28,455
\$ -	\$ -	\$ -	\$ 434	\$ 1,721	\$ 1,488	\$ 384	\$ 4,027



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation - Newbury

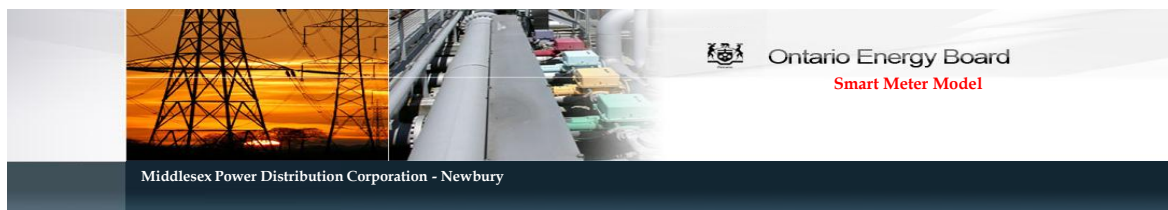
	2006	2007	2008	2009	2010	2011	2012 and later
Cost of Capital							
Capital Structure¹							
Deemed Short-term Debt Capitalization							
Deemed Long-term Debt Capitalization	50.0%	50.0%	53.3%	56.7%	60.0%	60.0%	60.0%
Deemed Equity Capitalization	50.0%	50.0%	46.7%	43.3%	40.0%	40.0%	40.0%
Preferred Shares	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							
Long-term Debt Rate (actual/embedded/deemed) ²	7.25%	7.25%	7.25%	7.25%	7.25%	7.25%	7.25%
Target Return on Equity (ROE)	9.0%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
Return on Preferred Shares							
WACC	8.13%	8.13%	8.07%	8.01%	7.95%	7.95%	7.95%
Working Capital Allowance							
Working Capital Allowance Rate (% of the sum of Cost of Power + controllable expenses)	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
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	50	50	50	50
Computer Equipment - CCA Rate	45%	55%	55%	55%	55%	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	12	12	12	12	12	12	12
Applications Software - CCA Rate	100%	100%	100%	100%	100%	100%	100%

Assumptions

¹ Planned smart meter installations occur evenly throughout the year.

² Fiscal calendar year (January 1 to December 31) used.

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



	2006	2007	2008	2009	2010	2011	2012 and later
Net Fixed Assets - Smart Meters							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ 25,161	\$ 25,161	\$ 25,161
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ 25,161	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 25,161	\$ 25,161	\$ 25,161	\$ 25,161
Accumulated Depreciation							
Opening Balance		\$ -	\$ -	\$ -	\$ 839	\$ 2,516	\$ 4,193
Amortization expense during year	\$ -	\$ -	\$ -	\$ 839	\$ 1,677	\$ 1,677	\$ 1,677
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 839	\$ 2,516	\$ 4,193	\$ 5,871
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 24,322	\$ 22,644	\$ 20,967
Closing Balance	\$ -	\$ -	\$ -	\$ 24,322	\$ 22,644	\$ 20,967	\$ 19,290
Average Net Book Value	\$ -	\$ -	\$ -	\$ 12,161	\$ 23,483	\$ 21,806	\$ 20,128
Net Fixed Assets - Computer Hardware							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ 2,974	\$ 2,974	\$ 2,974
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ 2,974	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 2,974	\$ 2,974	\$ 2,974	\$ 2,974
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 297	\$ 892	\$ 1,487
Amortization expense during year	\$ -	\$ -	\$ -	\$ 297	\$ 595	\$ 595	\$ 595
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 297	\$ 892	\$ 1,487	\$ 2,082
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 2,677	\$ 2,082	\$ 1,487
Closing Balance	\$ -	\$ -	\$ -	\$ 2,677	\$ 2,082	\$ 1,487	\$ 892
Average Net Book Value	\$ -	\$ -	\$ -	\$ 1,339	\$ 2,380	\$ 1,785	\$ 1,190
Net Fixed Assets - Computer Software (Including Applications Software)							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ 321	\$ 321	\$ 321
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ 321	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 321	\$ 321	\$ 321	\$ 321
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 53	\$ 160	\$ 267
Amortization expense during year	\$ -	\$ -	\$ -	\$ 53	\$ 107	\$ 107	\$ 53
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 53	\$ 160	\$ 267	\$ 321
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 267	\$ 160	\$ 53
Closing Balance	\$ -	\$ -	\$ -	\$ 267	\$ 160	\$ 53	\$ -
Average Net Book Value	\$ -	\$ -	\$ -	\$ 134	\$ 214	\$ 107	\$ 27
Net Fixed Assets - Tools and Equipment							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Amortization expense during year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Average Net Book Value	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Fixed Assets - Other Equipment							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Amortization expense during year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Average Net Book Value	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation - Newbury

	2006	2007	2008	2009	2010	2011	2012 and Later
Average Net Fixed Asset Values (from Sheet 4)							
Smart Meters	\$ -	\$ -	\$ -	\$ 12,161	\$ 23,483	\$ 21,806	\$ 20,128
Computer Hardware	\$ -	\$ -	\$ -	\$ 1,339	\$ 2,380	\$ 1,785	\$ 1,190
Computer Software	\$ -	\$ -	\$ -	\$ 134	\$ 214	\$ 107	\$ 27
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Net Fixed Assets	\$ -	\$ -	\$ -	\$ 13,633	\$ 26,076	\$ 23,697	\$ 21,345
Working Capital							
Operating Expenses (from Sheet 2)	\$ -	\$ -	\$ -	\$ 434	\$ 1,721	\$ 1,488	\$ 384
Working Capital Factor (from Sheet 3)	15%	15%	15%	15%	15%	15%	15%
Working Capital Allowance	\$ -	\$ -	\$ -	\$ 65	\$ 258	\$ 223	\$ 58
Incremental Smart Meter Rate Base	\$ -	\$ -	\$ -	\$ 13,698	\$ 26,335	\$ 23,921	\$ 21,402
Return on Rate Base							
Capital Structure							
Deemed Short Term Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Deemed Long Term Debt	\$ -	\$ -	\$ -	\$ 7,767	\$ 15,801	\$ 14,352	\$ 12,841
Equity	\$ -	\$ -	\$ -	\$ 5,931	\$ 10,534	\$ 9,568	\$ 8,561
Preferred Shares	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Capitalization	\$ -	\$ -	\$ -	\$ 13,698	\$ 26,335	\$ 23,921	\$ 21,402
Return on							
Deemed Short Term Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Deemed Long Term Debt	\$ -	\$ -	\$ -	\$ 563	\$ 1,146	\$ 1,041	\$ 931
Equity	\$ -	\$ -	\$ -	\$ 534	\$ 948	\$ 861	\$ 770
Preferred Shares	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Return on Capital	\$ -	\$ -	\$ -	\$ 1,097	\$ 2,094	\$ 1,902	\$ 1,701
Operating Expenses	\$ -	\$ -	\$ -	\$ 434	\$ 1,721	\$ 1,488	\$ 384
Amortization Expenses (from Sheet 4)							
Smart Meters	\$ -	\$ -	\$ -	\$ 839	\$ 1,677	\$ 1,677	\$ 1,677
Computer Hardware	\$ -	\$ -	\$ -	\$ 297	\$ 595	\$ 595	\$ 595
Computer Software	\$ -	\$ -	\$ -	\$ 53	\$ 107	\$ 107	\$ 53
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Amortization Expense in Year	\$ -	\$ -	\$ -	\$ 1,190	\$ 2,379	\$ 2,379	\$ 2,326
Incremental Revenue Requirement before Taxes/PILs	\$ -	\$ -	\$ -	\$ 2,720	\$ 6,194	\$ 5,769	\$ 4,411
Calculation of Taxable Income							
Incremental Operating Expenses	\$ -	\$ -	\$ -	\$ 434	\$ 1,721	\$ 1,488	\$ 384
Amortization Expense	\$ -	\$ -	\$ -	\$ 1,190	\$ 2,379	\$ 2,379	\$ 2,326
Interest Expense	\$ -	\$ -	\$ -	\$ 563	\$ 1,146	\$ 1,041	\$ 931
Net Income for Taxes/PILs	\$ -	\$ -	\$ -	\$ 534	\$ 948	\$ 861	\$ 770
Grossed-up Taxes/PILs (from Sheet 7)	\$ -	\$ -	\$ -	\$ 67.35	\$ 40.45	\$ 365.68	\$ 434.40
Revenue Requirement, including Grossed-up Taxes/PILs	\$ -	\$ -	\$ -	\$ 2,653	\$ 6,234	\$ 6,135	\$ 4,845



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation - Newbury

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	\$ -	\$ -	\$ -	\$ -	\$ 24,154.12	\$ 22,221.79	\$ 20,444.05
Capital Additions	\$ -	\$ -	\$ -	\$ 25,160.54	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
UCC Before Half Year Rule	\$ -	\$ -	\$ -	\$ 25,160.54	\$ 24,154.12	\$ 22,221.79	\$ 20,444.05
Half Year Rule (1/2 Additions - Disposals)	\$ -	\$ -	\$ -	\$ 12,580.27	\$ -	\$ -	\$ -
Reduced UCC	\$ -	\$ -	\$ -	\$ 12,580.27	\$ 24,154.12	\$ 22,221.79	\$ 20,444.05
CCA Rate Class	47	47	47	47	47	47	47
CCA Rate	8%	8%	8%	8%	8%	8%	8%
CCA	\$ -	\$ -	\$ -	\$ 1,006.42	\$ 1,932.33	\$ 1,777.74	\$ 1,635.52
Closing UCC	\$ -	\$ -	\$ -	\$ 24,154.12	\$ 22,221.79	\$ 20,444.05	\$ 18,808.52

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	\$ -	\$ -	\$ -	\$ -	\$ 2,156.48	\$ 970.42	\$ 436.69
Capital Additions Computer Hardware	\$ -	\$ -	\$ -	\$ 2,974.45	\$ -	\$ -	\$ -
Capital Additions Computer Software	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
UCC Before Half Year Rule	\$ -	\$ -	\$ -	\$ 2,974.45	\$ 2,156.48	\$ 970.42	\$ 436.69
Half Year Rule (1/2 Additions - Disposals)	\$ -	\$ -	\$ -	\$ 1,487.23	\$ -	\$ -	\$ -
Reduced UCC	\$ -	\$ -	\$ -	\$ 1,487.23	\$ 2,156.48	\$ 970.42	\$ 436.69
CCA Rate Class	45	50	50	50	50	50	50
CCA Rate	45%	55%	55%	55%	55%	55%	55%
CCA	\$ -	\$ -	\$ -	\$ 817.97	\$ 1,186.06	\$ 533.73	\$ 240.18
Closing UCC	\$ -	\$ -	\$ -	\$ 2,156.48	\$ 970.42	\$ 436.69	\$ 196.51

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	\$ -	\$ -	\$ -	\$ 533.81	\$ 948.04	\$ 861.14	\$ 770.49
Amortization	\$ -	\$ -	\$ -	\$ 1,189.55	\$ 2,379.10	\$ 2,379.10	\$ 2,325.68
CCA - Smart Meters	\$ -	\$ -	\$ -	\$ 1,006.42	\$ 1,932.33	\$ 1,777.74	\$ 1,635.52
CCA - Computers	\$ -	\$ -	\$ -	\$ 817.97	\$ 1,186.06	\$ 533.73	\$ 240.18
CCA - Applications Software	\$ -	\$ -	\$ -	\$ 160.25	\$ 160.25	\$ -	\$ -
CCA - Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Change in taxable income	\$ -	\$ -	\$ -	\$ 261.29	\$ 48.49	\$ 928.76	\$ 1,220.47
Tax Rate (from Sheet 3)	36.12%	36.12%	33.50%	33.00%	31.00%	28.25%	26.25%
Income Taxes Payable	\$ -	\$ -	\$ -	\$ 86.23	\$ 15.03	\$ 262.38	\$ 320.37
ONTARIO CAPITAL TAX							
Smart Meters	\$ -	\$ -	\$ -	\$ 24,321.86	\$ 22,644.49	\$ 20,967.12	\$ 19,289.75
Computer Hardware	\$ -	\$ -	\$ -	\$ 2,677.01	\$ 2,082.12	\$ 1,487.23	\$ 892.34
Computer Software (Including Application Software)	\$ -	\$ -	\$ -	\$ 267.09	\$ 160.25	\$ 53.42	\$ -
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Rate Base	\$ -	\$ -	\$ -	\$ 27,265.95	\$ 24,886.86	\$ 22,507.76	\$ 20,182.08
Less: Exemption	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Deemed Taxable Capital	\$ -	\$ -	\$ -	\$ 27,265.95	\$ 24,886.86	\$ 22,507.76	\$ 20,182.08
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)	\$ -	\$ -	\$ -	\$ 61.35	\$ 18.67	\$ -	\$ -
Change in Income Taxes Payable	\$ -	\$ -	\$ -	\$ 86.23	\$ 15.03	\$ 262.38	\$ 320.37
Change in OCT	\$ -	\$ -	\$ -	\$ 61.35	\$ 18.67	\$ -	\$ -
PILs	\$ -	\$ -	\$ -	\$ 24.88	\$ 33.70	\$ 262.38	\$ 320.37
Gross Up PILs							
Tax Rate	36.12%	36.12%	33.50%	33.00%	31.00%	28.25%	26.25%
Change in Income Taxes Payable	\$ -	\$ -	\$ -	\$ 128.69	\$ 21.79	\$ 365.68	\$ 434.40
Change in OCT	\$ -	\$ -	\$ -	\$ 61.35	\$ 18.67	\$ -	\$ -
PILs	\$ -	\$ -	\$ -	\$ 67.35	\$ 40.45	\$ 365.68	\$ 434.40



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation - Newbury

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	\$ -		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	\$ -	\$ 4.87	5.14%	\$ -	\$ 4.87		\$ 0.25
2011 Q4	1.47%	4.29%	Dec-07	2007	Q4	\$ 4.87	\$ 40.89	5.14%	\$ 0.02	\$ 45.78	\$ 45.78	\$ 0.25
2012 Q1	1.47%	4.29%	Jan-08	2008	Q1	\$ 45.76	\$ 41.43	5.14%	\$ 0.20	\$ 87.39		\$ 0.25
2012 Q2	1.47%	4.29%	Feb-08	2008	Q1	\$ 87.19	\$ 41.28	5.14%	\$ 0.37	\$ 128.84		\$ 0.25
2012 Q3	1.47%	4.29%	Mar-08	2008	Q1	\$ 128.47	\$ 41.19	5.14%	\$ 0.55	\$ 170.21		\$ 0.25
2012 Q4	1.47%	4.29%	Apr-08	2008	Q2	\$ 169.66	\$ 41.19	4.08%	\$ 0.58	\$ 211.43		\$ 0.25
			May-08	2008	Q2	\$ 210.85	\$ 41.37	4.08%	\$ 0.72	\$ 252.94		\$ 0.25
			Jun-08	2008	Q2	\$ 252.22	\$ 41.04	4.08%	\$ 0.86	\$ 294.12		\$ 0.25
			Jul-08	2008	Q3	\$ 293.26	\$ 42.12	3.35%	\$ 0.82	\$ 336.20		\$ 0.25
			Aug-08	2008	Q3	\$ 335.38	\$ 41.50	3.35%	\$ 0.94	\$ 377.82		\$ 0.25
			Sep-08	2008	Q3	\$ 376.88	\$ 41.07	3.35%	\$ 1.05	\$ 419.00		\$ 0.25
			Oct-08	2008	Q4	\$ 417.95	\$ 42.33	3.35%	\$ 1.17	\$ 461.45		\$ 0.25
			Nov-08	2008	Q4	\$ 460.28	\$ 41.64	3.35%	\$ 1.28	\$ 503.20		\$ 0.25
			Dec-08	2008	Q4	\$ 501.92	\$ 42.21	3.35%	\$ 1.40	\$ 545.53	\$ 508.31	\$ 0.25
			Jan-09	2009	Q1	\$ 544.13	\$ 42.17	2.45%	\$ 1.11	\$ 587.41		\$ 0.25
			Feb-09	2009	Q1	\$ 586.30	\$ 42.25	2.45%	\$ 1.20	\$ 629.75		\$ 0.25
			Mar-09	2009	Q1	\$ 628.55	\$ 41.65	2.45%	\$ 1.28	\$ 671.48		\$ 0.25
			Apr-09	2009	Q2	\$ 670.20	\$ 42.97	1.00%	\$ 0.56	\$ 713.73		\$ 0.25
			May-09	2009	Q2	\$ 713.17	\$ -	1.00%	\$ 0.59	\$ 713.76		\$ 1.00
			Jun-09	2009	Q2	\$ 713.17	\$ 52.42	1.00%	\$ 0.59	\$ 766.18		\$ 1.00
			Jul-09	2009	Q3	\$ 765.59	\$ 166.27	0.55%	\$ 0.35	\$ 932.21		\$ 1.00
			Aug-09	2009	Q3	\$ 931.86	\$ 167.94	0.55%	\$ 0.43	\$ 1,100.23		\$ 1.00
			Sep-09	2009	Q3	\$ 1,099.80	\$ 167.37	0.55%	\$ 0.50	\$ 1,267.67		\$ 1.00
			Oct-09	2009	Q4	\$ 1,267.17	\$ 166.30	0.55%	\$ 0.58	\$ 1,434.05		\$ 1.00
			Nov-09	2009	Q4	\$ 1,433.47	\$ 168.63	0.55%	\$ 0.66	\$ 1,602.76		\$ 1.00
			Dec-09	2009	Q4	\$ 1,602.10	\$ 247.86	0.55%	\$ 0.73	\$ 1,850.69	\$ 1,314.41	\$ 1.00
			Jan-10	2010	Q1	\$ 1,849.96	\$ 167.86	0.55%	\$ 0.85	\$ 2,018.67		\$ 1.00
			Feb-10	2010	Q1	\$ 2,017.82	\$ 167.63	0.55%	\$ 0.92	\$ 2,186.37		\$ 1.00
			Mar-10	2010	Q1	\$ 2,185.45	\$ 168.50	0.55%	\$ 1.00	\$ 2,354.95		\$ 1.00
			Apr-10	2010	Q2	\$ 2,353.95	\$ 168.53	0.55%	\$ 1.08	\$ 2,523.56		\$ 1.00
			May-10	2010	Q2	\$ 2,522.48	\$ 167.43	0.55%	\$ 1.16	\$ 2,691.07		\$ 1.00
			Jun-10	2010	Q2	\$ 2,689.91	\$ 168.77	0.55%	\$ 1.23	\$ 2,859.91		\$ 1.00
			Jul-10	2010	Q3	\$ 2,858.68	\$ 167.79	0.89%	\$ 2.12	\$ 3,028.59		\$ 1.00
			Aug-10	2010	Q3	\$ 3,026.47	\$ 165.20	0.89%	\$ 2.24	\$ 3,193.91		\$ 1.00
			Sep-10	2010	Q3	\$ 3,191.67	\$ 167.23	0.89%	\$ 2.37	\$ 3,361.27		\$ 1.00
			Oct-10	2010	Q4	\$ 3,358.90	\$ 167.97	1.20%	\$ 3.36	\$ 3,530.23		\$ 1.00
			Nov-10	2010	Q4	\$ 3,526.87	\$ 167.23	1.20%	\$ 3.53	\$ 3,697.63		\$ 1.00
			Dec-10	2010	Q4	\$ 3,694.10	\$ 67.00	1.20%	\$ 3.69	\$ 3,764.79	\$ 1,934.69	\$ 1.00
			Jan-11	2011	Q1	\$ 3,761.10	\$ 165.74	1.47%	\$ 4.61	\$ 3,931.45		\$ 1.00
			Feb-11	2011	Q1	\$ 3,926.84	\$ 168.87	1.47%	\$ 4.81	\$ 4,100.52		\$ 1.00
			Mar-11	2011	Q1	\$ 4,095.71	\$ 168.26	1.47%	\$ 5.02	\$ 4,268.99		\$ 1.00
			Apr-11	2011	Q2	\$ 4,263.97	\$ 169.19	1.47%	\$ 5.22	\$ 4,438.38		\$ 1.00
			May-11	2011	Q2	\$ 4,433.16	\$ 167.00	1.47%	\$ 5.43	\$ 4,605.59		\$ 2.50
			Jun-11	2011	Q2	\$ 4,600.16	\$ 295.17	1.47%	\$ 5.64	\$ 4,900.97		\$ 2.50
			Jul-11	2011	Q3	\$ 4,895.33	\$ 419.50	1.47%	\$ 6.00	\$ 5,320.83		\$ 2.50
			Aug-11	2011	Q3	\$ 5,314.83	\$ 421.59	1.47%	\$ 6.51	\$ 5,742.93		\$ 2.50
			Sep-11	2011	Q3	\$ 5,736.42	\$ 418.00	1.47%	\$ 7.03	\$ 6,161.45		\$ 2.50
			Oct-11	2011	Q4	\$ 6,154.42	\$ 422.00	1.47%	\$ 7.54	\$ 6,583.96		\$ 2.50
			Nov-11	2011	Q4	\$ 6,576.42	\$ 419.66	1.47%	\$ 8.06	\$ 7,004.14		\$ 2.50
			Dec-11	2011	Q4	\$ 6,996.08	\$ 891.08	1.47%	\$ 8.57	\$ 7,895.73	\$ 4,200.50	\$ 2.50



This worksheet calculates the funding adder revenues.

Account 1555 - Sub-account Funding Adder Revenues

Interest Rates	Approved Deferral and Variance Accounts	CWIP				Opening Balance (Principal)	Funding Adder Revenues	Interest		Closing Balance	Annual amounts	Board Approved Smart Meter Funding Adder (from Tariff)
			Date	Year	Quarter			Rate	Interest			
			Jan-12	2012	Q1	\$ 7,887.16	\$ 418.91	1.47%	\$ 9.66	\$ 8,315.73		\$ 2.50
			Feb-12	2012	Q1	\$ 8,306.07	\$ 419.92	1.47%	\$ 10.17	\$ 8,736.16		\$ 2.50
			Mar-12	2012	Q1	\$ 8,725.99	\$ 418.09	1.47%	\$ 10.69	\$ 9,154.77		\$ 2.50
			Apr-12	2012	Q2	\$ 9,144.08	\$ 418.33	1.47%	\$ 11.20	\$ 9,573.61		\$ 2.50
			May-12	2012	Q2	\$ 9,562.41	-\$ 40.92	1.47%	\$ 11.71	\$ 9,533.20		
			Jun-12	2012	Q2	\$ 9,521.49		1.47%	\$ 11.66	\$ 9,533.15		
			Jul-12	2012	Q3	\$ 9,521.49		1.47%	\$ 11.66	\$ 9,533.15		
			Aug-12	2012	Q3	\$ 9,521.49		1.47%	\$ 11.66	\$ 9,533.15		
			Sep-12	2012	Q3	\$ 9,521.49		1.47%	\$ 11.66	\$ 9,533.15		
			Oct-12	2012	Q4	\$ 9,521.49		1.47%	\$ 11.66	\$ 9,533.15		
			Nov-12	2012	Q4	\$ 9,521.49		1.47%	\$ 11.66	\$ 9,533.15		
			Dec-12	2012	Q4	\$ 9,521.49		1.47%	\$ 11.66	\$ 9,533.15	\$ 1,769.38	
Total Funding Adder Revenues Collected						\$ 9,521.49			\$ 251.58	\$ 9,773.07	\$ 9,773.07	



Middlesex Power Distribution Corporation - Newbury

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	-			-	5.14%	-	-
2012 Q1	1.47%	4.29%	Jan-08	2008	Q1	-			-	5.14%	-	-
2012 Q2	1.47%	4.29%	Feb-08	2008	Q1	-			-	5.14%	-	-
2012 Q3	1.47%	4.29%	Mar-08	2008	Q1	-			-	5.14%	-	-
2012 Q4	1.47%	4.29%	Apr-08	2008	Q2	-			-	4.08%	-	-
			May-08	2008	Q2	-			-	4.08%	-	-
			Jun-08	2008	Q2	-			-	4.08%	-	-
			Jul-08	2008	Q3	-			-	3.35%	-	-
			Aug-08	2008	Q3	-			-	3.35%	-	-
			Sep-08	2008	Q3	-			-	3.35%	-	-
			Oct-08	2008	Q4	-			-	3.35%	-	-
			Nov-08	2008	Q4	-			-	3.35%	-	-
			Dec-08	2008	Q4	-			-	3.35%	-	-
			Jan-09	2009	Q1	-			-	2.45%	-	-
			Feb-09	2009	Q1	-			-	2.45%	-	-
			Mar-09	2009	Q1	-			-	2.45%	-	-
			Apr-09	2009	Q2	-			-	1.00%	-	-
			May-09	2009	Q2	-			-	1.00%	-	-
			Jun-09	2009	Q2	-			-	1.00%	-	-
			Jul-09	2009	Q3	-			-	0.55%	-	-
			Aug-09	2009	Q3	-			-	0.55%	-	-
			Sep-09	2009	Q3	-			-	0.55%	-	-
			Oct-09	2009	Q4	-			-	0.55%	-	-
			Nov-09	2009	Q4	-			-	0.55%	-	-
			Dec-09	2009	Q4	-			-	0.55%	-	-
			Jan-10	2010	Q1	-			-	0.55%	-	-
			Feb-10	2010	Q1	-			-	0.55%	-	-
			Mar-10	2010	Q1	-			-	0.55%	-	-
			Apr-10	2010	Q2	-			-	0.55%	-	-
			May-10	2010	Q2	-			-	0.55%	-	-
			Jun-10	2010	Q2	-			-	0.55%	-	-
			Jul-10	2010	Q3	-			-	0.89%	-	-
			Aug-10	2010	Q3	-			-	0.89%	-	-
			Sep-10	2010	Q3	-			-	0.89%	-	-
			Oct-10	2010	Q4	-			-	1.20%	-	-
			Nov-10	2010	Q4	-			-	1.20%	-	-
			Dec-10	2010	Q4	-			-	1.20%	-	-
			Jan-11	2011	Q1	-			-	1.47%	-	-
			Feb-11	2011	Q1	-			-	1.47%	-	-
			Mar-11	2011	Q1	-			-	1.47%	-	-
			Apr-11	2011	Q2	-			-	1.47%	-	-
			May-11	2011	Q2	-			-	1.47%	-	-
			Jun-11	2011	Q2	-			-	1.47%	-	-
			Jul-11	2011	Q3	-			-	1.47%	-	-
			Aug-11	2011	Q3	-			-	1.47%	-	-
			Sep-11	2011	Q3	-			-	1.47%	-	-
			Oct-11	2011	Q4	-			-	1.47%	-	-
			Nov-11	2011	Q4	-			-	1.47%	-	-
			Dec-11	2011	Q4	-			-	1.47%	-	-
			Jan-12	2012	Q1	-			-	1.47%	-	-
			Feb-12	2012	Q1	-			-	1.47%	-	-
			Mar-12	2012	Q1	-			-	1.47%	-	-
			Apr-12	2012	Q2	-			-	1.47%	-	-
			May-12	2012	Q2	-			-	1.47%	-	-
			Jun-12	2012	Q2	-			-	1.47%	-	-
			Jul-12	2012	Q3	-			-	1.47%	-	-
			Aug-12	2012	Q3	-			-	1.47%	-	-
			Sep-12	2012	Q3	-			-	1.47%	-	-
			Oct-12	2012	Q4	-			-	1.47%	-	-
			Nov-12	2012	Q4	-			-	1.47%	-	-
			Dec-12	2012	Q4	-			-	1.47%	-	-
						\$	-	\$	-	\$	-	-



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation - Newbury

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

Year	OM&A (from Sheet 5)	Amortization Expense (from Sheet 5)	Cumulative OM&A and Amortization Expense	Average Cumulative OM&A and Amortization Expense	Average Annual Prescribed Interest Rate for Deferral and Variance Accounts (from Sheets 8A and 8B)	Simple Interest on OM&A and Amortization Expenses
2006	\$ -	\$ -	\$ -	\$ -	4.37%	\$ -
2007	\$ -	\$ -	\$ -	\$ -	4.73%	\$ -
2008	\$ -	\$ -	\$ -	\$ -	3.98%	\$ -
2009	\$ 433.88	\$ 1,189.55	\$ 1,623.43	\$ 811.71	1.14%	\$ 9.23
2010	\$ 1,720.81	\$ 2,379.10	\$ 5,723.34	\$ 3,673.38	0.80%	\$ 29.30
2011	\$ 1,488.21	\$ 2,379.10	\$ 9,590.64	\$ 7,656.99	1.47%	\$ 112.56
2012	\$ 383.68	\$ 2,325.68	\$ 12,300.00	\$ 10,945.32	1.47%	\$ 160.90
Cumulative Interest to 2011						\$ 151.09
Cumulative Interest to 2012						\$ 311.98



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

Check if applicable

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

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

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

	2006	2007	2008	2009	2010	2011	2012 and later	Total
Deferred and forecasted Smart Meter Incremental Revenue Requirement (from Sheet 5)	\$ -	\$ -	\$ -	\$ 2,652.99	\$ 6,233.95	\$ 6,134.67	\$ 4,845.26	\$ 19,866.87
Interest on Deferred and forecasted OM&A and Amortization Expense (Sheet 8A/8B) (Check one of the boxes below)	\$ -	\$ -	\$ -	\$ 9.23	\$ 29.30	\$ 112.56		\$ 151.09
<input type="checkbox"/> Sheet 8A (Interest calculated on monthly balances)								\$ -
<input checked="" type="checkbox"/> Sheet 8B (Interest calculated on average annual balances)	\$ -	\$ -	\$ -	\$ 9.23	\$ 29.30	\$ 112.56		\$ 151.09
SMFA Revenues (from Sheet 8)	\$ -	\$ 45.76	\$ 498.37	\$ 1,305.83	\$ 1,911.14	\$ 4,126.06	\$ 1,634.33	\$ 9,521.49
SMFA Interest (from Sheet 8)	\$ -	\$ 0.02	\$ 9.94	\$ 8.58	\$ 23.55	\$ 74.44	\$ 135.05	\$ 251.58
Net Deferred Revenue Requirement	\$ -	\$ 45.78	\$ 508.31	\$ 1,347.81	\$ 4,328.56	\$ 2,046.73	\$ 3,075.88	\$ 10,244.89
Number of Metered Customers (average for 2012 test year)							168	

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

Years for collection or refunding	3.5	
Deferred Incremental Revenue Requirement from 2006 to December 31, 2011 plus Interest on OM&A and Amortization	\$ 15,172.70	
SMFA Revenues collected from 2006 to 2012 test year (inclusive) Plus Simple Interest on SMFA Revenues	\$ 9,773.07	
Net Deferred Revenue Requirement	\$ 5,399.63	
SMDR November 1, 2012 to April 30, 2013	\$ 0.77	Match
Check: Forecasted SMDR Revenues	\$ 5,433.12	

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

Incremental Revenue Requirement for 2012	\$ 4,845.26	
SMIRR	\$ 2.40	Match
Check: Forecasted SMIRR Revenues	\$ 4,838.40	

Attachment M

Newbury General Service less than 50 kW Smart Meter Model



Ontario Energy Board

Smart Meter Model

Choose Your Utility:

Middlesex Power Distribution Corporation - Newbury

Midland Power Utility Corporation

Application Contact Information

Name: Andrya Eagen

Title: Senior Regulatory Specialist

Phone Number: 519-352-6300 Ext 243

Email Address: andryaeagen@ckenergy.com

We are applying for rates effective: November 1, 2012

Last COS Re-based Year 2006

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.



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

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

Smart Meter Capital Cost and Operational Expense Data	2006	2007	2008	2009	2010	2011	2012 and later	Total
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
Smart Meter Installation Plan								
Actual/Planned number of Smart Meters installed during the Calendar Year								
Residential								0
General Service < 50 kW				31				31
Actual/Planned number of Smart Meters installed (Residential and GS < 50 kW only)	0	0	0	31	0	0	0	31
Percentage of Residential and GS < 50 kW Smart Meter Installations Completed	0.00%	0.00%	0.00%	100.00%	0.00%	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	31	0	0	0	31
1 Capital Costs								
1.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)								
Asset Type	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			4,800	0	0		\$ 4,800
1.1.2 Installation Costs (may include socket kits, labour, vehicle, benefits, etc.)	Smart Meter			1,233	0	0		\$ 1,233
1.1.3a Workforce Automation Hardware (may include fieldwork handhelds, barcode hardware, etc.)								\$ -
1.1.3b Workforce Automation Software (may include fieldwork handhelds, barcode hardware, etc.)								\$ -
Total Advanced Metering Communications Devices (AMCD)	\$ -	\$ -	\$ -	\$ 6,034	\$ -	\$ -	\$ -	\$ 6,034
1.2 ADVANCED METERING REGIONAL COLLECTOR (AMRC) (includes LAN)								
Asset Type	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
1.2.1 Collectors								\$ -
1.2.2 Repeaters (may include radio licence, etc.)	Computer Hardware			729	0	0		\$ 729
1.2.3 Installation (may include meter seals and rings, collector computer hardware, etc.)								\$ -
Total Advanced Metering Regional Collector (AMRC) (includes LAN)	\$ -	\$ -	\$ -	\$ 729	\$ -	\$ -	\$ -	\$ 729
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								\$ -
1.3.2 Computer Software								\$ -
1.3.3 Computer Software Licences & Installation (includes hardware and software) (may include AS400 disk space, backup and recovery computer, UPS, etc.)								\$ -
Total Advanced Metering Control Computer (AMCC)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1.4 WIDE AREA NETWORK (WAN)								
Asset Type	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
1.4.1 Activation Fees	Applications Software			75	0	0		\$ 75
Total Wide Area Network (WAN)	\$ -	\$ -	\$ -	\$ 75	\$ -	\$ -	\$ -	\$ 75
1.5 OTHER AMI CAPITAL COSTS RELATED TO MINIMUM FUNCTIONALITY								
Asset Type	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
1.5.1 Customer Equipment (including repair of damaged equipment)								\$ -
1.5.2 AMI Interface to CIS								\$ -
1.5.3 Professional Fees								\$ -
1.5.4 Integration								\$ -
1.5.5 Program Management								\$ -
1.5.6 Other AMI Capital								\$ -
Total Other AMI Capital Costs Related to Minimum Functionality	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Capital Costs Related to Minimum Functionality	\$ -	\$ -	\$ -	\$ 6,838	\$ -	\$ -	\$ -	\$ 6,838
1.6 CAPITAL COSTS BEYOND MINIMUM FUNCTIONALITY								
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	Computer Software							\$ -
1.6.2 Costs for deployment of smart meters to customers other than residential and small general service	Applications Software							\$ -
1.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDNR, etc.								\$ -
Total Capital Costs Beyond Minimum Functionality	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Smart Meter Capital Costs	\$ -	\$ -	\$ -	\$ 6,838	\$ -	\$ -	\$ -	\$ 6,838
2 OM&A Expenses								
2.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)								
Asset Type	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
2.1.1 Maintenance (may include meter reverification costs, etc.)				42	34	52	0	\$ 128
2.1.2 Other (please specify)								\$ -
Total Incremental AMCD OM&A Costs	\$ -	\$ -	\$ -	\$ 42	\$ 34	\$ 52	\$ -	\$ 128



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

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

Smart Meter Capital Cost and Operational Expense Data

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

2.2.1 Maintenance

2.2.2 Other (please specify)

Total Incremental AMRC OM&A Costs

2.3 ADVANCED METERING CONTROL COMPUTER (AMCC)

2.3.1 Hardware Maintenance (may include server support, etc.)

2.3.2 Software Maintenance (may include maintenance support, etc.)

2.3.2 Other (please specify)

Total Incremental AMCC OM&A Costs

2.4 WIDE AREA NETWORK (WAN)

2.4.1 WAN Maintenance

2.4.2 Other (please specify)

Total Incremental AMRC OM&A Costs

2.5 OTHER AMI OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY

2.5.1 Business Process Redesign

2.5.2 Customer Communication (may include project communication, etc.)

2.5.3 Program Management

2.5.4 Change Management (may include training, etc.)

2.5.5 Administration Costs

2.5.6 Other AM Expenses

(please specify)

Total Other AMI OM&A Costs Related to Minimum Functionality

TOTAL OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY

2.6 OM&A COSTS RELATED TO BEYOND MINIMUM FUNCTIONALITY

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

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

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

2.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDMR, etc.

Total OM&A Costs Beyond Minimum Functionality

Total Smart Meter OM&A Costs

	2006	2007	2008	2009	2010	2011	2012 and later	Total
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
								\$ -
								\$ -
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
				5	5	3	3	\$ 16
				19	14	9	67	\$ 109
								\$ -
	\$ -	\$ -	\$ -	23	19	12	70	\$ 125
								\$ -
								\$ -
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
								\$ -
								\$ -
								\$ -
				1	0	0	0	\$ 1
				7	2	5	0	\$ 13
	\$ -	\$ -	\$ -	7	2	5	-	\$ 14
	\$ -	\$ -	\$ -	73	55	69	70	\$ 267
								\$ -
								\$ -
				6	259	202	0	\$ 467
	\$ -	\$ -	\$ -	6	259	202	-	\$ 467
	\$ -	\$ -	\$ -	79	314	271	70	\$ 734

3 Aggregate Smart Meter Costs by Category

3.1

Capital

3.1.1 Smart Meter

3.1.2 Computer Hardware

3.1.3 Computer Software

3.1.4 Tools & Equipment

3.1.5 Other Equipment

3.1.6 Applications Software

3.1.7 Total Capital Costs

3.2 OM&A Costs

3.2.1 Total OM&A Costs

\$ -	\$ -	\$ -	\$ 6,034	\$ -	\$ -	\$ -	\$ -	\$ 6,034
\$ -	\$ -	\$ -	\$ 729	\$ -	\$ -	\$ -	\$ -	\$ 729
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ 75	\$ -	\$ -	\$ -	\$ -	\$ 75
\$ -	\$ -	\$ -	\$ 6,838	\$ -	\$ -	\$ -	\$ -	\$ 6,838
\$ -	\$ -	\$ -	\$ 79	\$ 314	\$ 271	\$ 70		\$ 734



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation - Newbury

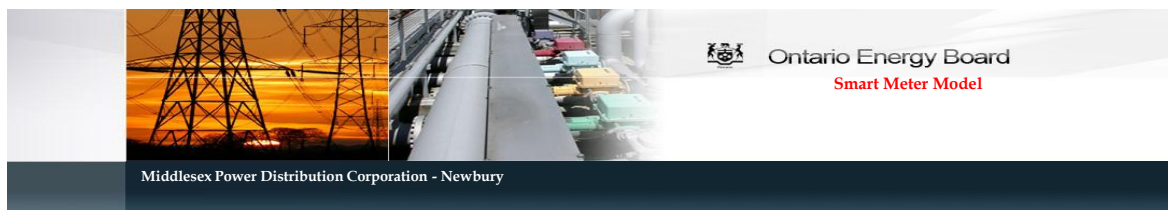
	2006	2007	2008	2009	2010	2011	2012 and later
Cost of Capital							
Capital Structure¹							
Deemed Short-term Debt Capitalization							
Deemed Long-term Debt Capitalization	50.0%	50.0%	53.3%	56.7%	60.0%	60.0%	60.0%
Deemed Equity Capitalization	50.0%	50.0%	46.7%	43.3%	40.0%	40.0%	40.0%
Preferred Shares	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							
Long-term Debt Rate (actual/embedded/deemed) ²	7.25%	7.25%	7.25%	7.25%	7.25%	7.25%	7.25%
Target Return on Equity (ROE)	9.0%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
Return on Preferred Shares							
WACC	8.13%	8.13%	8.07%	8.01%	7.95%	7.95%	7.95%
Working Capital Allowance							
Working Capital Allowance Rate (% of the sum of Cost of Power + controllable expenses)	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
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	50	50	50	50
Computer Equipment - CCA Rate	45%	55%	55%	55%	55%	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	12	12	12	12	12	12	12
Applications Software - CCA Rate	100%	100%	100%	100%	100%	100%	100%

Assumptions

¹ Planned smart meter installations occur evenly throughout the year.

² Fiscal calendar year (January 1 to December 31) used.

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



	2006	2007	2008	2009	2010	2011	2012 and later
Net Fixed Assets - Smart Meters							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ 6,034	\$ 6,034	\$ 6,034
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ 6,034	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 6,034	\$ 6,034	\$ 6,034	\$ 6,034
Accumulated Depreciation							
Opening Balance		\$ -	\$ -	\$ -	\$ 201	\$ 603	\$ 1,006
Amortization expense during year	\$ -	\$ -	\$ -	\$ 201	\$ 402	\$ 402	\$ 402
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 201	\$ 603	\$ 1,006	\$ 1,408
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 5,833	\$ 5,430	\$ 5,028
Closing Balance	\$ -	\$ -	\$ -	\$ 5,833	\$ 5,430	\$ 5,028	\$ 4,626
Average Net Book Value	\$ -	\$ -	\$ -	\$ 2,916	\$ 5,631	\$ 5,229	\$ 4,827
Net Fixed Assets - Computer Hardware							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ 729	\$ 729	\$ 729
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ 729	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 729	\$ 729	\$ 729	\$ 729
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 73	\$ 219	\$ 364
Amortization expense during year	\$ -	\$ -	\$ -	\$ 73	\$ 146	\$ 146	\$ 146
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 73	\$ 219	\$ 364	\$ 510
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 656	\$ 510	\$ 364
Closing Balance	\$ -	\$ -	\$ -	\$ 656	\$ 510	\$ 364	\$ 219
Average Net Book Value	\$ -	\$ -	\$ -	\$ 328	\$ 563	\$ 437	\$ 292
Net Fixed Assets - Computer Software (Including Applications Software)							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ 75	\$ 75	\$ 75
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ 75	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 75	\$ 75	\$ 75	\$ 75
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 13	\$ 38	\$ 63
Amortization expense during year	\$ -	\$ -	\$ -	\$ 13	\$ 25	\$ 25	\$ 13
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 13	\$ 38	\$ 63	\$ 75
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 63	\$ 38	\$ 13
Closing Balance	\$ -	\$ -	\$ -	\$ 63	\$ 38	\$ 13	\$ -
Average Net Book Value	\$ -	\$ -	\$ -	\$ 31	\$ 50	\$ 25	\$ 6
Net Fixed Assets - Tools and Equipment							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Amortization expense during year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Average Net Book Value	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Fixed Assets - Other Equipment							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Amortization expense during year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Average Net Book Value	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation - Newbury

	2006	2007	2008	2009	2010	2011	2012 and Later
Average Net Fixed Asset Values (from Sheet 4)							
Smart Meters	\$ -	\$ -	\$ -	\$ 2,916	\$ 5,631	\$ 5,229	\$ 4,827
Computer Hardware	\$ -	\$ -	\$ -	\$ 328	\$ 583	\$ 437	\$ 292
Computer Software	\$ -	\$ -	\$ -	\$ 31	\$ 50	\$ 25	\$ 6
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Net Fixed Assets	\$ -	\$ -	\$ -	\$ 3,276	\$ 6,265	\$ 5,692	\$ 5,125
Working Capital							
Operating Expenses (from Sheet 2)	\$ -	\$ -	\$ -	\$ 79	\$ 314	\$ 271	\$ 70
Working Capital Factor (from Sheet 3)	15%	15%	15%	15%	15%	15%	15%
Working Capital Allowance	\$ -	\$ -	\$ -	\$ 12	\$ 47	\$ 41	\$ 10
Incremental Smart Meter Rate Base	\$ -	\$ -	\$ -	\$ 3,288	\$ 6,312	\$ 5,732	\$ 5,135
Return on Rate Base							
Capital Structure							
Deemed Short Term Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Deemed Long Term Debt	\$ -	\$ -	\$ -	\$ 1,864	\$ 3,787	\$ 3,439	\$ 3,081
Equity	\$ -	\$ -	\$ -	\$ 1,423	\$ 2,525	\$ 2,293	\$ 2,054
Preferred Shares	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Capitalization	\$ -	\$ -	\$ -	\$ 3,288	\$ 6,312	\$ 5,732	\$ 5,135
Return on							
Deemed Short Term Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Deemed Long Term Debt	\$ -	\$ -	\$ -	\$ 135	\$ 275	\$ 249	\$ 223
Equity	\$ -	\$ -	\$ -	\$ 128	\$ 227	\$ 206	\$ 185
Preferred Shares	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Return on Capital	\$ -	\$ -	\$ -	\$ 263	\$ 502	\$ 456	\$ 408
Operating Expenses	\$ -	\$ -	\$ -	\$ 79	\$ 314	\$ 271	\$ 70
Amortization Expenses (from Sheet 4)							
Smart Meters	\$ -	\$ -	\$ -	\$ 201	\$ 402	\$ 402	\$ 402
Computer Hardware	\$ -	\$ -	\$ -	\$ 73	\$ 146	\$ 146	\$ 146
Computer Software	\$ -	\$ -	\$ -	\$ 13	\$ 25	\$ 25	\$ 13
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Amortization Expense in Year	\$ -	\$ -	\$ -	\$ 287	\$ 573	\$ 573	\$ 561
Incremental Revenue Requirement before Taxes/PILs	\$ -	\$ -	\$ -	\$ 629	\$ 1,389	\$ 1,300	\$ 1,039
Calculation of Taxable Income							
Incremental Operating Expenses	\$ -	\$ -	\$ -	\$ 79	\$ 314	\$ 271	\$ 70
Amortization Expense	\$ -	\$ -	\$ -	\$ 287	\$ 573	\$ 573	\$ 561
Interest Expense	\$ -	\$ -	\$ -	\$ 135	\$ 275	\$ 249	\$ 223
Net Income for Taxes/PILs	\$ -	\$ -	\$ -	\$ 128	\$ 227	\$ 206	\$ 185
Grossed-up Taxes/PILs (from Sheet 7)	\$ -	\$ -	\$ -	\$ 17.16	\$ 8.38	\$ 87.56	\$ 104.78
Revenue Requirement, including Grossed-up Taxes/PILs	\$ -	\$ -	\$ -	\$ 612	\$ 1,397	\$ 1,388	\$ 1,144



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation - Newbury

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	\$ -	\$ -	\$ -	\$ -	\$ 5,792.33	\$ 5,328.95	\$ 4,902.63
Capital Additions	\$ -	\$ -	\$ -	\$ 6,033.68	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
UCC Before Half Year Rule	\$ -	\$ -	\$ -	\$ 6,033.68	\$ 5,792.33	\$ 5,328.95	\$ 4,902.63
Half Year Rule (1/2 Additions - Disposals)	\$ -	\$ -	\$ -	\$ 3,016.84	\$ -	\$ -	\$ -
Reduced UCC	\$ -	\$ -	\$ -	\$ 3,016.84	\$ 5,792.33	\$ 5,328.95	\$ 4,902.63
CCA Rate Class	47	47	47	47	47	47	47
CCA Rate	8%	8%	8%	8%	8%	8%	8%
CCA	\$ -	\$ -	\$ -	\$ 241.35	\$ 463.39	\$ 426.32	\$ 392.21
Closing UCC	\$ -	\$ -	\$ -	\$ 5,792.33	\$ 5,328.95	\$ 4,902.63	\$ 4,510.42

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	\$ -	\$ -	\$ -	\$ -	\$ 528.44	\$ 237.80	\$ 107.01
Capital Additions Computer Hardware	\$ -	\$ -	\$ -	\$ 728.89	\$ -	\$ -	\$ -
Capital Additions Computer Software	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
UCC Before Half Year Rule	\$ -	\$ -	\$ -	\$ 728.89	\$ 528.44	\$ 237.80	\$ 107.01
Half Year Rule (1/2 Additions - Disposals)	\$ -	\$ -	\$ -	\$ 364.44	\$ -	\$ -	\$ -
Reduced UCC	\$ -	\$ -	\$ -	\$ 364.44	\$ 528.44	\$ 237.80	\$ 107.01
CCA Rate Class	45	50	50	50	50	50	50
CCA Rate	45%	55%	55%	55%	55%	55%	55%
CCA	\$ -	\$ -	\$ -	\$ 200.44	\$ 290.64	\$ 130.79	\$ 58.86
Closing UCC	\$ -	\$ -	\$ -	\$ 528.44	\$ 237.80	\$ 107.01	\$ 48.15

UCC - General Equipment

	2006 Audited Actual	2007 Audited Actual	2008 Audited Actual	2009 Audited Actual	2010 Audited Actual	2011 Audited Actual	2012 and later Forecast
Opening UCC	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
UCC Before Half Year Rule	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Half Year Rule (1/2 Additions - Disposals)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Reduced UCC	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CCA Rate Class	8	8	8	8	8	8	8
CCA Rate	20%	20%	20%	20%	20%	20%	20%
CCA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing UCC	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation - Newbury

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	\$ -	\$ -	\$ -	\$ 128.11	\$ 227.23	\$ 206.36	\$ 184.87
Amortization	\$ -	\$ -	\$ -	\$ 286.56	\$ 573.12	\$ 573.12	\$ 560.57
CCA - Smart Meters	\$ -	\$ -	\$ -	\$ 241.35	\$ 463.39	\$ 426.32	\$ 392.21
CCA - Computers	\$ -	\$ -	\$ -	\$ 200.44	\$ 290.64	\$ 130.79	\$ 58.86
CCA - Applications Software	\$ -	\$ -	\$ -	\$ 37.65	\$ 37.65	\$ -	\$ -
CCA - Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Change in taxable income	\$ -	\$ -	\$ -	\$ 64.76	\$ 8.67	\$ 222.38	\$ 294.38
Tax Rate (from Sheet 3)	36.12%	36.12%	33.50%	33.00%	31.00%	28.25%	26.25%
Income Taxes Payable	\$ -	\$ -	\$ -	\$ 21.37	\$ 2.69	\$ 62.82	\$ 77.27
ONTARIO CAPITAL TAX							
Smart Meters	\$ -	\$ -	\$ -	\$ 5,832.56	\$ 5,430.31	\$ 5,028.07	\$ 4,625.82
Computer Hardware	\$ -	\$ -	\$ -	\$ 656.00	\$ 510.22	\$ 364.44	\$ 218.67
Computer Software (Including Application Software)	\$ -	\$ -	\$ -	\$ 62.74	\$ 37.65	\$ 12.55	\$ -
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Rate Base	\$ -	\$ -	\$ -	\$ 6,551.30	\$ 5,978.18	\$ 5,405.06	\$ 4,844.49
Less: Exemption	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Deemed Taxable Capital	\$ -	\$ -	\$ -	\$ 6,551.30	\$ 5,978.18	\$ 5,405.06	\$ 4,844.49
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)	\$ -	\$ -	\$ -	\$ 14.74	\$ 4.48	\$ -	\$ -
Change in Income Taxes Payable	\$ -	\$ -	\$ -	\$ 21.37	\$ 2.69	\$ 62.82	\$ 77.27
Change in OCT	\$ -	\$ -	\$ -	\$ 14.74	\$ 4.48	\$ -	\$ -
PILs	\$ -	\$ -	\$ -	\$ 6.63	\$ 7.17	\$ 62.82	\$ 77.27
Gross Up PILs							
Tax Rate	36.12%	36.12%	33.50%	33.00%	31.00%	28.25%	26.25%
Change in Income Taxes Payable	\$ -	\$ -	\$ -	\$ 31.90	\$ 3.89	\$ 87.56	\$ 104.78
Change in OCT	\$ -	\$ -	\$ -	\$ 14.74	\$ 4.48	\$ -	\$ -
PILs	\$ -	\$ -	\$ -	\$ 17.16	\$ 8.38	\$ 87.56	\$ 104.78



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation - Newbury

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	\$ -		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	\$ -	\$ 0.91	5.14%	\$ -	\$ 0.91		\$ 0.25
2011 Q4	1.47%	4.29%	Dec-07	2007	Q4	\$ 0.91	\$ 7.25	5.14%	\$ -	\$ 8.16	\$ 8.16	\$ 0.25
2012 Q1	1.47%	4.29%	Jan-08	2008	Q1	\$ 8.16	\$ 7.25	5.14%	\$ 0.03	\$ 15.44		\$ 0.25
2012 Q2	1.47%	4.29%	Feb-08	2008	Q1	\$ 15.41	\$ 7.25	5.14%	\$ 0.07	\$ 22.73		\$ 0.25
2012 Q3	1.47%	4.29%	Mar-08	2008	Q1	\$ 22.66	\$ 7.25	5.14%	\$ 0.10	\$ 30.01		\$ 0.25
2012 Q4	1.47%	4.29%	Apr-08	2008	Q2	\$ 29.91	\$ 7.00	4.08%	\$ 0.10	\$ 37.01		\$ 0.25
			May-08	2008	Q2	\$ 36.91	\$ 7.00	4.08%	\$ 0.13	\$ 44.04		\$ 0.25
			Jun-08	2008	Q2	\$ 43.91	\$ 7.25	4.08%	\$ 0.15	\$ 51.31		\$ 0.25
			Jul-08	2008	Q3	\$ 51.16	\$ 7.25	3.35%	\$ 0.14	\$ 58.55		\$ 0.25
			Aug-08	2008	Q3	\$ 58.41	\$ 7.25	3.35%	\$ 0.16	\$ 65.82		\$ 0.25
			Sep-08	2008	Q3	\$ 65.66	\$ 7.25	3.35%	\$ 0.18	\$ 73.09		\$ 0.25
			Oct-08	2008	Q4	\$ 72.91	\$ 7.25	3.35%	\$ 0.20	\$ 80.36		\$ 0.25
			Nov-08	2008	Q4	\$ 80.16	\$ 7.15	3.35%	\$ 0.22	\$ 87.53		\$ 0.25
			Dec-08	2008	Q4	\$ 87.31	\$ 7.36	3.35%	\$ 0.24	\$ 94.91	\$ 88.23	\$ 0.25
			Jan-09	2009	Q1	\$ 94.67	\$ 7.25	2.45%	\$ 0.19	\$ 102.11		\$ 0.25
			Feb-09	2009	Q1	\$ 101.92	\$ 7.25	2.45%	\$ 0.21	\$ 109.38		\$ 0.25
			Mar-09	2009	Q1	\$ 109.17	\$ 7.00	2.45%	\$ 0.22	\$ 116.39		\$ 0.25
			Apr-09	2009	Q2	\$ 116.17	\$ 7.00	1.00%	\$ 0.10	\$ 123.27		\$ 0.25
			May-09	2009	Q2	\$ 123.17	\$ -	1.00%	\$ 0.10	\$ 123.27		\$ 1.00
			Jun-09	2009	Q2	\$ 123.17	\$ 14.00	1.00%	\$ 0.10	\$ 137.27		\$ 1.00
			Jul-09	2009	Q3	\$ 137.17	\$ 29.00	0.55%	\$ 0.06	\$ 166.23		\$ 1.00
			Aug-09	2009	Q3	\$ 166.17	\$ 29.50	0.55%	\$ 0.08	\$ 195.75		\$ 1.00
			Sep-09	2009	Q3	\$ 195.67	\$ 30.00	0.55%	\$ 0.09	\$ 225.76		\$ 1.00
			Oct-09	2009	Q4	\$ 225.67	\$ 30.00	0.55%	\$ 0.10	\$ 255.77		\$ 1.00
			Nov-09	2009	Q4	\$ 255.67	\$ 31.20	0.55%	\$ 0.12	\$ 286.99		\$ 1.00
			Dec-09	2009	Q4	\$ 286.87	\$ 80.60	0.55%	\$ 0.13	\$ 367.60	\$ 274.30	\$ 1.00
			Jan-10	2010	Q1	\$ 367.47	\$ 31.00	0.55%	\$ 0.17	\$ 398.64		\$ 1.00
			Feb-10	2010	Q1	\$ 398.47	\$ 31.00	0.55%	\$ 0.18	\$ 429.65		\$ 1.00
			Mar-10	2010	Q1	\$ 429.47	\$ 31.00	0.55%	\$ 0.20	\$ 460.67		\$ 1.00
			Apr-10	2010	Q2	\$ 460.47	\$ 31.00	0.55%	\$ 0.21	\$ 491.68		\$ 1.00
			May-10	2010	Q2	\$ 491.47	\$ 31.00	0.55%	\$ 0.23	\$ 522.70		\$ 1.00
			Jun-10	2010	Q2	\$ 522.47	\$ 31.00	0.55%	\$ 0.24	\$ 553.71		\$ 1.00
			Jul-10	2010	Q3	\$ 553.47	\$ 31.00	0.89%	\$ 0.41	\$ 584.88		\$ 1.00
			Aug-10	2010	Q3	\$ 584.47	\$ 31.00	0.89%	\$ 0.43	\$ 615.90		\$ 1.00
			Sep-10	2010	Q3	\$ 615.47	\$ 31.00	0.89%	\$ 0.46	\$ 646.93		\$ 1.00
			Oct-10	2010	Q4	\$ 646.47	\$ 31.00	1.20%	\$ 0.65	\$ 678.12		\$ 1.00
			Nov-10	2010	Q4	\$ 677.47	\$ 31.00	1.20%	\$ 0.68	\$ 709.15		\$ 1.00
			Dec-10	2010	Q4	\$ 708.47	\$ 12.97	1.20%	\$ 0.71	\$ 722.15	\$ 358.54	\$ 1.00
			Jan-11	2011	Q1	\$ 721.44	\$ 31.10	1.47%	\$ 0.88	\$ 753.42		\$ 1.00
			Feb-11	2011	Q1	\$ 752.54	\$ 31.00	1.47%	\$ 0.92	\$ 784.46		\$ 1.00
			Mar-11	2011	Q1	\$ 783.54	\$ 31.00	1.47%	\$ 0.96	\$ 815.50		\$ 1.00
			Apr-11	2011	Q2	\$ 814.54	\$ 31.00	1.47%	\$ 1.00	\$ 846.54		\$ 1.00
			May-11	2011	Q2	\$ 845.54	\$ 31.00	1.47%	\$ 1.04	\$ 877.58		\$ 2.50
			Jun-11	2011	Q2	\$ 876.54	\$ 54.25	1.47%	\$ 1.07	\$ 931.86		\$ 2.50
			Jul-11	2011	Q3	\$ 930.79	\$ 77.50	1.47%	\$ 1.14	\$ 1,009.43		\$ 2.50
			Aug-11	2011	Q3	\$ 1,008.29	\$ 77.50	1.47%	\$ 1.24	\$ 1,087.03		\$ 2.50
			Sep-11	2011	Q3	\$ 1,085.79	\$ 77.50	1.47%	\$ 1.33	\$ 1,164.62		\$ 2.50
			Oct-11	2011	Q4	\$ 1,163.29	\$ 77.50	1.47%	\$ 1.43	\$ 1,242.22		\$ 2.50
			Nov-11	2011	Q4	\$ 1,240.79	\$ 77.50	1.47%	\$ 1.52	\$ 1,319.81		\$ 2.50
			Dec-11	2011	Q4	\$ 1,318.29	\$ 164.67	1.47%	\$ 1.61	\$ 1,484.57	\$ 775.66	\$ 2.50



This worksheet calculates the funding adder revenues.

Account 1555 - Sub-account Funding Adder Revenues

Interest Rates	Approved Deferral and Variance Accounts	CWIP				Opening Balance (Principal)	Funding Adder Revenues	Interest		Closing Balance	Annual amounts	Board Approved Smart Meter Funding Adder (from Tariff)
			Date	Year	Quarter			Rate	Interest			
			Jan-12	2012	Q1	\$ 1,482.96	\$ 77.50	1.47%	\$ 1.82	\$ 1,562.28		\$ 2.50
			Feb-12	2012	Q1	\$ 1,560.46	\$ 77.50	1.47%	\$ 1.91	\$ 1,639.87		\$ 2.50
			Mar-12	2012	Q1	\$ 1,637.96	\$ 77.50	1.47%	\$ 2.01	\$ 1,717.47		\$ 2.50
			Apr-12	2012	Q2	\$ 1,715.46	\$ 77.50	1.47%	\$ 2.10	\$ 1,795.06		\$ 2.50
			May-12	2012	Q2	\$ 1,792.96	\$ 7.76	1.47%	\$ 2.20	\$ 1,787.40		
			Jun-12	2012	Q2	\$ 1,785.20		1.47%	\$ 2.19	\$ 1,787.39		
			Jul-12	2012	Q3	\$ 1,785.20		1.47%	\$ 2.19	\$ 1,787.39		
			Aug-12	2012	Q3	\$ 1,785.20		1.47%	\$ 2.19	\$ 1,787.39		
			Sep-12	2012	Q3	\$ 1,785.20		1.47%	\$ 2.19	\$ 1,787.39		
			Oct-12	2012	Q4	\$ 1,785.20		1.47%	\$ 2.19	\$ 1,787.39		
			Nov-12	2012	Q4	\$ 1,785.20		1.47%	\$ 2.19	\$ 1,787.39		
			Dec-12	2012	Q4	\$ 1,785.20		1.47%	\$ 2.19	\$ 1,787.39	\$ 327.61	
Total Funding Adder Revenues Collected						\$ 1,785.20		\$ 47.30	\$ 1,832.50	\$ 1,832.50		



Middlesex Power Distribution Corporation - Newbury

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	-			-	5.14%	-	-
2012 Q1	1.47%	4.29%	Jan-08	2008	Q1	-			-	5.14%	-	-
2012 Q2	1.47%	4.29%	Feb-08	2008	Q1	-			-	5.14%	-	-
2012 Q3	1.47%	4.29%	Mar-08	2008	Q1	-			-	5.14%	-	-
2012 Q4	1.47%	4.29%	Apr-08	2008	Q2	-			-	4.08%	-	-
			May-08	2008	Q2	-			-	4.08%	-	-
			Jun-08	2008	Q2	-			-	4.08%	-	-
			Jul-08	2008	Q3	-			-	3.35%	-	-
			Aug-08	2008	Q3	-			-	3.35%	-	-
			Sep-08	2008	Q3	-			-	3.35%	-	-
			Oct-08	2008	Q4	-			-	3.35%	-	-
			Nov-08	2008	Q4	-			-	3.35%	-	-
			Dec-08	2008	Q4	-			-	3.35%	-	-
			Jan-09	2009	Q1	-			-	2.45%	-	-
			Feb-09	2009	Q1	-			-	2.45%	-	-
			Mar-09	2009	Q1	-			-	2.45%	-	-
			Apr-09	2009	Q2	-			-	1.00%	-	-
			May-09	2009	Q2	-			-	1.00%	-	-
			Jun-09	2009	Q2	-			-	1.00%	-	-
			Jul-09	2009	Q3	-			-	0.55%	-	-
			Aug-09	2009	Q3	-			-	0.55%	-	-
			Sep-09	2009	Q3	-			-	0.55%	-	-
			Oct-09	2009	Q4	-			-	0.55%	-	-
			Nov-09	2009	Q4	-			-	0.55%	-	-
			Dec-09	2009	Q4	-			-	0.55%	-	-
			Jan-10	2010	Q1	-			-	0.55%	-	-
			Feb-10	2010	Q1	-			-	0.55%	-	-
			Mar-10	2010	Q1	-			-	0.55%	-	-
			Apr-10	2010	Q2	-			-	0.55%	-	-
			May-10	2010	Q2	-			-	0.55%	-	-
			Jun-10	2010	Q2	-			-	0.55%	-	-
			Jul-10	2010	Q3	-			-	0.89%	-	-
			Aug-10	2010	Q3	-			-	0.89%	-	-
			Sep-10	2010	Q3	-			-	0.89%	-	-
			Oct-10	2010	Q4	-			-	1.20%	-	-
			Nov-10	2010	Q4	-			-	1.20%	-	-
			Dec-10	2010	Q4	-			-	1.20%	-	-
			Jan-11	2011	Q1	-			-	1.47%	-	-
			Feb-11	2011	Q1	-			-	1.47%	-	-
			Mar-11	2011	Q1	-			-	1.47%	-	-
			Apr-11	2011	Q2	-			-	1.47%	-	-
			May-11	2011	Q2	-			-	1.47%	-	-
			Jun-11	2011	Q2	-			-	1.47%	-	-
			Jul-11	2011	Q3	-			-	1.47%	-	-
			Aug-11	2011	Q3	-			-	1.47%	-	-
			Sep-11	2011	Q3	-			-	1.47%	-	-
			Oct-11	2011	Q4	-			-	1.47%	-	-
			Nov-11	2011	Q4	-			-	1.47%	-	-
			Dec-11	2011	Q4	-			-	1.47%	-	-
			Jan-12	2012	Q1	-			-	1.47%	-	-
			Feb-12	2012	Q1	-			-	1.47%	-	-
			Mar-12	2012	Q1	-			-	1.47%	-	-
			Apr-12	2012	Q2	-			-	1.47%	-	-
			May-12	2012	Q2	-			-	1.47%	-	-
			Jun-12	2012	Q2	-			-	1.47%	-	-
			Jul-12	2012	Q3	-			-	1.47%	-	-
			Aug-12	2012	Q3	-			-	1.47%	-	-
			Sep-12	2012	Q3	-			-	1.47%	-	-
			Oct-12	2012	Q4	-			-	1.47%	-	-
			Nov-12	2012	Q4	-			-	1.47%	-	-
			Dec-12	2012	Q4	-			-	1.47%	-	-
						\$	-	\$	-	\$	-	-



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation - Newbury

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

Year	OM&A (from Sheet 5)	Amortization Expense (from Sheet 5)	Cumulative OM&A and Amortization Expense	Average Cumulative OM&A and Amortization Expense	Average Annual Prescribed Interest Rate for Deferral and Variance Accounts (from Sheets 8A and 8B)	Simple Interest on OM&A and Amortization Expenses
2006	\$ -	\$ -	\$ -	\$ -	4.37%	\$ -
2007	\$ -	\$ -	\$ -	\$ -	4.73%	\$ -
2008	\$ -	\$ -	\$ -	\$ -	3.98%	\$ -
2009	\$ 79.12	\$ 286.56	\$ 365.68	\$ 182.84	1.14%	\$ 2.08
2010	\$ 313.80	\$ 573.12	\$ 1,252.60	\$ 809.14	0.80%	\$ 6.45
2011	\$ 271.38	\$ 573.12	\$ 2,097.09	\$ 1,674.84	1.47%	\$ 24.62
2012	\$ 69.97	\$ 560.57	\$ 2,727.63	\$ 2,412.36	1.47%	\$ 35.46
Cumulative Interest to 2011						\$ 33.15
Cumulative Interest to 2012						\$ 68.61



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation - Newbury

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

Check if applicable

☐ Smart Meter Funding Adder (SMFA)

☒ Smart Meter Disposition Rider (SMDR)

☒ Smart Meter Incremental Revenue Requirement Rate Rider (SMIRR)

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

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

	2006	2007	2008	2009	2010	2011	2012 and later	Total
Deferred and forecasted Smart Meter Incremental Revenue Requirement (from Sheet 5)	\$ -	\$ -	\$ -	\$ 611.78	\$ 1,397.08	\$ 1,387.78	\$ 1,143.57	\$ 4,540.21
Interest on Deferred and forecasted OM&A and Amortization Expense (Sheet 8A/8B) (Check one of the boxes below)	\$ -	\$ -	\$ -	\$ 2.08	\$ 6.45	\$ 24.62		\$ 33.15
<input type="checkbox"/> Sheet 8A (Interest calculated on monthly balances)								\$ -
<input checked="" type="checkbox"/> Sheet 8B (Interest calculated on average annual balances)	\$ -	\$ -	\$ -	\$ 2.08	\$ 6.45	\$ 24.62		\$ 33.15
SMFA Revenues (from Sheet 8)	\$ -	\$ 8.16	\$ 86.51	\$ 272.80	\$ 353.97	\$ 761.52	\$ 302.24	\$ 1,785.20
SMFA Interest (from Sheet 8)	\$ -	\$ -	\$ 1.72	\$ 1.50	\$ 4.57	\$ 14.14	\$ 25.37	\$ 47.30
Net Deferred Revenue Requirement	\$ -	\$ 8.16	\$ 88.23	\$ 339.56	\$ 1,045.00	\$ 636.74	\$ 815.96	\$ 2,740.86

Number of Metered Customers (average for 2012 test year)

31

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

Years for collection or refunding	3.5
Deferred Incremental Revenue Requirement from 2006 to December 31, 2011 plus Interest on OM&A and Amortization	\$ 3,429.79
SMFA Revenues collected from 2006 to 2012 test year (inclusive) Plus Simple Interest on SMFA Revenues	\$ 1,832.50
Net Deferred Revenue Requirement	\$ 1,597.29
SMDR November 1, 2012 to April 30, 2013	\$ 1.23
Check: Forecasted SMDR Revenues	\$ 1,601.46

Match

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

Incremental Revenue Requirement for 2012	\$ 1,143.57
SMIRR	\$ 3.07
Check: Forecasted SMIRR Revenues	\$ 1,142.04

Match

Attachment N

Newbury General Service greater than 50 kW Smart Meter Model



Ontario Energy Board

Smart Meter Model

Choose Your Utility:

Middlesex Power Distribution Corporation - Newbury

Midland Power Utility Corporation

Application Contact Information

Name: Andrya Eagen

Title: Senior Regulatory Specialist

Phone Number: 519-352-6300 Ext 243

Email Address: andryaeagen@ckenergy.com

We are applying for rates effective: November 1, 2012

Last COS Re-based Year 2006

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.



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

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

Smart Meter Capital Cost and Operational Expense Data	2006	2007	2008	2009	2010	2011	2012 and later	Total
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
Smart Meter Installation Plan								
Actual/Planned number of Smart Meters installed during the Calendar Year								
Residential								0
General Service < 50 kW								0
Actual/Planned number of Smart Meters installed (Residential and GS < 50 kW only)	0	0	0	0	0	0	0	0
Percentage of Residential and GS < 50 kW Smart Meter Installations Completed	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Actual/Planned number of GS > 50 kW meters installed				4				4
Other (please identify)								0
Total Number of Smart Meters installed or planned to be installed	0	0	0	4	0	0	0	4
1 Capital Costs								
1.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)								
1.1.1 Smart Meters (may include new meters and modules, etc.)	Smart Meter			2,462	0	0		\$ 2,462
1.1.2 Installation Costs (may include socket kits, labour, vehicle, benefits, etc.)	Smart Meter			306	0	0		\$ 306
1.1.3a Workforce Automation Hardware (may include fieldwork handhelds, barcode hardware, etc.)								\$ -
1.1.3b Workforce Automation Software (may include fieldwork handhelds, barcode hardware, etc.)								\$ -
Total Advanced Metering Communications Devices (AMCD)				2,768				\$ 2,768
1.2 ADVANCED METERING REGIONAL COLLECTOR (AMRC) (includes LAN)								
1.2.1 Collectors								\$ -
1.2.2 Repeaters (may include radio licence, etc.)				0	0	0		\$ -
1.2.3 Installation (may include meter seals and rings, collector computer hardware, etc.)								\$ -
Total Advanced Metering Regional Collector (AMRC) (includes LAN)								\$ -
1.3 ADVANCED METERING CONTROL COMPUTER (AMCC)								
1.3.1 Computer Hardware								\$ -
1.3.2 Computer Software								\$ -
1.3.3 Computer Software Licences & Installation (includes hardware and software) (may include AS400 disk space, backup and recovery computer, UPS, etc.)								\$ -
Total Advanced Metering Control Computer (AMCC)								\$ -
1.4 WIDE AREA NETWORK (WAN)								
1.4.1 Activation Fees				0	0	0		\$ -
Total Wide Area Network (WAN)								\$ -
1.5 OTHER AMI CAPITAL COSTS RELATED TO MINIMUM FUNCTIONALITY								
1.5.1 Customer Equipment (including repair of damaged equipment)								\$ -
1.5.2 AMI Interface to CIS								\$ -
1.5.3 Professional Fees								\$ -
1.5.4 Integration								\$ -
1.5.5 Program Management								\$ -
1.5.6 Other AMI Capital								\$ -
Total Other AMI Capital Costs Related to Minimum Functionality								\$ -
Total Capital Costs Related to Minimum Functionality				2,768				\$ 2,768
1.6 CAPITAL COSTS BEYOND MINIMUM FUNCTIONALITY								
1.6.1 Costs related to technical capabilities in the smart meters or related communications infrastructure that exceed those specified in O.Reg 425/06	Computer Software							\$ -
1.6.2 Costs for deployment of smart meters to customers other than residential and small general service	Applications Software							\$ -
1.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDNR, etc.								\$ -
Total Capital Costs Beyond Minimum Functionality								\$ -
Total Smart Meter Capital Costs				2,768				\$ 2,768
2 OM&A Expenses								
2.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)								
2.1.1 Maintenance (may include meter reverification costs, etc.)				5	4	7	0	\$ 17
2.1.2 Other (please specify)								\$ -
Total Incremental AMCD OM&A Costs				5	4	7		\$ 17



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

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

Smart Meter Capital Cost and Operational Expense Data

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

2.2.1 Maintenance

2.2.2 Other (please specify)

Total Incremental AMRC OM&A Costs

2.3 ADVANCED METERING CONTROL COMPUTER (AMCC)

2.3.1 Hardware Maintenance (may include server support, etc.)

2.3.2 Software Maintenance (may include maintenance support, etc.)

2.3.2 Other (please specify)

Total Incremental AMCC OM&A Costs

2.4 WIDE AREA NETWORK (WAN)

2.4.1 WAN Maintenance

2.4.2 Other (please specify)

Total Incremental AMRC OM&A Costs

2.5 OTHER AMI OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY

2.5.1 Business Process Redesign

2.5.2 Customer Communication (may include project communication, etc.)

2.5.3 Program Management

2.5.4 Change Management (may include training, etc.)

2.5.5 Administration Costs

2.5.6 Other AM Expenses

(please specify)

Total Other AMI OM&A Costs Related to Minimum Functionality

TOTAL OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY

2.6 OM&A COSTS RELATED TO BEYOND MINIMUM FUNCTIONALITY

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

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

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

2.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDMR, etc.

Total OM&A Costs Beyond Minimum Functionality

Total Smart Meter OM&A Costs

	2006	2007	2008	2009	2010	2011	2012 and later	Total
	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Forecast	
2.2.1 Maintenance								\$ -
2.2.2 Other (please specify)								\$ -
Total Incremental AMRC OM&A Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3.1 Hardware Maintenance (may include server support, etc.)				1	1	0	0	\$ 2
2.3.2 Software Maintenance (may include maintenance support, etc.)				2	2	1	9	\$ 14
2.3.2 Other (please specify)								\$ -
Total Incremental AMCC OM&A Costs	\$ -	\$ -	\$ -	\$ 3	\$ 2	\$ 2	\$ 9	\$ 16
2.4.1 WAN Maintenance								\$ -
2.4.2 Other (please specify)								\$ -
Total Incremental AMRC OM&A Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5.1 Business Process Redesign								\$ -
2.5.2 Customer Communication (may include project communication, etc.)								\$ -
2.5.3 Program Management								\$ -
2.5.4 Change Management (may include training, etc.)								\$ -
2.5.5 Administration Costs				0	0	0	0	\$ 0
2.5.6 Other AM Expenses				1	0	1	0	\$ 2
(please specify)								
Total Other AMI OM&A Costs Related to Minimum Functionality	\$ -	\$ -	\$ -	\$ 1	\$ 0	\$ 1	\$ -	\$ 2
TOTAL OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY	\$ -	\$ -	\$ -	\$ 9	\$ 7	\$ 9	\$ 9	\$ 34
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 MDMR, etc.				0	0	0	0	\$ -
Total OM&A Costs Beyond Minimum Functionality	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Smart Meter OM&A Costs	\$ -	\$ -	\$ -	\$ 9	\$ 7	\$ 9	\$ 9	\$ 34

3 Aggregate Smart Meter Costs by Category

3.1

Capital

3.1.1 Smart Meter

3.1.2 Computer Hardware

3.1.3 Computer Software

3.1.4 Tools & Equipment

3.1.5 Other Equipment

3.1.6 Applications Software

3.1.7 Total Capital Costs

3.2 OM&A Costs

3.2.1 Total OM&A Costs

\$ -	\$ -	\$ -	\$ 2,768	\$ -	\$ -	\$ -	\$ -	\$ 2,768
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ 2,768	\$ -	\$ -	\$ -	\$ -	\$ 2,768
\$ -	\$ -	\$ -	\$ 9	\$ 7	\$ 9	\$ 9	\$ 9	\$ 34



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation - Newbury

	2006	2007	2008	2009	2010	2011	2012 and later
Cost of Capital							
Capital Structure¹							
Deemed Short-term Debt Capitalization							
Deemed Long-term Debt Capitalization	50.0%	50.0%	53.3%	56.7%	60.0%	60.0%	60.0%
Deemed Equity Capitalization	50.0%	50.0%	46.7%	43.3%	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							
Long-term Debt Rate (actual/embedded/deemed) ²	7.25%	7.25%	7.25%	7.25%	7.25%	7.25%	7.25%
Target Return on Equity (ROE)	9.0%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
Return on Preferred Shares							
WACC	8.13%	8.13%	8.07%	8.01%	7.95%	7.95%	7.95%
Working Capital Allowance							
Working Capital Allowance Rate (% of the sum of Cost of Power + controllable expenses)	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
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	50	50	50	50
Computer Equipment - CCA Rate	45%	55%	55%	55%	55%	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	12	12	12	12	12	12	12
Applications Software - CCA Rate	100%	100%	100%	100%	100%	100%	100%

Assumptions

¹ Planned smart meter installations occur evenly throughout the year.

² Fiscal calendar year (January 1 to December 31) used.

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



	2006	2007	2008	2009	2010	2011	2012 and later
Net Fixed Assets - Smart Meters							
Gross Book Value							
Opening Balance		\$ -	\$ -	\$ -	\$ 2,768	\$ 2,768	\$ 2,768
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ 2,768	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 2,768	\$ 2,768	\$ 2,768	\$ 2,768
Accumulated Depreciation							
Opening Balance		\$ -	\$ -	\$ -	\$ 92	\$ 277	\$ 461
Amortization expense during year	\$ -	\$ -	\$ -	\$ 92	\$ 185	\$ 185	\$ 185
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ 92	\$ 277	\$ 461	\$ 646
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ 2,675	\$ 2,491	\$ 2,306
Closing Balance	\$ -	\$ -	\$ -	\$ 2,675	\$ 2,491	\$ 2,306	\$ 2,122
Average Net Book Value	\$ -	\$ -	\$ -	\$ 1,338	\$ 2,583	\$ 2,399	\$ 2,214
Net Fixed Assets - Computer Hardware							
Gross Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Amortization expense during year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Average Net Book Value	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Fixed Assets - Computer Software (Including Applications Software)							
Gross Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Amortization expense during year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Average Net Book Value	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Fixed Assets - Tools and Equipment							
Gross Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Amortization expense during year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Average Net Book Value	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Fixed Assets - Other Equipment							
Gross Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions during year (from Smart Meter Costs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Depreciation							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Amortization expense during year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)							
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Book Value							
Opening Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Average Net Book Value	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -



Ontario Energy Board
Smart Meter Model

Middlesex Power Distribution Corporation - Newbury

	2006	2007	2008	2009	2010	2011	2012 and Later
Average Net Fixed Asset Values (from Sheet 4)							
Smart Meters	\$ -	\$ -	\$ -	\$ 1,338	\$ 2,583	\$ 2,399	\$ 2,214
Computer Hardware	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Computer Software	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Net Fixed Assets	\$ -	\$ -	\$ -	\$ 1,338	\$ 2,583	\$ 2,399	\$ 2,214
Working Capital							
Operating Expenses (from Sheet 2)	\$ -	\$ -	\$ -	\$ 9	\$ 7	\$ 9	\$ 9
Working Capital Factor (from Sheet 3)	15%	15%	15%	15%	15%	15%	15%
Working Capital Allowance	\$ -	\$ -	\$ -	\$ 1	\$ 1	\$ 1	\$ 1
Incremental Smart Meter Rate Base	\$ -	\$ -	\$ -	\$ 1,339	\$ 2,584	\$ 2,400	\$ 2,215
Return on Rate Base							
Capital Structure							
Deemed Short Term Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Deemed Long Term Debt	\$ -	\$ -	\$ -	\$ 759	\$ 1,550	\$ 1,440	\$ 1,329
Equity	\$ -	\$ -	\$ -	\$ 580	\$ 1,034	\$ 960	\$ 886
Preferred Shares	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Capitalization	\$ -	\$ -	\$ -	\$ 1,339	\$ 2,584	\$ 2,400	\$ 2,215
Return on							
Deemed Short Term Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Deemed Long Term Debt	\$ -	\$ -	\$ -	\$ 55	\$ 112	\$ 104	\$ 96
Equity	\$ -	\$ -	\$ -	\$ 52	\$ 93	\$ 86	\$ 80
Preferred Shares	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Return on Capital	\$ -	\$ -	\$ -	\$ 107	\$ 205	\$ 191	\$ 176
Operating Expenses	\$ -	\$ -	\$ -	\$ 9	\$ 7	\$ 9	\$ 9
Amortization Expenses (from Sheet 4)							
Smart Meters	\$ -	\$ -	\$ -	\$ 92	\$ 185	\$ 185	\$ 185
Computer Hardware	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Computer Software	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Amortization Expense in Year	\$ -	\$ -	\$ -	\$ 92	\$ 185	\$ 185	\$ 185
Incremental Revenue Requirement before Taxes/PILs	\$ -	\$ -	\$ -	\$ 209	\$ 397	\$ 384	\$ 370
Calculation of Taxable Income							
Incremental Operating Expenses	\$ -	\$ -	\$ -	\$ 9	\$ 7	\$ 9	\$ 9
Amortization Expense	\$ -	\$ -	\$ -	\$ 92	\$ 185	\$ 185	\$ 185
Interest Expense	\$ -	\$ -	\$ -	\$ 55	\$ 112	\$ 104	\$ 96
Net Income for Taxes/PILs	\$ -	\$ -	\$ -	\$ 52	\$ 93	\$ 86	\$ 80
Grossed-up Taxes/PILs (from Sheet 7)	\$ -	\$ -	\$ -	\$ 22.63	\$ 31.06	\$ 29.67	\$ 30.03
Revenue Requirement, including Grossed-up Taxes/PILs	\$ -	\$ -	\$ -	\$ 232	\$ 428	\$ 414	\$ 400



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation - Newbury

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	\$ -	\$ -	\$ -	\$ -	\$ 2,656.82	\$ 2,444.28	\$ 2,248.74
Capital Additions	\$ -	\$ -	\$ -	\$ 2,767.52	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
UCC Before Half Year Rule	\$ -	\$ -	\$ -	\$ 2,767.52	\$ 2,656.82	\$ 2,444.28	\$ 2,248.74
Half Year Rule (1/2 Additions - Disposals)	\$ -	\$ -	\$ -	\$ 1,383.76	\$ -	\$ -	\$ -
Reduced UCC	\$ -	\$ -	\$ -	\$ 1,383.76	\$ 2,656.82	\$ 2,444.28	\$ 2,248.74
CCA Rate Class	47	47	47	47	47	47	47
CCA Rate	8%	8%	8%	8%	8%	8%	8%
CCA	\$ -	\$ -	\$ -	\$ 110.70	\$ 212.55	\$ 195.54	\$ 179.90
Closing UCC	\$ -	\$ -	\$ -	\$ 2,656.82	\$ 2,444.28	\$ 2,248.74	\$ 2,068.84

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	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions Computer Hardware	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Additions Computer Software	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retirements/Removals (if applicable)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
UCC Before Half Year Rule	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Half Year Rule (1/2 Additions - Disposals)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Reduced UCC	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CCA Rate Class	45	50	50	50	50	50	50
CCA Rate	45%	55%	55%	55%	55%	55%	55%
CCA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Closing UCC	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

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	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation - Newbury

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	\$ -	\$ -	\$ -	\$ 52.18	\$ 93.03	\$ 86.39	\$ 79.75
Amortization	\$ -	\$ -	\$ -	\$ 92.25	\$ 184.50	\$ 184.50	\$ 184.50
CCA - Smart Meters	\$ -	\$ -	\$ -	\$ 110.70	\$ 212.55	\$ 195.54	\$ 179.90
CCA - Computers	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CCA - Applications Software	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CCA - Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Change in taxable income	\$ -	\$ -	\$ -	\$ 33.73	\$ 64.98	\$ 75.35	\$ 84.36
Tax Rate (from Sheet 3)	36.12%	36.12%	33.50%	33.00%	31.00%	28.25%	26.25%
Income Taxes Payable	\$ -	\$ -	\$ -	\$ 11.13	\$ 20.14	\$ 21.29	\$ 22.14
ONTARIO CAPITAL TAX							
Smart Meters	\$ -	\$ -	\$ -	\$ 2,675.27	\$ 2,490.77	\$ 2,306.27	\$ 2,121.77
Computer Hardware	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Computer Software	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
(Including Application Software)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Tools & Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Rate Base	\$ -	\$ -	\$ -	\$ 2,675.27	\$ 2,490.77	\$ 2,306.27	\$ 2,121.77
Less: Exemption	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Deemed Taxable Capital	\$ -	\$ -	\$ -	\$ 2,675.27	\$ 2,490.77	\$ 2,306.27	\$ 2,121.77
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)	\$ -	\$ -	\$ -	\$ 6.02	\$ 1.87	\$ -	\$ -
Change in Income Taxes Payable	\$ -	\$ -	\$ -	\$ 11.13	\$ 20.14	\$ 21.29	\$ 22.14
Change in OCT	\$ -	\$ -	\$ -	\$ 6.02	\$ 1.87	\$ -	\$ -
PILs	\$ -	\$ -	\$ -	\$ 17.15	\$ 22.01	\$ 21.29	\$ 22.14
Gross Up PILs							
Tax Rate	36.12%	36.12%	33.50%	33.00%	31.00%	28.25%	26.25%
Change in Income Taxes Payable	\$ -	\$ -	\$ -	\$ 16.61	\$ 29.20	\$ 29.67	\$ 30.03
Change in OCT	\$ -	\$ -	\$ -	\$ 6.02	\$ 1.87	\$ -	\$ -
PILs	\$ -	\$ -	\$ -	\$ 22.63	\$ 31.06	\$ 29.67	\$ 30.03



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation - Newbury

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	\$ -		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	\$ -	\$ 0.12	5.14%	\$ -	\$ 0.12		\$ 0.25
2011 Q4	1.47%	4.29%	Dec-07	2007	Q4	\$ 0.12	\$ 1.00	5.14%	\$ -	\$ 1.12	\$ 1.12	\$ 0.25
2012 Q1	1.47%	4.29%	Jan-08	2008	Q1	\$ 1.12	\$ 1.00	5.14%	\$ -	\$ 2.12		\$ 0.25
2012 Q2	1.47%	4.29%	Feb-08	2008	Q1	\$ 2.12	\$ 1.00	5.14%	\$ 0.01	\$ 3.13		\$ 0.25
2012 Q3	1.47%	4.29%	Mar-08	2008	Q1	\$ 3.12	\$ 1.00	5.14%	\$ 0.01	\$ 4.13		\$ 0.25
2012 Q4	1.47%	4.29%	Apr-08	2008	Q2	\$ 4.12	\$ 1.00	4.08%	\$ 0.01	\$ 5.13		\$ 0.25
			May-08	2008	Q2	\$ 5.12	\$ 1.00	4.08%	\$ 0.02	\$ 6.14		\$ 0.25
			Jun-08	2008	Q2	\$ 6.12	\$ 1.00	4.08%	\$ 0.02	\$ 7.14		\$ 0.25
			Jul-08	2008	Q3	\$ 7.12	\$ 1.00	3.35%	\$ 0.02	\$ 8.14		\$ 0.25
			Aug-08	2008	Q3	\$ 8.12	\$ 1.00	3.35%	\$ 0.02	\$ 9.14		\$ 0.25
			Sep-08	2008	Q3	\$ 9.12	\$ 1.00	3.35%	\$ 0.03	\$ 10.15		\$ 0.25
			Oct-08	2008	Q4	\$ 10.12	\$ 1.00	3.35%	\$ 0.03	\$ 11.15		\$ 0.25
			Nov-08	2008	Q4	\$ 11.12	\$ 1.00	3.35%	\$ 0.03	\$ 12.15		\$ 0.25
			Dec-08	2008	Q4	\$ 12.12	\$ 1.00	3.35%	\$ 0.03	\$ 13.15	\$ 12.23	\$ 0.25
			Jan-09	2009	Q1	\$ 13.12	\$ 1.00	2.45%	\$ 0.03	\$ 14.15		\$ 0.25
			Feb-09	2009	Q1	\$ 14.12	\$ 1.00	2.45%	\$ 0.03	\$ 15.15		\$ 0.25
			Mar-09	2009	Q1	\$ 15.12	\$ 1.00	2.45%	\$ 0.03	\$ 16.15		\$ 0.25
			Apr-09	2009	Q2	\$ 16.12	\$ 1.00	1.00%	\$ 0.01	\$ 17.13		\$ 0.25
			May-09	2009	Q2	\$ 17.12	\$ -	1.00%	\$ 0.01	\$ 17.13		\$ 1.00
			Jun-09	2009	Q2	\$ 17.12	\$ 2.00	1.00%	\$ 0.01	\$ 19.13		\$ 1.00
			Jul-09	2009	Q3	\$ 19.12	\$ 4.00	0.55%	\$ 0.01	\$ 23.13		\$ 1.00
			Aug-09	2009	Q3	\$ 23.12	\$ 4.00	0.55%	\$ 0.01	\$ 27.13		\$ 1.00
			Sep-09	2009	Q3	\$ 27.12	\$ 4.00	0.55%	\$ 0.01	\$ 31.13		\$ 1.00
			Oct-09	2009	Q4	\$ 31.12	\$ 4.00	0.55%	\$ 0.01	\$ 35.13		\$ 1.00
			Nov-09	2009	Q4	\$ 35.12	\$ 4.00	0.55%	\$ 0.02	\$ 39.14		\$ 1.00
			Dec-09	2009	Q4	\$ 39.12	\$ 10.33	0.55%	\$ 0.02	\$ 49.47	\$ 36.53	\$ 1.00
			Jan-10	2010	Q1	\$ 49.45	\$ 4.00	0.55%	\$ 0.02	\$ 53.47		\$ 1.00
			Feb-10	2010	Q1	\$ 53.45	\$ 4.00	0.55%	\$ 0.02	\$ 57.47		\$ 1.00
			Mar-10	2010	Q1	\$ 57.45	\$ 4.00	0.55%	\$ 0.03	\$ 61.48		\$ 1.00
			Apr-10	2010	Q2	\$ 61.45	\$ 4.00	0.55%	\$ 0.03	\$ 65.48		\$ 1.00
			May-10	2010	Q2	\$ 65.45	\$ 4.00	0.55%	\$ 0.03	\$ 69.48		\$ 1.00
			Jun-10	2010	Q2	\$ 69.45	\$ 4.00	0.55%	\$ 0.03	\$ 73.48		\$ 1.00
			Jul-10	2010	Q3	\$ 73.45	\$ 4.00	0.89%	\$ 0.05	\$ 77.50		\$ 1.00
			Aug-10	2010	Q3	\$ 77.45	\$ 4.00	0.89%	\$ 0.06	\$ 81.51		\$ 1.00
			Sep-10	2010	Q3	\$ 81.45	\$ 4.00	0.89%	\$ 0.06	\$ 85.51		\$ 1.00
			Oct-10	2010	Q4	\$ 85.45	\$ 4.00	1.20%	\$ 0.09	\$ 89.54		\$ 1.00
			Nov-10	2010	Q4	\$ 89.45	\$ 4.00	1.20%	\$ 0.09	\$ 93.54		\$ 1.00
			Dec-10	2010	Q4	\$ 93.45	\$ 1.67	1.20%	\$ 0.09	\$ 95.21	\$ 46.27	\$ 1.00
			Jan-11	2011	Q1	\$ 95.12	\$ 4.00	1.47%	\$ 0.12	\$ 99.24		\$ 1.00
			Feb-11	2011	Q1	\$ 99.12	\$ 4.00	1.47%	\$ 0.12	\$ 103.24		\$ 1.00
			Mar-11	2011	Q1	\$ 103.12	\$ 4.00	1.47%	\$ 0.13	\$ 107.25		\$ 1.00
			Apr-11	2011	Q2	\$ 107.12	\$ 4.00	1.47%	\$ 0.13	\$ 111.25		\$ 1.00
			May-11	2011	Q2	\$ 111.12	\$ 4.00	1.47%	\$ 0.14	\$ 115.26		\$ 2.50
			Jun-11	2011	Q2	\$ 115.12	\$ 7.00	1.47%	\$ 0.14	\$ 122.26		\$ 2.50
			Jul-11	2011	Q3	\$ 122.12	\$ 10.00	1.47%	\$ 0.15	\$ 132.27		\$ 2.50
			Aug-11	2011	Q3	\$ 132.12	\$ 10.00	1.47%	\$ 0.16	\$ 142.28		\$ 2.50
			Sep-11	2011	Q3	\$ 142.12	\$ 12.50	1.47%	\$ 0.17	\$ 154.79		\$ 2.50
			Oct-11	2011	Q4	\$ 154.62	\$ 12.50	1.47%	\$ 0.19	\$ 167.31		\$ 2.50
			Nov-11	2011	Q4	\$ 167.12	\$ 12.50	1.47%	\$ 0.20	\$ 179.82		\$ 2.50
			Dec-11	2011	Q4	\$ 179.62	\$ 27.65	1.47%	\$ 0.22	\$ 207.49	\$ 114.02	\$ 2.50



This worksheet calculates the funding adder revenues.

Account 1555 - Sub-account Funding Adder Revenues

Interest Rates	Approved Deferral and Variance Accounts	CWIP				Opening Balance (Principal)	Funding Adder Revenues	Interest		Closing Balance	Annual amounts	Board Approved Smart Meter Funding Adder (from Tariff)
			Date	Year	Quarter			Rate	Interest			
			Jan-12	2012	Q1	\$ 207.27	\$ 12.50	1.47%	\$ 0.25	\$ 220.02		\$ 2.50
			Feb-12	2012	Q1	\$ 219.77	\$ 12.50	1.47%	\$ 0.27	\$ 232.54		\$ 2.50
			Mar-12	2012	Q1	\$ 232.27	\$ 12.50	1.47%	\$ 0.28	\$ 245.05		\$ 2.50
			Apr-12	2012	Q2	\$ 244.77	\$ 12.50	1.47%	\$ 0.30	\$ 257.57		\$ 2.50
			May-12	2012	Q2	\$ 257.27	\$ 2.05	1.47%	\$ 0.32	\$ 255.54		
			Jun-12	2012	Q2	\$ 255.22		1.47%	\$ 0.31	\$ 255.53		
			Jul-12	2012	Q3	\$ 255.22		1.47%	\$ 0.31	\$ 255.53		
			Aug-12	2012	Q3	\$ 255.22		1.47%	\$ 0.31	\$ 255.53		
			Sep-12	2012	Q3	\$ 255.22		1.47%	\$ 0.31	\$ 255.53		
			Oct-12	2012	Q4	\$ 255.22		1.47%	\$ 0.31	\$ 255.53		
			Nov-12	2012	Q4	\$ 255.22		1.47%	\$ 0.31	\$ 255.53		
			Dec-12	2012	Q4	\$ 255.22		1.47%	\$ 0.31	\$ 255.53	\$ 51.54	
Total Funding Adder Revenues Collected						\$ 255.22		\$ 6.49	\$ 261.71	\$ 261.71		



Middlesex Power Distribution Corporation - Newbury

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	-			-	5.14%	-	-
2012 Q1	1.47%	4.29%	Jan-08	2008	Q1	-			-	5.14%	-	-
2012 Q2	1.47%	4.29%	Feb-08	2008	Q1	-			-	5.14%	-	-
2012 Q3	1.47%	4.29%	Mar-08	2008	Q1	-			-	5.14%	-	-
2012 Q4	1.47%	4.29%	Apr-08	2008	Q2	-			-	4.08%	-	-
			May-08	2008	Q2	-			-	4.08%	-	-
			Jun-08	2008	Q2	-			-	4.08%	-	-
			Jul-08	2008	Q3	-			-	3.35%	-	-
			Aug-08	2008	Q3	-			-	3.35%	-	-
			Sep-08	2008	Q3	-			-	3.35%	-	-
			Oct-08	2008	Q4	-			-	3.35%	-	-
			Nov-08	2008	Q4	-			-	3.35%	-	-
			Dec-08	2008	Q4	-			-	3.35%	-	-
			Jan-09	2009	Q1	-			-	2.45%	-	-
			Feb-09	2009	Q1	-			-	2.45%	-	-
			Mar-09	2009	Q1	-			-	2.45%	-	-
			Apr-09	2009	Q2	-			-	1.00%	-	-
			May-09	2009	Q2	-			-	1.00%	-	-
			Jun-09	2009	Q2	-			-	1.00%	-	-
			Jul-09	2009	Q3	-			-	0.55%	-	-
			Aug-09	2009	Q3	-			-	0.55%	-	-
			Sep-09	2009	Q3	-			-	0.55%	-	-
			Oct-09	2009	Q4	-			-	0.55%	-	-
			Nov-09	2009	Q4	-			-	0.55%	-	-
			Dec-09	2009	Q4	-			-	0.55%	-	-
			Jan-10	2010	Q1	-			-	0.55%	-	-
			Feb-10	2010	Q1	-			-	0.55%	-	-
			Mar-10	2010	Q1	-			-	0.55%	-	-
			Apr-10	2010	Q2	-			-	0.55%	-	-
			May-10	2010	Q2	-			-	0.55%	-	-
			Jun-10	2010	Q2	-			-	0.55%	-	-
			Jul-10	2010	Q3	-			-	0.89%	-	-
			Aug-10	2010	Q3	-			-	0.89%	-	-
			Sep-10	2010	Q3	-			-	0.89%	-	-
			Oct-10	2010	Q4	-			-	1.20%	-	-
			Nov-10	2010	Q4	-			-	1.20%	-	-
			Dec-10	2010	Q4	-			-	1.20%	-	-
			Jan-11	2011	Q1	-			-	1.47%	-	-
			Feb-11	2011	Q1	-			-	1.47%	-	-
			Mar-11	2011	Q1	-			-	1.47%	-	-
			Apr-11	2011	Q2	-			-	1.47%	-	-
			May-11	2011	Q2	-			-	1.47%	-	-
			Jun-11	2011	Q2	-			-	1.47%	-	-
			Jul-11	2011	Q3	-			-	1.47%	-	-
			Aug-11	2011	Q3	-			-	1.47%	-	-
			Sep-11	2011	Q3	-			-	1.47%	-	-
			Oct-11	2011	Q4	-			-	1.47%	-	-
			Nov-11	2011	Q4	-			-	1.47%	-	-
			Dec-11	2011	Q4	-			-	1.47%	-	-
			Jan-12	2012	Q1	-			-	1.47%	-	-
			Feb-12	2012	Q1	-			-	1.47%	-	-
			Mar-12	2012	Q1	-			-	1.47%	-	-
			Apr-12	2012	Q2	-			-	1.47%	-	-
			May-12	2012	Q2	-			-	1.47%	-	-
			Jun-12	2012	Q2	-			-	1.47%	-	-
			Jul-12	2012	Q3	-			-	1.47%	-	-
			Aug-12	2012	Q3	-			-	1.47%	-	-
			Sep-12	2012	Q3	-			-	1.47%	-	-
			Oct-12	2012	Q4	-			-	1.47%	-	-
			Nov-12	2012	Q4	-			-	1.47%	-	-
			Dec-12	2012	Q4	-			-	1.47%	-	-
						\$ -	\$ -	\$ -	\$ -			



Ontario Energy Board

Smart Meter Model

Middlesex Power Distribution Corporation - Newbury

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

Year	OM&A (from Sheet 5)	Amortization Expense (from Sheet 5)	Cumulative OM&A and Amortization Expense	Average Cumulative OM&A and Amortization Expense	Average Annual Prescribed Interest Rate for Deferral and Variance Accounts (from Sheets 8A and 8B)	Simple Interest on OM&A and Amortization Expenses
2006	\$ -	\$ -	\$ -	\$ -	4.37%	\$ -
2007	\$ -	\$ -	\$ -	\$ -	4.73%	\$ -
2008	\$ -	\$ -	\$ -	\$ -	3.98%	\$ -
2009	\$ 9.40	\$ 92.25	\$ 101.65	\$ 50.83	1.14%	\$ 0.58
2010	\$ 7.09	\$ 184.50	\$ 293.25	\$ 197.45	0.80%	\$ 1.57
2011	\$ 8.91	\$ 184.50	\$ 486.66	\$ 389.95	1.47%	\$ 5.73
2012	\$ 9.03	\$ 184.50	\$ 680.19	\$ 583.42	1.47%	\$ 8.58
Cumulative Interest to 2011						\$ 7.89
Cumulative Interest to 2012						\$ 16.46



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

Check if applicable

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

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

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

	2006	2007	2008	2009	2010	2011	2012 and later	Total
Deferred and forecasted Smart Meter Incremental Revenue Requirement (from Sheet 5)	\$ -	\$ -	\$ -	\$ 231.51	\$ 428.09	\$ 413.87	\$ 399.68	\$ 1,473.15
Interest on Deferred and forecasted OM&A and Amortization Expense (Sheet 8A/8B) (Check one of the boxes below)	\$ -	\$ -	\$ -	\$ 0.58	\$ 1.57	\$ 5.73		\$ 7.89
<input type="checkbox"/> Sheet 8A (Interest calculated on monthly balances)								\$ -
<input checked="" type="checkbox"/> Sheet 8B (Interest calculated on average annual balances)	\$ -	\$ -	\$ -	\$ 0.58	\$ 1.57	\$ 5.73		\$ 7.89
SMFA Revenues (from Sheet 8)	\$ -	\$ 1.12	\$ 12.00	\$ 36.33	\$ 45.67	\$ 112.15	\$ 47.95	\$ 255.22
SMFA Interest (from Sheet 8)	\$ -	\$ -	\$ 0.23	\$ 0.20	\$ 0.60	\$ 1.87	\$ 3.59	\$ 6.49
Net Deferred Revenue Requirement	\$ -	\$ 1.12	\$ 12.23	\$ 195.56	\$ 383.40	\$ 305.58	\$ 348.14	\$ 1,219.32
Number of Metered Customers (average for 2012 test year)								5

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

Years for collection or refunding	1	
Deferred Incremental Revenue Requirement from 2006 to December 31, 2011 plus Interest on OM&A and Amortization	\$ 1,081.36	
SMFA Revenues collected from 2006 to 2012 test year (inclusive) Plus Simple Interest on SMFA Revenues	\$ 261.71	
Net Deferred Revenue Requirement	\$ 819.65	
SMDR November 1, 2012 to October 31, 2013	\$ 13.66	Match
Check: Forecasted SMDR Revenues	\$ 819.60	

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

Incremental Revenue Requirement for 2012	\$ 399.68	
SMIRR	\$ 6.66	Match
Check: Forecasted SMIRR Revenues	\$ 399.60	

Attachment O

OM&A and TOU Cost Allocation

Entegrus Powerlines Inc.

OM&A and TOU Cost Allocation Summary

Chatham-Kent																			
OEB Line	Residential	GS<50						GS>50						Grand Total					
No.	2008	2009	2010	2011	2012	Total	2008	2009	2010	2011	2012	Total	2008	2009	2010	2011	2012	Total	
2.1.1	\$0.00	\$38,982.90	\$31,318.93	\$48,156.92	\$0.00	\$118,458.76	\$0.00	\$4,224.25	\$3,393.77	\$5,218.36	\$0.00	\$12,836.37	\$0.00	\$527.18	\$423.54	\$651.25	\$0.00	\$1,601.97	\$132,897.10
2.3.1	\$0.00	\$4,440.99	\$4,659.52	\$3,122.26	\$2,731.90	\$14,954.67	\$0.00	\$481.23	\$504.91	\$338.33	\$296.03	\$1,620.51	\$0.00	\$60.06	\$63.01	\$42.22	\$36.94	\$202.24	\$16,777.42
2.3.2	\$0.00	\$17,292.69	\$12,966.89	\$8,422.52	\$62,022.52	\$100,704.63	\$0.00	\$1,873.86	\$1,405.11	\$912.68	\$6,720.85	\$10,912.51	\$0.00	\$233.86	\$175.36	\$113.90	\$838.76	\$1,361.87	\$112,979.01
2.5.5	\$0.00	\$585.06	\$0.00	\$0.00	\$0.00	\$585.06	\$0.00	\$63.40	\$0.00	\$0.00	\$0.00	\$63.40	\$0.00	\$7.91	\$0.00	\$0.00	\$0.00	\$7.91	\$656.37
2.5.6	\$0.00	\$6,137.23	\$1,928.04	\$4,186.59	\$0.00	\$12,251.85	\$0.00	\$665.04	\$208.92	\$453.66	\$0.00	\$1,327.63	\$0.00	\$83.00	\$26.07	\$56.62	\$0.00	\$165.69	\$13,745.16
2.6.3	\$0.00	\$5,787.67	\$239,549.01	\$187,277.63	\$0.00	\$432,614.30	\$0.00	\$627.16	\$25,957.89	\$20,293.69	\$0.00	\$46,878.74	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$479,493.04
Total	\$0.00	\$73,226.54	\$290,422.39	\$251,165.92	\$64,754.42	\$679,569.27	\$0.00	\$7,934.94	\$31,470.61	\$27,216.72	\$7,016.89	\$73,639.15	\$0.00	\$912.00	\$687.98	\$863.99	\$875.70	\$3,339.67	\$756,548.09

Strathroy, Mt Brydges & Parkhill																			
OEB Line	Residential	GS<50						GS>50						Grand Total					
No.	2008	2009	2010	2011	2012	Total	2008	2009	2010	2011	2012	Total	2008	2009	2010	2011	2012	Total	
2.1.1	\$9,574.03	\$9,148.23	\$7,349.70	\$11,301.12	\$0.00	\$37,373.09	\$959.82	\$917.13	\$736.83	\$1,132.97	\$0.00	\$3,746.75	\$115.18	\$110.06	\$88.42	\$135.96	\$0.00	\$449.61	\$41,569.45
2.3.1	\$8,011.67	\$1,042.18	\$1,093.46	\$732.71	\$641.10	\$11,521.12	\$803.19	\$104.48	\$109.62	\$73.46	\$64.27	\$1,155.02	\$96.38	\$12.54	\$13.15	\$8.81	\$7.71	\$138.60	\$12,814.75
2.3.2	\$17,573.87	\$4,058.13	\$3,042.98	\$1,976.54	\$14,555.00	\$41,206.51	\$1,761.82	\$406.84	\$305.07	\$198.15	\$1,459.18	\$4,131.06	\$211.42	\$48.82	\$36.61	\$23.78	\$175.10	\$495.73	\$45,833.30
2.5.5	\$35,957.94	\$137.30	\$0.00	\$0.00	\$0.00	\$36,095.24	\$3,604.87	\$13.76	\$0.00	\$0.00	\$0.00	\$3,618.64	\$432.58	\$1.65	\$0.00	\$0.00	\$0.00	\$434.24	\$40,148.11
2.5.6	\$2,144.97	\$1,440.24	\$452.46	\$982.48	\$0.00	\$5,020.14	\$215.04	\$144.39	\$45.36	\$98.50	\$0.00	\$503.28	\$25.80	\$17.33	\$5.44	\$11.82	\$0.00	\$60.39	\$5,583.82
2.6.3	\$0.00	\$1,358.21	\$56,215.66	\$43,948.98	\$0.00	\$101,522.85	\$0.00	\$136.16	\$5,635.76	\$4,405.99	\$0.00	\$10,177.92	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$111,700.77
Total	\$73,262.48	\$17,184.29	\$68,154.26	\$58,941.83	\$15,196.11	\$232,738.96	\$7,344.75	\$1,722.77	\$6,832.63	\$5,909.07	\$1,523.45	\$23,332.66	\$881.37	\$190.39	\$143.62	\$180.37	\$182.81	\$1,578.57	\$257,650.19

Dutton																			
OEB Line	Residential	GS<50						GS>50						Grand Total					
No.	2008	2009	2010	2011	2012	Total	2008	2009	2010	2011	2012	Total	2008	2009	2010	2011	2012	Total	
2.1.1	\$0.00	\$701.10	\$563.26	\$866.09	\$0.00	\$2,130.45	\$0.00	\$119.57	\$96.06	\$147.71	\$0.00	\$363.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,493.78
2.3.1	\$0.00	\$79.87	\$83.80	\$56.15	\$49.13	\$268.96	\$0.00	\$13.62	\$14.29	\$9.58	\$8.38	\$45.87	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$314.82
2.3.2	\$0.00	\$311.00	\$233.21	\$151.48	\$1,115.46	\$1,811.15	\$0.00	\$53.04	\$39.77	\$25.83	\$190.23	\$308.88	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,120.02
2.5.5	\$0.00	\$10.52	\$0.00	\$0.00	\$0.00	\$10.52	\$0.00	\$1.79	\$0.00	\$0.00	\$0.00	\$1.79	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$12.32
2.5.6	\$0.00	\$110.38	\$34.68	\$75.29	\$0.00	\$220.35	\$0.00	\$18.82	\$5.91	\$12.84	\$0.00	\$37.58	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$257.92
2.6.3	\$0.00	\$104.09	\$4,308.23	\$3,368.14	\$0.00	\$7,780.45	\$0.00	\$17.75	\$734.74	\$574.41	\$0.00	\$1,326.90	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$9,107.35
Total	\$0.00	\$1,316.96	\$5,223.17	\$4,517.15	\$1,164.59	\$12,221.87	\$0.00	\$224.60	\$890.77	\$770.37	\$198.61	\$2,084.35	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$14,306.22

Newbury																			
OEB Line	Residential	GS<50						GS>50						Grand Total					
No.	2008	2009	2010	2011	2012	Total	2008	2009	2010	2011	2012	Total	2008	2009	2010	2011	2012	Total	
2.1.1	\$0.00	\$230.98	\$185.57	\$285.34	\$0.00	\$701.89	\$0.00	\$42.12	\$33.84	\$52.03	\$0.00	\$127.99	\$0.00	\$5.43	\$4.37	\$6.71	\$0.00	\$16.52	\$846.40
2.3.1	\$0.00	\$26.31	\$27.61	\$18.50	\$16.19	\$88.61	\$0.00	\$4.80	\$5.03	\$3.37	\$2.95	\$16.16	\$0.00	\$0.62	\$0.65	\$0.44	\$0.38	\$2.08	\$106.85
2.3.2	\$0.00	\$102.46	\$76.83	\$49.91	\$367.50	\$596.70	\$0.00	\$18.68	\$14.01	\$9.10	\$67.01	\$108.81	\$0.00	\$2.41	\$1.81	\$1.17	\$8.65	\$14.04	\$719.54
2.5.5	\$0.00	\$3.47	\$0.00	\$0.00	\$0.00	\$3.47	\$0.00	\$0.63	\$0.00	\$0.00	\$0.00	\$0.63	\$0.00	\$0.08	\$0.00	\$0.00	\$0.00	\$0.08	\$4.18
2.5.6	\$0.00	\$36.36	\$11.42	\$24.81	\$0.00	\$72.59	\$0.00	\$6.63	\$2.08	\$4.52	\$0.00	\$13.24	\$0.00	\$0.86	\$0.27	\$0.58	\$0.00	\$1.71	\$87.54
2.6.3	\$0.00	\$34.29	\$1,419.38	\$1,109.66	\$0.00	\$2,563.33	\$0.00	\$6.25	\$258.83	\$202.35	\$0.00	\$467.43	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$3,030.76
Total	\$0.00	\$433.88	\$1,720.81	\$1,488.21	\$383.68	\$4,026.59	\$0.00	\$79.12	\$313.80	\$271.38	\$69.97	\$734.26	\$0.00	\$9.40	\$7.09	\$8.91	\$9.03	\$34.43	\$4,795.28

Grand Total																			
OEB Line	Residential	GS<50						GS>50						Grand Total					
No.	2008	2009	2010	2011	2012	Total	2008	2009	2010	2011	2012	Total	2008	2009	2010	2011	2012	Total	
2.1.1	\$9,574.03	\$49,063.21	\$39,417.47	\$60,609.47	\$0.00	\$158,664.19	\$959.82	\$5,303.07	\$4,260.49	\$6,551.06	\$0.00	\$17,074.44	\$115.18	\$642.67	\$516.32	\$793.92	\$0.00	\$2,068.09	\$177,806.72
2.3.1	\$8,011.67	\$5,589.35	\$5,864.39	\$3,929.62	\$3,438.33	\$26,833.36	\$803.19	\$604.13	\$633.86	\$424.74	\$371.64	\$2,837.56	\$96.38	\$73.21	\$76.82	\$51.47	\$45.04	\$342.93	\$30,013.84
2.3.2	\$17,573.87	\$21,764.29	\$16,319.91	\$10,600.44	\$78,060.48	\$144,318.99	\$1,761.82	\$2,352.42	\$1,763.96	\$1,145.76	\$8,437.28	\$15,461.25	\$211.42	\$285.09	\$213.77	\$138.85	\$1,022.50	\$1,871.64	\$161,651.87
2.5.5	\$35,957.94	\$736.35	\$0.00	\$0.00	\$0.00	\$36,694.29	\$3,604.87	\$79.59	\$0.00	\$0.00	\$0.00	\$3,684.46	\$432.58	\$9.65	\$0.00	\$0.00	\$0.00	\$442.23	\$40,820.98
2.5.6	\$2,144.97	\$7,724.21	\$2,426.59	\$5,269.16	\$0.00	\$17,564.93	\$215.04	\$834.88	\$262.28	\$569.53	\$0.00	\$1,881.73	\$25.80	\$101.18	\$31.79	\$69.02	\$0.00	\$227.79	\$19,674.45
2.6.3	\$0.00	\$7,284.26	\$301,492.27	\$235,704.41	\$0.00	\$544,480.93	\$0.00	\$787.33	\$32,587.21	\$25,476.44	\$0.00	\$58,850.99	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$603,331.92
Total	\$73,262.48	\$92,161.67	\$365,520.63	\$316,113.11	\$81,498.81	\$928,556.69	\$7,344.75	\$9,961.42	\$39,507.81	\$34,167.53	\$8,808.91	\$99,790.42	\$881.37	\$1,111.80	\$838.70	\$1,053.26	\$1,067.54	\$4,952.67	\$1,033,299.78

Notes:

(A) 2008 OM&A costs allocated to SMP rate zone only, since CK rate zone for 2008 was cleared in EB-2009-0261 and Dutton and Newbury rate zones were not acquired until 2009.

(B) 2009 through 2012 OM&A costs allocated to CK, SMP, Dutton and Newbury rate zones and rate classes based on number of meters installed per rate zone and rate class.

(C) 2009 through 2011 TOU costs allocated to CK, SMP, Dutton and Newbury rate zones and Residential and GS<50 kW rate classes based on number of meters installed per rate zone and applicable rate class. TOU billing deployment is not applicable to the GS>50 kW rate class.

Attachment P

Ontario Capital Tax Exemption Schedule

Entegrus Powerlines Inc.
Summary of Ontario Capital Tax Exemptions

Chatham-Kent Hydro Inc.					
Description	2006	2007	2008	2009	2010
Taxable capital	\$56,666,089	\$57,490,216	\$59,254,652	\$60,964,648	\$59,630,969
Exemption allocation	\$8,370,553	\$10,360,652	\$12,084,321	\$15,000,000	\$15,000,000
Exemption as a % of taxable capital	14.77%	18.02%	20.39%	24.60%	25.15%

Middlesex Power Distribution Corp.					
Description	2006	2007	2008	2009	2010
Taxable capital	\$8,939,445	\$9,911,782	\$10,212,354	\$12,113,280	\$12,911,143
Exemption allocation	\$1,320,520	\$1,786,261	\$2,082,695	\$0	\$0
Exemption as a % of taxable capital	14.77%	18.02%	20.39%	0.00%	0.00%

Attachment Q

TOU Implementation Cost Summary

Entegrus Powerlines Inc.
TOU Implementation Cost Summary

Chatham-Kent				
Description	2009	2010	2011	Total
Project Management	\$0	\$41,958	\$16,660	\$58,618
External IT Support	\$0	\$77,600	\$61,574	\$139,174
Contract Labour	\$8,072	\$131,028	\$101,937	\$241,036
Project Specific Overtime	\$0	\$30,883	\$36,319	\$67,202
Customer Communication	\$0	\$19,562	\$2,035	\$21,597
Training	\$0	\$3,932	\$3,175	\$7,107
Total	\$8,072	\$304,963	\$221,700	\$534,735
Balance	\$8,072	\$304,963	\$221,700	\$534,735
Variance	\$0	\$0	\$0	\$0

Middlesex Power Distribution				
Description	2009	2010	2011	Total
Project Management	\$0	\$13,554	\$4,165	\$17,720
External IT Support	\$0	\$15,562	\$18,529	\$34,090
Contract Labour	\$0	\$0	\$12,711	\$12,711
Project Specific Overtime	\$0	\$0	\$0	\$0
Customer Communication	\$0	\$0	\$2,495	\$2,495
Training	\$0	\$0	\$1,582	\$1,582
Total	\$0	\$29,116	\$39,482	\$68,598
Balance	\$0	\$29,116	\$39,481	\$68,597
Variance	\$0	\$0	\$0	\$0

Total				
Description	2009	2010	2011	Total
Project Management	\$0	\$55,512	\$20,826	\$76,338
External IT Support	\$0	\$93,161	\$80,103	\$173,264
Contract Labour	\$8,072	\$131,028	\$114,648	\$253,747
Project Specific Overtime	\$0	\$30,883	\$36,319	\$67,202
Customer Communication	\$0	\$19,562	\$4,530	\$24,092
Training	\$0	\$3,932	\$4,757	\$8,689
Total	\$8,072	\$334,079	\$261,181	\$603,332
Balance	\$8,072	\$334,079	\$261,181	\$603,332
Variance	\$0	\$0	\$0	\$0

Attachment R
Reconciliation to December 31, 2011 RRR

Entegrus Powerlines Inc.

Reconcile Capital Costs to December 31, 2011 RRR

Account 1555, Capital Cost Reconciliation						
Description	CK	SMP	Dutton	Newbury	Total	Ref
Included in Model, Tab 2, Section 1:						
Residential	\$213,436.75	\$109,635.70	\$88,421.23	\$28,455.50	\$439,949.18	
GS<50	\$1,327,791.92	\$276,508.91	\$26,851.04	\$6,837.86	\$1,637,989.73	
GS>50	\$354,712.32	\$72,263.83	\$0.00	\$2,767.52	\$429,743.67	
Subtotal Model	\$1,895,941.00	\$458,408.44	\$115,272.27	\$38,060.88	\$2,507,682.59	
Per RRR 2.1.1, December 31, 2011:						
Acct 1555 Smart Meter Capital and Recovery Offset	\$1,543,275.51	\$328,807.63	\$0.00	\$0.00	\$1,872,083.14	
Accumulated Depreciation Booked	\$493,167.61	\$204,585.12			\$697,752.73	(A)
Stranded Meters	-\$325,935.13	-\$160,148.41	-\$20,933.35	-\$4,298.69	-\$511,315.58	(B)
Residual Inventory Reclass	-\$266,140.55	-\$82,725.62			-\$348,866.17	(C)
Reclass between Capital and OM&A	\$64,182.94	-\$16,481.04	\$0.00	\$0.00	\$47,701.90	(D)
Reporting Balance Reclassification	\$0.00	-\$153,047.82	\$120,265.64	\$32,782.18	\$0.00	(E)
Adder Revenue per GL at December 31, 2011 (See Below*)	\$387,390.62	\$337,418.58	\$15,939.98	\$9,577.39	\$750,326.57	
Subtotal RRR	\$1,895,941.00	\$458,408.44	\$115,272.27	\$38,060.88	\$2,507,682.59	
Unexplained Variances	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
*Adder Revenue Reconciliation Included in Acct 1555						
Description	CK	SMP	Dutton	Newbury	Total	
Included in Models, Tab 8:						
Residential	\$505,514.86	\$330,822.33	\$18,738.65	\$9,521.49	\$864,597.33	
GS<50	\$52,317.47	\$34,826.80	\$3,200.95	\$1,785.20	\$92,130.42	
GS>50	\$6,328.00	\$5,119.63		\$255.22	\$11,702.85	
Remove Adder Revenue Rec'd in 2012						(F)
Residential	-\$157,590.69	-\$29,790.91	-\$5,132.35	-\$1,634.33	-\$194,148.28	
GS<50	-\$16,927.38	-\$3,079.41	-\$867.27	-\$302.24	-\$21,176.30	
GS>50	-\$2,251.64	-\$479.86	\$0.00	-\$47.95	-\$2,779.45	
Subtotal Model	\$387,390.62	\$337,418.58	\$15,939.98	\$9,577.39	\$750,326.57	
Per Reconciliation Above, December 31, 2011:						
December 31, 2011 Revenue per GL	\$387,390.62	\$337,418.58	\$15,939.98	\$9,577.39	\$750,326.57	
Subtotal RRR	\$387,390.62	\$337,418.58	\$15,939.98	\$9,577.39	\$750,326.57	
Unexplained Variances	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	

Notes:

(A) Accumulated Depreciation – Throughout the SMI period, on an annual basis Entegrus booked a proxy calculation to represent depreciation. This amount debited Acct 1556, OM&A and credited Acct 1555 Capital Assets, creating a direct offset. Since the Model calculates depreciation independently, these amounts have been removed from the cost inputs and treated as a reconciling item, such that the Model may operate in the way it was designed.

(B) Stranded Meters – As noted in Section 8 of the Application, Stranded Meters costs are not being claimed at this time and have not been included in the costs submitted in this Application.

(C) Residual Inventory Reclass - In the course of preparing this Application, Entegrus determined that undeployed Smart Meter inventory had been inadvertently included in Account 1555. Accordingly, Smart Meter inventory in the amount of \$266,141 for CKH and \$82,726 for MPDC has been reclassified out of Account 1555 into Account 1860 as of June 29, 2012. Entegrus has therefore not included inventory costs in the disposition requested in this Application

(D) Reclassification between Capital and OM&A – Upon further review of Accounts 1555 and 1556, some instances of misclassification between the two deferral accounts were noted and reclassified for the purpose of this Application. See corresponding change in the Account 1556 RRR reconciliation.

(E) Reporting Balance Reclassification – After the 2009 acquisition of Dutton Hydro and Newbury Power, MPDC was reported in all RRR submissions on a consolidated basis. This line allows for appropriate allocation between the SMP, Dutton and Newbury rate zones.

(F) 2012 Adder Revenue – Most rate adders were approved for collection until April 30, 2012. Comparatively, the RRR period ended December 31, 2011. To allow for correct calculations in the Model for the purposes of this Application, revenues collected until April 30, 2012 have been included, net of any unbilled accrual adjustments.

update

Entegrus Powerlines Inc.

Reconcile OM&A Costs to December 31, 2011 RRR

Account 1556, OM&A Costs Reconciliation						
Description	CK	SMP	Dutton	Newbury	Total	Ref
Per Board Issued Models:						
Residential	\$246,954.97	\$131,216.11	\$4,441.42	\$1,463.26	\$384,075.76	
GS<50	\$26,760.41	\$13,154.74	\$757.45	\$266.83	\$40,939.43	
GS>50	\$3,339.67	\$1,578.57		\$34.43	\$4,952.67	
Subtotal	\$277,055.05	\$145,949.42	\$5,198.87	\$1,764.52	\$429,967.86	
Ongoing Costs Incurred After December 31, 2011						(A)
Residential	-\$64,754.42	-\$15,196.11	-\$1,164.59	-\$383.68	-\$81,498.81	
GS<50	-\$7,016.89	-\$1,523.45	-\$198.61	-\$69.97	-\$8,808.91	
GS>50	-\$875.70	-\$182.81		-\$9.03	-\$1,067.54	
Adjusted December 31, 2011 Model Balance	\$204,408.04	\$129,047.05	\$3,835.67	\$1,301.84	\$338,592.60	
Per RRR 2.1.1, December 31, 2011:						
Acct 1556 OM&A Variance Account	\$597,069.82	\$496,960.99			\$1,094,030.81	
Accumulated Depreciation Booked	-\$493,167.61	-\$204,585.12	\$0.00	\$0.00	-\$697,752.73	(B)
Reclass between Capital and OM&A	-\$64,182.94	\$16,481.04	\$0.00	\$0.00	-\$47,701.90	(C)
Accrued Interest	-\$3,369.83	-\$6,613.75			-\$9,983.58	(D)
Reclass due to OM&A Allocation	\$168,058.60	-\$173,196.11	\$3,835.67	\$1,301.84	\$0.00	(E)
Adjusted RRR Balance	\$204,408.04	\$129,047.05	\$3,835.67	\$1,301.84	\$338,592.60	
Unexplained Variance	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
TOU Cost Reconciliation						
Description	CK	SMP	Dutton	Newbury	Total	Ref
Per Model, Tab 2, Section 2.6:						
Residential	\$432,614.30	\$101,522.85	\$7,780.45	\$2,563.33	\$544,480.93	
GS<50	\$46,878.74	\$10,177.92	\$1,326.90	\$467.43	\$58,850.99	
GS>50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Subtotal	\$479,493.04	\$111,700.77	\$9,107.35	\$3,030.76	\$603,331.92	
Per RRR 2.1.1, December 31, 2011:						
Acct 1508 Other Regulatory Assets, Sub Account TOU	\$534,734.71	\$68,597.21	\$0.00	\$0.00	\$603,331.92	
Reclass due to OM&A Allocation	-\$55,241.67	\$43,103.56	\$9,107.35	\$3,030.76	\$0.00	(E)
Adjusted RRR Balance	\$479,493.04	\$111,700.77	\$9,107.35	\$3,030.76	\$603,331.92	
Unexplained Variances	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	

Notes:

(A) 2012 Ongoing Costs – These amounts have represent 2012 and beyond forecasted costs and therefore were inherently not include d in the December 31, 2011 RRR filing.

Please see Section 6 of this Application for more details.

(B) Accumulated Depreciation – Throughout the SMI period, on an annual basis Entegrus booked a proxy calculation to represent de preciation. This amount debited Acct 1556, OM&A and credited Acct 1555 Capital Assets, creating a direct offset. Since the Model calculates depreciation independently, these amounts have been removed from the cost inputs and treated as a reconciling item such that the Model may operate it the way in which it was designed.

(C) Reclassification between Capital and OM&A – Upon further review of Accounts 1555 and 1556, some instances of misclassification between the two deferral accounts were noted and reclassified for the purpose of this Application. See corresponding change in the Account 1555 RRR reconciliation.


(D) Accrued Interest Adjustment – Throughout the SMI period, Entegrus accrued interest at the Board approved rates. In the course of preparing this Application, it was identified that some accrued interest was postedfor in Account 1556. These amounts have been removed from the cost inputs, in order to allow the Model to perform calculations in the way in which it was designed.

(E) OM&A and TOU Allocation Reclass – As described in Section 6, OM&A and TOU costs have been allocated amongst the four rate zones based on meter points to allow for equitable cost sharing.

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Attachment S

Navigator Time-of-Use Rates Focus Group Report
(December 2007)



NAVIGATOR

Time of Use Rates Focus Groups

INDEPENDENT ELECTRICITY SYSTEM OPERATOR
RESULTS FROM VAUGHAN, OTTAWA, AND CHATHAM
DECEMBER 2007

QUALITATIVE RESEARCH RESULTS

INTRODUCTION

In October and December, 2007 Navigator conducted a series of focus groups for the IESO and their partners on Time of Use rates. What follows is our report on these focus groups, conducted in Vaughan in October and Ottawa and Chatham in December. While all of the groups focused on public opinion of Time of Use rates, Smart Meters, and the general feelings and motivations on conservation, the groups in Ottawa and Chatham focused more narrowly on the advertising concepts developed by Narrative for the IESO.

RESEARCH OBJECTIVES

During these focus groups, Navigator, together with the IESO and local utilities, attempted to provide a sense of the level of understanding of the public at-large of the extent to which, if any, targeted LDC customers understand and support the concept of Time of Use Rates. Navigator also attempted to gain an understanding of the underlying motivations for the conservation of electricity. We also tested three different advertising concepts for potential use in the targeted communities which were aimed at increasing public support and use of Time of Use rates. We briefly discussed Time of Use pricing charts for use in the home and questioned participants on their level of understanding and preference of charts.

METHODOLOGY

Navigator began its work in October with three focus groups on a Saturday in Vaughan. These groups were comprised of individuals from Power Stream's service area. In December Navigator facilitated two focus groups in Chatham comprised of people who each already had a Smart Meter installed in their home. Each group was comprised of ten participants from the Chatham Hydro service area. In Ottawa, Navigator also facilitated two focus groups. In this case, the groups were split with the first group of 10 all having a Smart Meter already installed on their home, and the second group of 10 all being without one installed to date.

The groups were comprised of participants who were owners or renters who were responsible for their own electricity bill and who lived in a community served by the targeted utility. Participants were of mixed genders and ages with no one selected under the age of 25. Participants were selected through random digit dialing of the service area and those who participated were given a \$75 incentive.

Each focus group was two hours in length and was moderated by a Navigator consultant. Navigator, in conjunction with the IESO, drafted the screener for selecting the participants as well as a moderator's guide for the discussion designed to achieve the research objectives.

The guide, and each focus group, began with a general discussion on the electricity sector in Ontario. We then asked participants to review a number of advertising concepts provided by the IESO and their agency, Narrative. Navigator then educated the participants on TOU rates and allowed participants to ask questions in order to increase their confidence in the subject matter. We then exposed participants to a series of in-home products developed by the IESO to test their effectiveness.

KEY FINDINGS AND RECOMENDATIONS

GENERAL FINDINGS

Knowledge of the sector is vague

We found that in each community participant's knowledge of the electricity sector and the players in it, is still very vague. The exception to this was the near 100% recognition of the local LDC in each case. If the implementation of the Smart Meter project is to be successful, it is clear that the LDC must be involved in the role out, delivery, and communications efforts as they have the strongest brand to the customer. The brand association dwarfs all others including the government, OPA, and others.

Different Locations, Different Motivations

Navigator found that in each of the different locations, the participants were motivated in completely different ways when it came to conservation and Smart Meters. We found a high degree of homogeneity within the groups themselves, but each city was vastly different in their positions on the project.

In Vaughan, we found that most participants were motivated by lifestyle more than any other factor. That is to say that they put their own comfort, convenience, and habits above other factors when making the decision to conserve. Conservation was seen as a good concept, but they wanted to know how it would benefit them personally before committing.

In Ottawa, we clearly saw that participants were motivated by the greater good for the environment and were more likely to have already engaged in green initiatives. It was evident that Smart Meters would be another tool in their box to help to do what is right for the planet. They had a much higher degree of concern for the common good for the population.

In Chatham, we got yet another response. It was evident that the first and foremost concern of the participants there was price. We had a number of discussions around the bottom line cost of the meters, the cost of the electricity, and how they would go about saving money on their utility bill as a whole, not just on shifting their time of use. It appeared that the economic factors in their personal lives were weighing heavily on their minds during the discussion with talk of plant closures, shift cut backs, and the rising price of everything from food to electricity.

It was clear from our research that each LDC service area should be contemplated individually. The vast difference in motivating factors between these three communities illustrated to us that advertising approaches should, to the extent possible, reflect the actual motivating factors for the community in which they will run. While this may not be financially viable, it is our best advice.

Smart Meter Penetration

The groups conducted in Ottawa in which one group was comprised of those with Smart Meters, and the other those without, illustrated that there was no difference in the participant's level of knowledge about the meters or the concept. This would seem to indicate that provincial and local press, as well as the work of the LDC, had a considerable impact on the level of knowledge that participants had. The packages delivered at the door when the meters were installed would have re-enforced that message, but clearly those who had not had the meter installed (and thus not yet received the package accompanying the meter) had a similar level of knowledge indicating that information on the Smart Meters were getting to them through other means.

As noted above, Ottawa seemed to have a higher level of engagement on Green issues than other areas of research which could help to explain their higher than expected knowledge of the technology and pricing.

In Chatham, it was clear that participants had received relevant communications products (web, bill stuffers, Smart Meter packages, etc.) from their local utility. The level of understanding of the technology and price changes was great than we had seen elsewhere. It may be useful to look at what Chatham-Kent has done to educate their customers in order to gain an understanding for similar LDCs. This is not to say that Chatham-Kent's efforts should be duplicated across the province as we saw that different locations had different motivations. Learnings from Chatham-Kent Hydro's efforts could however serve as a helpful guide in similar communities.

Some confusion surrounding bill / price

During these three groups, participants continue to express concern about their inability to understand their bill. They cite the number of lines, the different charges for different amounts of use, and a general questioning of what some of the lines mean. We also saw that many participants do not even look at their bill or spent much time analysing it. Some more educated customers indicated that reducing the amount of electricity they used during peak times would not result in any significant savings as the commodity cost was not a big part of the bill. Many indicated they did not know how much their bill was or if action would result in big savings. Given the importance of the Smart Meter roll-out, we believe that using bill stuffers and other like material will not be sufficient for the purposes of communications.

Smart Meter Term Penetrating

In Vaughan, where not everyone had a Smart Meter, we found that the work done to date, coupled with the media coverage on Smart Meters has resulted in the term "Smart Meter" being recognized by many of the participants. We found that this message is penetrating.

We also found, however, that while participants did have some degree of recognition on the term, the function of the meter, what was different about it, and what it could do for them was still largely unknown by those who did not have one already. Given that the term is known, we found that there is a willingness from participants to find out what it is and what the technology can do.

Lag Time

Throughout all the groups, we found that there was a high degree of confusion surrounding the Smart Meters activation. To our knowledge, none of the participants, even those with Smart Meters currently installed, have the meter “go live” on the time of use rates. Many participants believed that the installation of the meters marked their live date. We heard many stories of load shifting and the resulting drop in their monthly electricity bill because of the efforts they had taken. We believe that this is not possible due to load shifting alone with all other factors being equal.

We found that when participants first get their new meter installed there is a high degree of a novelty factor associated with it. Many go out to the side of their houses to look at it, speak with their neighbours about it, and go on-line to read more about them. We believe that participants were highly engaged during that period of time immediately following the installation of the meter. By the time we spoke with many of the participants, this novelty factor had worn off or was significantly diminished. Many expressed outright frustration that the new meters did the same thing as the old meters “at twice the cost.”

Navigator recommends that the lag time between the installation of the meter and the activation of the meter be as short as possible in order to capitalize on the novelty factor we observed in the focus groups. We understand that this lag time is effected by the technology and regulatory environment. In the event that a short lag time is not possible, we recommend that the IESO together with the LDC attempt to recreate this novelty effect to the extent possible immediately prior to the activation of the new features of the meter and the changes in rates.

Price Chart

We found in all groups that the price chart developed by the IESO was very well received by participants. It should be noted that small edits were made to the chart following the Vaughan groups to clarify some of the times of use. These edits did not fundamentally change the graph nor do they, in our opinion, change the findings. Participants found the chart easy to understand and indicated that they would likely post on their refrigerators as a reminder of the rates. Some indicated that it would find a home beside the garbage and recycling calendars that they all ready have posted. Some consideration should be given to the IESO making the chart available to municipalities and LDCs for inclusion in the yearly calendars of garbage pick up and there was a high degree of linkage between the two in the groups. Our groups also tested a different approach to the price chart in the form of a pie graph. We found this approach developed to illustrate price was rejected out of hand as being too confusing and too complicated.

No Concept of Price

During these groups, we had some interesting comments surrounding what a kWh was and how far one went. The discussion here was not about the actual price per kWh, or the increases that the participants could expect through time of use rates, rather the discussion was primarily about how many it took to power a light bulb, run a load of laundry, or keep the air conditioner going during the day. Participants lacked the connection between turning the lights on and the price per hour or the cost to leave the air conditioner running all day when they were not at home. Seeing as the ultimate success or failure of time of use rates will rest with the differences between the rates and consumer choice based in part on the rates, we recommend that some generic illustrations or calculations of kWh used per appliance may be a motivated for some.

Environmental and Cost Impacts

Much of the conversation in each of the groups centered around the belief or skepticism on statements made regarding the impacts of Smart Meters on electricity bill costs and environmental benefits. It seemed that, regardless of the group, there was a high degree of questioning surrounding how much this new technology would really help the environment and avoid the need for new power plants or how much load shifting would save verses other rising costs (DRC, delivery, transmission, commodity). Navigator understands that using examples of specific dollar amount impacts or environmental statements for communications purposes is a different task. We do believe, however, that there is a need to manage expectations by setting the terms of "success" on this at the outset. We firmly believe that customers be made to realize that they are not going to cut their bill in half, or more, by shifting their use. Failure to manage these expectations at the outset could result in a public backlash on electricity prices like Ontario saw in 2002.

ADVERTISING FINDINGS

In general, we found that the advertising concepts were well received by participants. With few exceptions, the ads were easily understood and conveyed the desired messages to the participants.

8 O'clock Received Better Than 10 O'clock

It is clear from our research that a switch to the off peak time at 8PM is far superior to the current 10PM. This was especially true when discussing during loads of laundry after 10PM when that load requires a change to the dryer and folding. While the other concepts for savings were not as heavily negative (dishwasher, air conditioning), it was clear that the majority of participants in all locations felt that 10PM was too late for them to take advantage of. Discussions surrounding personal habits and electricity consumption can best be summarized as a general feeling that 8PM was the time the kids go to bed, and 10PM is the time parents' sleep. The time between 8PM and 10PM is seen as the time parents get things done around the house before bed.

Smart, Smarter Advertising Concept

We found that the *Smart, Smarter* ad was the best received on the whole in all the communities. While this ad was the best received, it would be misleading to state that all participants grasped the concept that was being communicated. Having said that, participants did identify with the CFL bulb as many had already replaced their own and understood that changing the time they used electricity would help the system / environment. Some concern was raised that the clock was not clear, but that would likely be addressed by final artwork in the ad.

Connections Advertising Concept

Connections was well received, but not as positively as *Smart Smarter*. Some felt that the ad was "too childish" in its attempt to replicate a "See Spot Run" story, while others, most notably Chatham, felt that it was a nice softer approach to the message. Most participants in all locations felt that the ending of the sentence was confusing or awkward. They felt that it was a big leap from personal air conditioning use to global warming, to more power plants and back was a stretching the concept to some degree. If this ad is to be used, we recommend a simplification of the ending of the *Connections* sentence.

10 PM Advertising Concept

Our research indicated that *10 PM* as a concept worked. People readily understood what was being conveyed and immediately began to comment on the practicalities of washing clothes after 10PM. With this near instant reaction, we saw that the message cut to the core of the concept immediately. However, this was also the major problem with the ad. Participants felt that it was unreasonable to do one's laundry after 10PM at night and this ad evoked some of the most negative commentary surrounding Time of Use rates that we heard. In Vaughan, however, we tested a similar concept using a dishwasher and a dirty plate. While the dirty plate graphic was more difficult for people to understand, the illustration of shifting time in which laundry is done was not well received given the need for a change to the dryer and folding. The dishwasher concept was received better given that people are in the habit of leaving the washed dishes in the machine until a convenient time to empty. We recommend that the graphic for the 10PM ad on the dishwasher be fixed rather than changing to a laundry concept.

Use of Specific Terms

In each of our groups, individuals expressed concern with the use of the term "control" in the ads. Most participants indicated that they did not like the connotations of the term or that the government or big business would have a say in how they behaved. This is not to say, however, that the term was not effective or that including the term would make the ad less effective at motivating action, rather we do believe that the feeling that the word "control" evokes was negatively perceived by participants. We had the same finding each time the word was used in each of the concepts. We recommend the use of an alternative word.

We also heard some negative reaction to the concept that Smart Meters were “the next step.” Many felt that the meters were not the be-all in conservation of electricity and that they represented one of many things people could do, not the one and only next step.

Potentially one of the most difficult areas for the IESO and partner LDCs to address was the concern around the use of the term “we can all save money.” Many participants felt that this was not a truthful statement while others wanted to know how much money they would actually save with a Smart Meter. Some more informed participants also indicated that the price of the commodity was only part of the overall bill. They commented that the increases in DRC, Distribution, and Transmission, would more than eat up any load shifting savings regardless of what they did. Participants wanted to know the dollar amount saved so they could make a value judgment on whether or not to stay up to do their laundry.

On the positive side, we found that the lines “We all need to be smarter about our electricity use” received a great deal of support from participants. There was general agreement in all the groups that action needed to be taken on some level. The majority of the participants indicated that they had already changed many of their light bulbs and felt that they were contributing, but could do more.

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Attachment T

Navigant Consulting Evaluation of Smart Meter Time-of-Use Project Report
(February 10, 2009)

EVALUATION OF SMART METER TIME-OF-USE PILOT

Presented to



CHATHAM-KENT HYDRO

320 Queen St.

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Chatham ON N7M 5K2

FEBRUARY 10, 2009

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EXECUTIVE SUMMARY

This report summarizes the results of the Chatham-Kent Hydro Inc. (CK Hydro) Smart Meter Time-of-Use (TOU) pricing pilot study undertaken from January 2007 through the end of June 2008.

Based on Navigant Consulting's analysis of the consumption patterns of the pilot participants and those of control group customers in a similar subdivision, the following conclusions can be drawn:

1. CK Hydro average residential customer consumption decreased by 8% from 2002 to 2007, compared with a decline of only 3% for residential customers in fourteen similar Ontario LDCs. In 2007, CK Hydro's average residential customer consumption was 10% less than for residential customers in similar LDCs. This observation was confirmed through Navigant Consulting's regression analysis, with a statistically significant downward trend in consumption among CK Hydro customers. Navigant Consulting attributes this effect to CK Hydro's aggressive conservation education efforts. Further, this effect appears to have dampened the conservation effect typically seen among customers switching to TOU rates. In effect, the CK Hydro customers had already reduced their consumption prior to the implementation of the TOU pilot, whereas TOU pilot participants elsewhere who had not been exposed to a similar level of conservation education pre-TOU would have more conservation opportunities available to them post-TOU (and would generally be expected to have greater conservation awareness post-TOU).
2. There was no discernable conservation effect observed when comparing the pilot participants' consumption in the pre-TOU and TOU period and with the control group customers' consumption in the same periods, likely due to the earlier conservation efforts of these and other CK Hydro customers.
3. There were no statistically significant differences in the percentage of overall consumption by TOU period between the pilot participants and the control group during the pilot period.
4. Given their level of monthly consumption and consumption patterns, pilot participants would pay less than the average RPP prices under either TOU prices or tiered prices, but the difference is slightly greater under tier prices. As a result, pilot participants paid, on average, just under \$2 per month more under TOU prices than they would have paid under tiered prices.

Note that these results reflect short-term behaviour changes only and it is expected that the results will change over time.

It is important to keep in mind that all forms of “flat” (or non-time varying) electricity pricing such as the tiered RPP prices inherently result in cross-subsidies between consumers with different consumption patterns, as the actual cost of power changes on an hourly basis. Time-of-use prices better reflect the true cost of power and significantly reduce such cross-subsidies. Further, the impact of time-of-use prices on the average commodity charges experienced by customers is dependent on the relative percentage of their consumption in each of the two tiers under the RPP tiered pricing structure. Consumers, such as many in this pilot project, with most of their monthly consumption below the tier threshold pay somewhat less under tiered pricing than the average actual cost of electricity.

CONTENTS

EXECUTIVE SUMMARY.....	I
INTRODUCTION	1
PILOT OBJECTIVES	1
ONTARIO ENERGY BOARD APPROVAL	2
STANDARD AND TOU RATE STRUCTURE	2
<i>Standard Meter Regulated Price Plan</i>	<i>3</i>
<i>TOU Regulated Price Plan Prices</i>	<i>3</i>
PILOT PARTICIPANTS.....	7
TEST STRUCTURE AND DESIGN.....	8
CUSTOMER DEMAND RESPONSE	10
ANALYTICAL APPROACH	10
FINDINGS	12
<i>Impact of Chatham-Kent Hydro's Pre-TOU Energy Conservation Efforts.....</i>	<i>12</i>
<i>Conservation Effect</i>	<i>14</i>
<i>Change in Consumption – Pre TOU vs. TOU period</i>	<i>15</i>
<i>Load Shifting</i>	<i>16</i>
<i>Estimated Commodity Cost Impacts.....</i>	<i>19</i>
CONCLUSIONS	23

LIST OF FIGURES

Figure 1: RPP periods experienced during the pilot study	3
Figure 2: Winter TOU Prices (May 1 2007 RPP Price Setting)	5
Figure 3: Summer TOU Prices (May 1 2007 RPP Price Setting)	5
Figure 4: Example of Energy Consumption Profile Available Online for Pilot Participants	7
Figure 5: Example of Distribution of Daily Energy Consumption Available Online for Pilot Participants	8
Figure 6: Structuring the Hourly Consumption Data.....	10
Figure 7: Analytic Approach Undertaken by Navigant Consulting.....	11
Figure 17: Comparison of Average Monthly Consumption for CK Hydro Customers with Customers of Peer Group LDCs	13
Figure 8: Comparison of Average Monthly Consumption for Pilot Participants and the Control Group during the Evaluation Period.....	14
Figure 10: Comparison of Total Consumption by TOU Period for Pilot Participants and the Control Group during the Evaluation Period	16
Figure 11: Comparison of Average Hourly Consumption for TOU Participants and the Control Group for a Summer Weekday	17
Figure 12: Comparison of Average Hourly Consumption for TOU Participants and the Control Group for a Winter Weekday	18
Figure 13: Comparison of Average Hourly Consumption for TOU participants who Accessed their Consumption Online and the Remaining TOU Participants for a Summer Weekday	18
Figure 14: Comparison of Average Hourly Consumption for TOU participants who Accessed their Consumption Online and the Remaining TOU Participants for a Winter Weekday	19
Figure 15: Average Monthly Consumption by Tier – Pilot Participants and Average RPP Customer ..	20
Figure 16: Distribution of Average Monthly Commodity Cost Savings for Pilot Participants	21

LIST OF TABLES

Table 1: Conventional Tiered RPP Prices	3
Table 2: Distribution of RPP TOU Prices during the Pilot Study.....	4
Table 3: Breakdown of RPP TOU Periods for Summer and Winter	4
Table 4: Average RPP Prices for an Average RPP Consumer (cents per kWh)	6
Table 5: Breakdown of Participants Analyzed by Group	9
Table 6: Average Commodity Cost Savings under TOU Prices by Group.....	21

INTRODUCTION

This report summarizes the results of the Chatham-Kent Hydro Inc. (CK Hydro) Smart Meter Time-of-Use (TOU) pricing pilot study undertaken from January 2007 through the end of June 2008.

The pilot project tested the response of residential customers billed under the Ontario Energy Board's Regulated Price Plan (RPP) tiered pricing changing to Time-of-Use rates.

Results from the pilot study are drawn through quantitative analysis of the conservation impact or reduction in overall consumption for residents on TOU rates in comparison to similar residents on RPP tiered pricing and 2) the demand response via load shifting away from On-Peak hours to either Mid-Peak or Off-Peak hours.

Specifically, Navigant Consulting explored the following:

- Monthly consumption trend of TOU pilot participants and control group customers.
- Monthly consumption of the TOU pilot participants before and after switching to TOU rates, as compared to the monthly consumption of the control group in the same periods.
- Consumption of the TOU pilot participants in the three TOU periods compared to the consumption of the control group and random sample in the same periods. We expect to look at On-Peak, Mid-Peak and Off-Peak consumption as a percentage of total, and also on peak versus "non-On-Peak" and Off-Peak versus "non-Off-Peak."
- Commodity costs for pilot participants on TOU RPP rates compared what they would have paid under tiered RPP rates and against what the control group customers paid under tiered RPP rates.

Information gathered from this pilot study will enable CK Hydro, the Ontario Energy Board and other LDCs to expedite and enhance residential customer response to RPP TOU rates when they are implemented more broadly.

Pilot Objectives

The specific objectives of the CK Hydro pilot test are as follows:

- To quantify and measure any potential conservation effects related to TOU pricing.
- To determine how TOU pricing will affect the cost of electricity to the customer.
- To determine if TOU pricing encourages customers to use the web presentment energy management tool.

Ontario Energy Board Approval

On July 28, 2006, the Ontario Energy Board (the “Board” or “OEB”) amended the Standard Supply Service Code (the “SSS Code”) to allow certain electricity distributors to charge time of use prices for consumers on the Regulated Price Plan (the “RPP”) with eligible time-of-use (or “smart”) meters as part of a pilot project. The amended SSS Code requires approval from the Board in order for any new pilot projects to be implemented.

Since CK Hydro planned to roll-out RPP TOU pricing to all of its customers with an eligible time-of-use meter, it was not considered as a pilot project under section 3.9.3 of the SSS Code. Instead, section 3.5 (Transition for Section 3.4) applied under which the LDC elects to implement the electricity commodity pricing mechanism set out in section 3.4 before the “mandatory TOU date”. Unlike section 3.9.3, this section does not require CK Hydro to seek approval in order to proceed.

However, CK Hydro did provide notice of this election in accordance with section 3.5.3 (e.g., including an insert containing a notice to this effect with at least one bill submitted to all affected RPP consumers). The SSS code required this to be carried out no less than 30 days prior to the date on which the CK Hydro commenced charging RPP consumers the TOU commodity price for electricity under section 3.4.

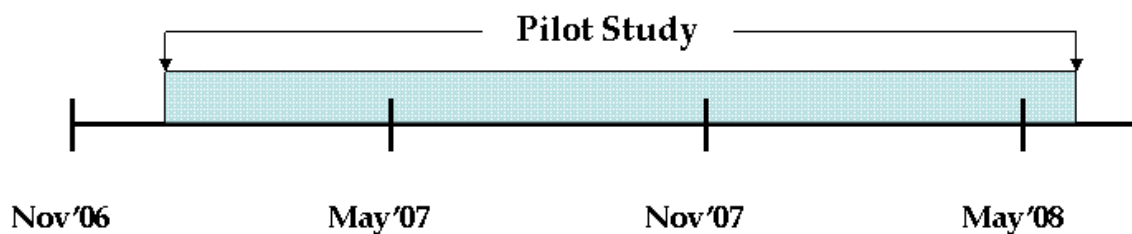
Standard and TOU Rate Structure

Under amendments to the *Ontario Energy Board Act, 1998* (the Act) contained in the *Electricity Restructuring Act, 2004*, the Board was mandated to develop a Regulated Price Plan (RPP) for electricity prices to be charged to consumers that have been designated by regulation. The first prices were implemented under the RPP effective on April 1, 2005, as set out in regulation by the Ontario Government.

The principles that have guided the Board in developing the RPP were established by the Ontario Government. In accordance with legislation, the prices paid for electricity by RPP consumers are based on forecasts of the cost of supplying them and must be set to recover those forecast costs. RPP prices are currently reviewed and adjusted if necessary by the OEB every six months.

During the CK Hydro pilot study, customers were exposed to four separate RPP prices since the OEB reset the prices on May 1st, 2007, November 1st, 2007 and May 1st, 2008. Figure 1 outlines the different RPP periods experienced during the pilot study.

Figure 1: RPP periods experienced during the pilot study



Standard Meter Regulated Price Plan

The conventional meter RPP has a two-tiered pricing structure, one price for monthly consumption under a tier threshold and a higher price for consumption over the tier threshold. Until October 31, 2005, the threshold was 750 kWh per month. From November 1, 2005, the tier threshold for residential consumers has changed twice a year on a seasonal basis: to 600 kWh per month during the summer season (May 1 to October 31) and to 1000 kWh per month during the winter season (November 1 to April 30). The threshold for non-residential RPP consumers remains constant at 750 kWh per month for the entire year.

Subsequent to April 2006, the RPP prices were reviewed by the Board every six months and adjusted, if necessary. The RPP prices in effect during this study reflect this resetting frequency and are shown in Table 1.

Table 1: Conventional Tiered RPP Prices

Cents per kWh	Nov'06- Apr'07	May'07- Oct-07	Nov'07- Apr'08	May'08- Oct-08
Tier 1	5.5	5.3	5.0	5.0
Tier 2	6.4	6.2	5.9	5.9

TOU Regulated Price Plan Prices

Subsequent to a date to be determined by the Ontario Energy Board, eligible RPP consumers with eligible time-of-use (or “smart”) meters that can measure and record electricity consumption for hourly (or shorter) intervals will pay under a time-of-use (TOU) RPP price structure. The prices under this plan are based on three time-of-use periods, as shown in Table 2. These periods are referred to as Off-Peak, Mid-Peak and On-Peak. The lowest (Off-Peak) price is below the tier prices, while the other two are above them. The three prices are related to each other in approximately a 1:2:3 ratio.

The RPP TOU prices are also reviewed and adjusted every six months. The following table outlines the TOU prices in effect during the pilot. Note that TOU prices in effect prior to

January 2007 (when TOU prices came into effect for study participants) are not relevant to this study. Our analysis of the pilot participants' response to TOU prices reflects the existing RPP prices for the period being analyzed.

Table 2: Distribution of RPP TOU Prices during the Pilot Study

Cents per kWh	Nov'06- Apr'07	May'07- Oct-07	Nov'07- Apr'08	May'08- Oct-08
Off-Peak	3.4	3.2	3.0	2.7
Mid-Peak	7.1	7.2	7.0	7.3
On-Peak	9.7	9.2	8.7	9.3

The hours and prices for each of these three time-of-use (TOU) periods are set out in Table 3.

Table 3: Breakdown of RPP TOU Periods for Summer and Winter

Time	Summer Hours (May 1 – Oct 31)	Winter Hours (Nov 1 – April 30)
Off-Peak	10pm – 7am weekdays; all day on weekends and holidays	10pm – 7am weekdays; all day on weekends and holidays
Mid-Peak	7am – 11am and 5pm and 10pm weekdays	11am – 5pm and 8pm – 10pm weekdays
On-Peak	11am – 5pm weekdays	7am-11am and 5pm-8pm weekdays

Figure 2 graphically displays the winter TOU prices based on the Board's May 1 2007 RPP price setting, while Figure 3 shows summer TOU prices based on the same price setting.

Figure 2: Winter TOU Prices (May 1 2007 RPP Price Setting)¹

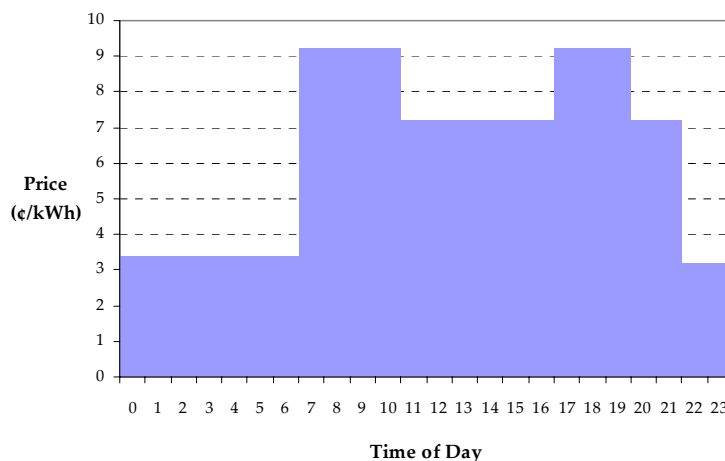
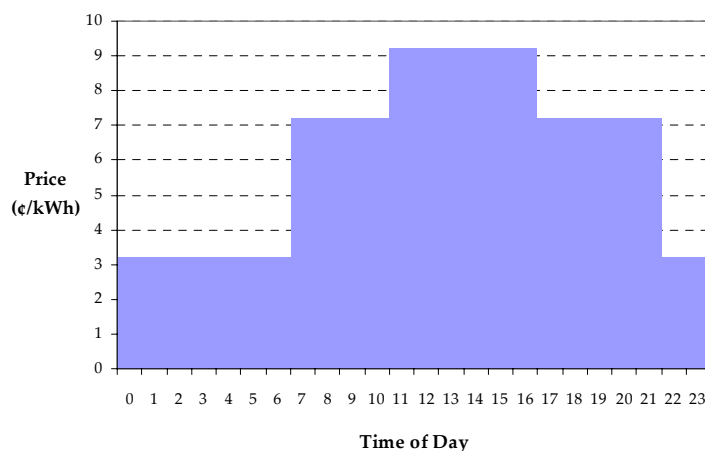


Figure 3: Summer TOU Prices (May 1 2007 RPP Price Setting)



The average price an RPP consumer on TOU prices will pay will depend on the consumer's load profile (i.e., how much electricity is used at what time). RPP prices are set so that a consumer with the average RPP consumption level and load profile will pay the same average price under either the tiered or TOU prices, as shown in Table 4. Specifically, this table shows the average RPP prices that were in effect during the May through October 2007 period for an average RPP consumer. This average price is equal to the average RPP supply cost of approximately 5.7¢/kWh.

¹ The May 1 2007 RPP price resetting covered the subsequent 12 month period through April 30, 2008 and included both summer and winter TOU pricing. The winter TOU prices were reset on November 1, 2007 and became effective on the same date. The November 1, 2007 price setting also included summer TOU pricing, which were reset by the Ontario Energy Board on May 1, 2008.

Table 4: Average RPP Prices for an Average RPP Consumer (cents per kWh)

Tiered RPP Prices	Tier 1		Tier 2	Average Price
Price	5.3¢		6.2¢	5.7¢
% of RPP Consumption	52%		48%	
TOU RPP Prices	Off Peak	Mid Peak	On Peak	Average Price
Price	3.2¢	7.2¢	9.2¢	5.7¢
% of RPP Consumption	48%	29%	23%	

PILOT PARTICIPANTS

A total of 213 participants for the pilot project were selected by CK Hydro from a representative subdivision in their territory. In this group, 31 customers were under contract to an electricity retailer and were removed from Navigant Consulting's analysis since they were not subject to TOU rates. Customers were hand delivered a smart meter package including the attached brochure to inform them they were now on TOU billing. A few months into TOU billing, a letter was sent along with an information brochure to remind them TOU pricing was in effect, along with additional energy conservation tips. Customers were also encouraged to access their account information online to view both their daily and hourly consumption. CK Hydro reported that a total of 35 customers of the TOU participants signed up to view their data online.

Figure 4 and Figure 5 provide examples of the consumption profiles available to pilot participants.

Figure 4: Example of Energy Consumption Profile Available Online for Pilot Participants

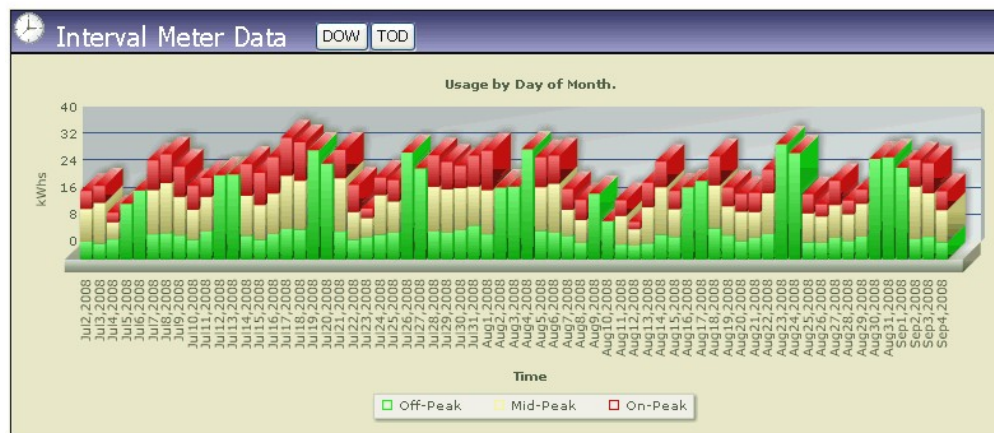
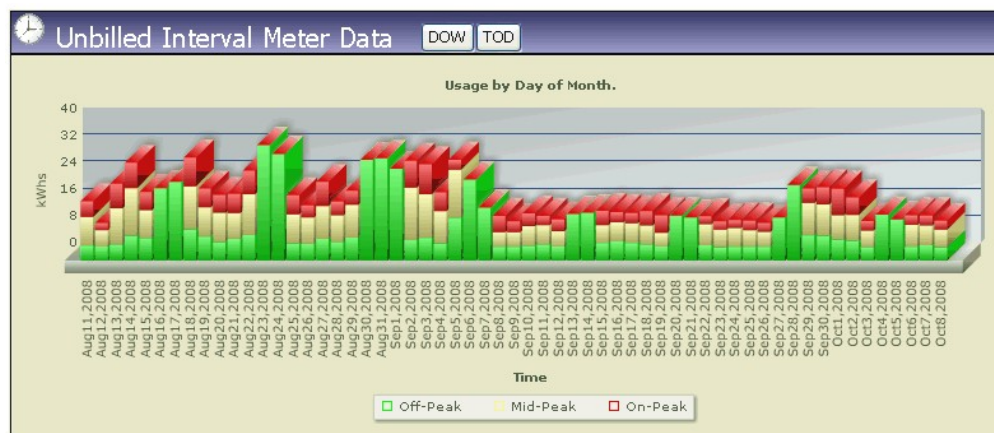
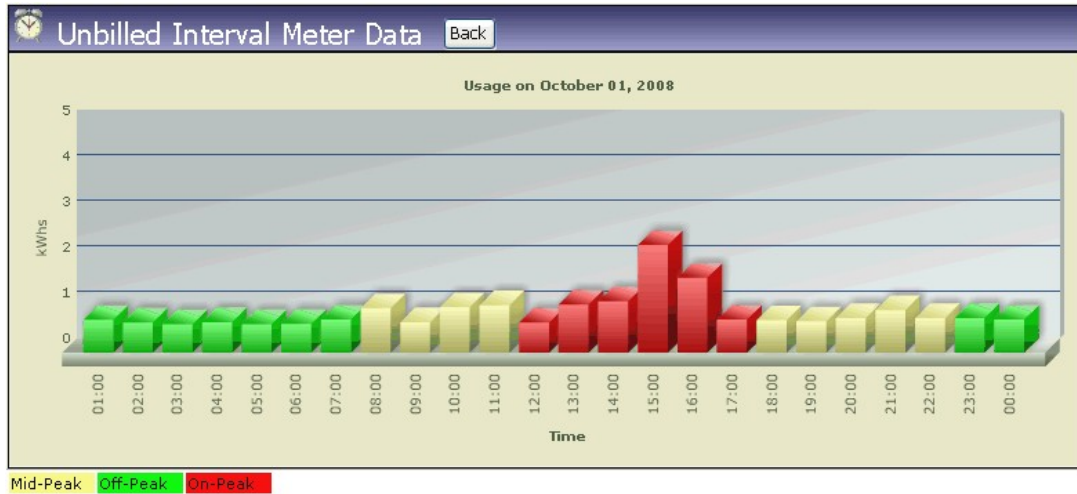


Figure 5: Example of Distribution of Daily Energy Consumption Available Online for Pilot Participants



A second neighbouring subdivision with similar housing characteristics was taken as the control group. The control group customers were equipped with smart meters but remained on the tiered RPP prices.

Test Structure and Design

Electricity data was provided by CK Hydro for each group. Specifically, the data provided was as follows:

- Individual pilot participant hourly meter reading data from January 2007 to June 2008;
- Individual control group hourly metering data from April 2007 to June 2008;
- Historical monthly billing consumption/meter reading data pilot participants from January 1997 to June 2008;
- Historical monthly billing consumption/meter reading data from control group customers from February 2002 to June 2008; and
- Flag for pilot participants who signed up online to view their consumption data; and
- Flag for pilot participants who were under contract with an electricity retailer.

The data set for the pilot participant group contained 213 original participants, while the control group contained 229 records. Once the 31 pilot participants who were subject to retail rates were removed, the remaining pilot participants and control group data was transposed so that each column represented a time series of that participant's hourly

consumption. May 2007 and May 2008 were the first and final full months of data that was shared by both groups. Given this, Navigant Consulting limited the time period assessed to May 2007 through May 2008 so that the period of analysis was uniform for the two groups. Additionally, Navigant Consulting eliminated outliers from the group. Eleven (11) outliers from the pilot participants and twenty-four (24) from the control, tiered-pricing group were eliminated. Thus, hourly consumption records were analyzed for each of 202 TOU participants and 202 control group members as shown in Table 5.

Table 5: Breakdown of Participants Analyzed by Group

	Total Customers Provided	Number of Retail Customers Removed	Number of Customer Analyzed	Percentage of Group Population Analyzed
Pilot Participants	213	31	171 ²	80%
Control Group	226	0	202	89%

² Includes 34 pilot participants who signed up online to view their consumption data.

CUSTOMER DEMAND RESPONSE

One of the main questions this pilot was intended to address was how and to what extent residents will change their consumption patterns in response to time-of-use rates. It is expected that customers will shift consumption away from On-Peak periods (which are relatively more expensive under TOU rates) and toward Off-Peak periods (which are relatively less expensive under TOU rates). Total consumption could increase or decrease. This chapter estimates the magnitudes of these responses.

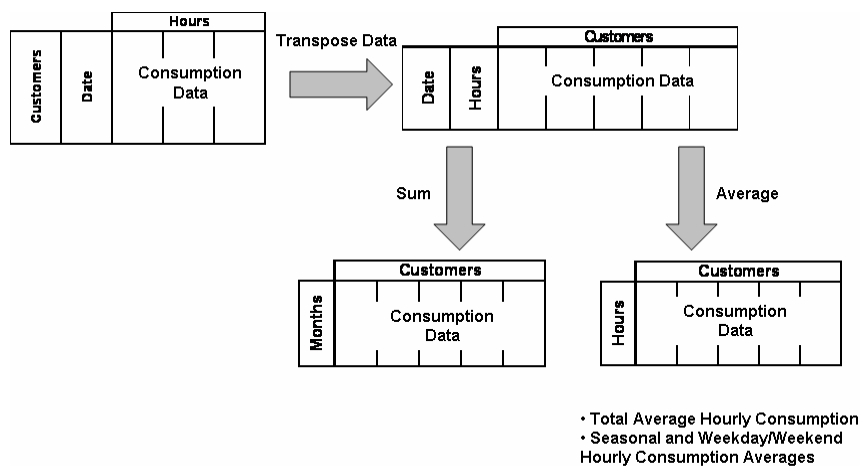
It should be noted that this study only captures short-term responses to time-of-use rates. This will include primarily changes in behaviour that are easy to make – for example, turning lights off during On-Peak periods. It is expected that additional changes will occur over time as customers further adjust their actions and acquire equipment that helps them control their electricity use – for example, installing timers on lights. Thus, the magnitudes of the changes in consumption observed in this study are expected to increase over time.

Analytical Approach

Post TOU Consumption Data

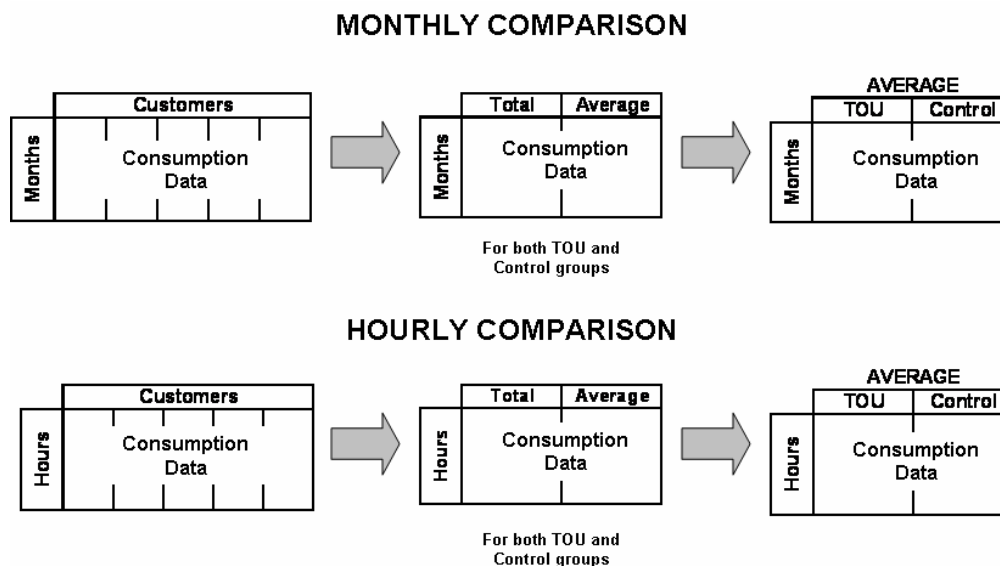
As previously mentioned, Navigant Consulting transformed the raw data provided by CK Hydro in order to facilitate analysis of the results and to eliminate any outliers or customers with invalid meter readings. Navigant Consulting used structured query language (SQL) queries to tabulate the average and total consumption data for each useable participant record in each group, as shown in Figure 6.

Figure 6: Structuring the Hourly Consumption Data



Within the groups, each customer's consumption time series was aggregated by their total monthly consumption, average hourly consumption across all periods, and average hourly weekday and weekend consumption by season. Taking the averages across all participants within each group, the two groups were compared side-by-side, graphically, and statistically, as shown in Figure 7. Navigant Consulting also calculated the proportions of consumption attributable to each TOU period (i.e., On-Peak, Mid-Peak, Off-Peak weekdays, and Off-Peak weekends and holidays) as well as the implied average tiered and TOU hourly rates. In addition, Navigant Consulting compared those TOU participants who accessed their consumption profile online to determine if their consumption distribution was different from other TOU participants who did not access their consumption profile online.

Figure 7: Analytic Approach Undertaken by Navigant Consulting



The final step of the basic data aggregation and testing was to statistically compare the TOU participants and the control group, as well as those who accessed their consumption profile online. For this comparison, Navigant used a paired means test. This test compares the means for two groups and assesses whether or not the means differ significantly (i.e., that the difference is consistently non-zero). A non-parametric paired means test was used since the distribution of responses was not normally distributed. This test was conducted on the paired groupings for monthly and hourly consumption as well as seasonal weekday/weekend hourly consumption. A paired means test was also used for the proportion of consumption attributable to each TOU period.

Pre-TOU Historical Billing Consumption Data

Navigant reviewed the two data sets, one for the pilot participants and one for the control group, representing historical readings for this analysis. Navigant filtered consumption

readings that represented extreme outliers on both ends of the data range. The filtered data sets were tabulated using the read dates, account numbers, and usage data so that each column represented a customer's account and each row a consumption reading for that specific customer's meter.

Navigant Consulting undertook an effort to normalize the recorded usage and strip away the affects of weather from the data. For both groups, the clean data set was tabulated using the read dates, account numbers, and usage data so that each column represented a customer's account and each row a consumption reading for that specific customer's meter. In addition, given the variable read dates for the pilot participants, Navigant Consulting created a third table for with the number of days between each read date for each customer. The pilot participant tables were joined in SQL based on the read dates, and all read dates with less than 50 reading were filtered out, since they would introduce an unacceptable level of bias into the analysis. The weighted average of the daily usage within the remaining period was computed so as to describe the entire participant population. Weather data was linked to each period using the number of days in the period and the read date and converted to average daily weather observations. Using the weighted average daily usage and the average daily weather, Navigant Consulting performed multivariate regression modeling to determine a model that characterized the baseline consumption. The parameter estimates were used to compute baseline consumption and normalize against the effects of weather.

Findings

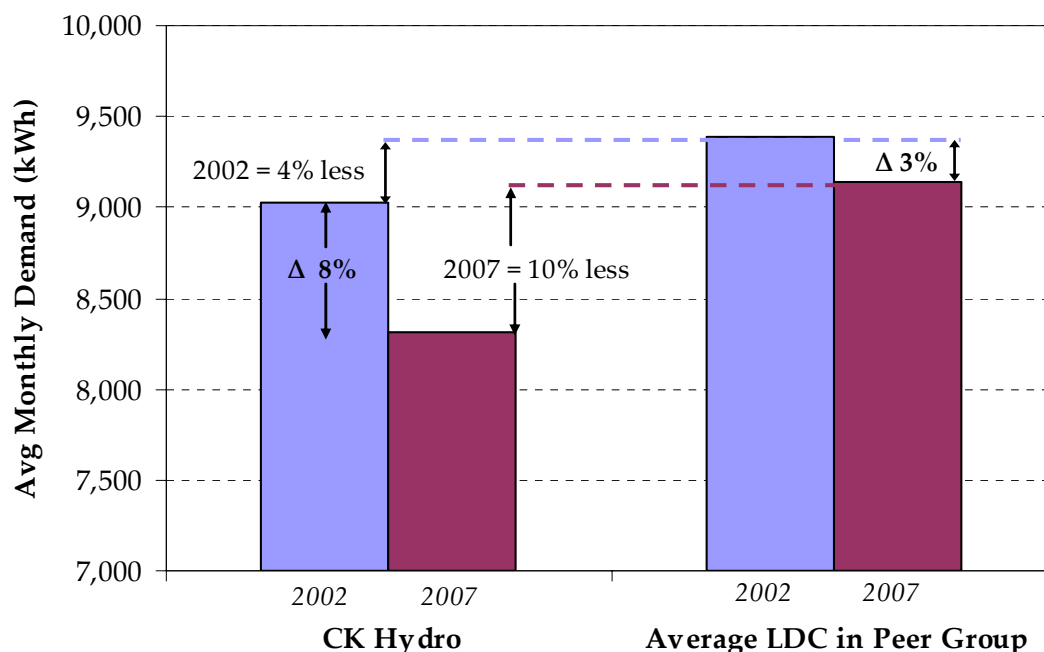
Impact of Chatham-Kent Hydro's Pre-TOU Energy Conservation Efforts

Since 2005, CK Hydro has promoted energy conservation to all of its customers through various media outlets, including radio ads, newspaper ads, bill inserts. CK Hydro also began promoting and educating their customers on time-of-use rates and smart meters long before the pilot study was introduced in their territory.

This increased awareness was confirmed by the Independent Electricity System Operator (IESO) which held a focus group in December 2007 in order to gauge customer's level of awareness of electricity pricing and smart meters. Based on their findings, the IESO reported that in Chatham, customers had received relevant communications and the level of understanding of the technology and price changes was greater than seen elsewhere.

In addition, based on reported electricity usage submitted by LDCs under the OEB's Reporting and Record Keeping Requirements³ shown in Figure 8, in 2002, the average monthly consumption for CK Hydro customers was slightly (4%) below the average monthly consumption for customers group of fourteen LDCs identified in the report as CK Hydro's peer group (Mid-Size Southern Medium-High Undergrounding). By 2007, this difference in consumption widened to 10%, with CK Hydro customers reducing their average monthly consumption by 8% from 2002, as compared to a 3% decrease in consumption observed for customers in the peer group LDCs over the same period.

Figure 8: Comparison of Average Monthly Consumption for CK Hydro Customers with Customers of Peer Group LDCs



This indicates that CK Hydro customers have responded to CK Hydro's conservation education efforts. Further, it is likely that given the broad nature of CK Hydro's efforts, both TOU pilot participants and control group customers had already reduced their consumption prior to the start of the TOU pilot. If this were the case, the ability to compare conservation and load shifting effects of the pilot participants in relation to a control group who was also subject to the same education through various media outlets becomes a challenge.

³ Ontario Energy Board, Comparison of Ontario Electricity Distributors Costs (EB-2006-0268), Peer Groups per PEG Report, June 2008.

Further, Navigant Consulting believes that any pre-TOU customer response due to CK Hydro's previous conservation efforts would reduce the post-TOU conservation effect, since the TOU pilot participants appear to have implemented a number of conservation measures in advance of the TOU pilot (as have other CK Hydro customers).

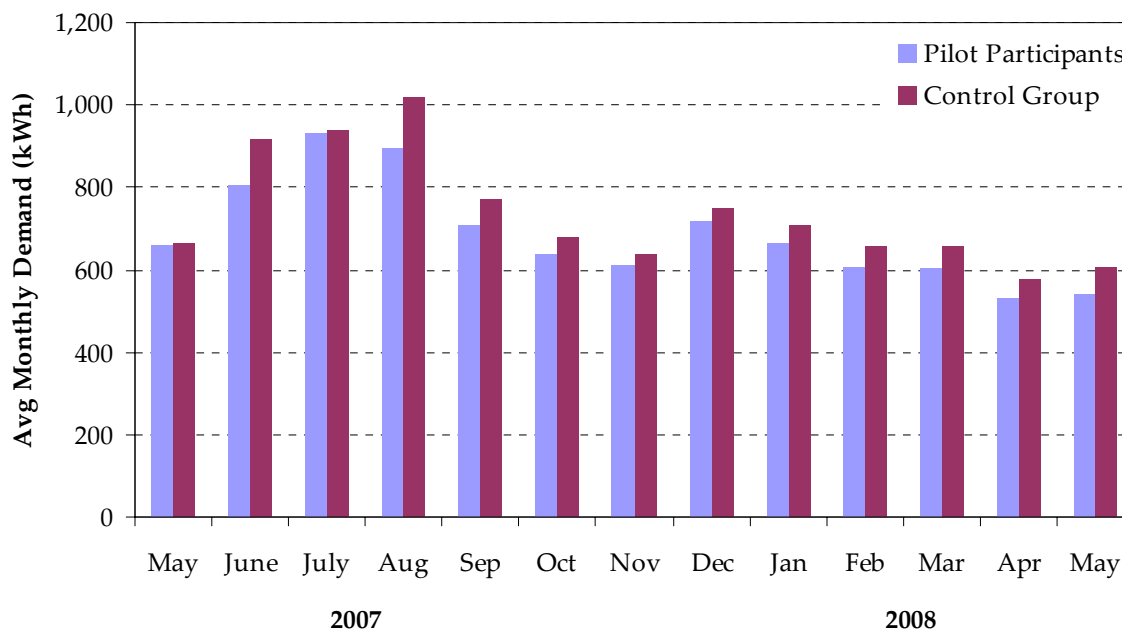
Conservation Effect

Other studies of time-of-use rates have found an overall conservation effect; not only do consumers shift their consumption from high-price to low-price periods, they also reduce their overall consumption, perhaps because of an increased awareness of their electricity use.

Figure 9 shows a comparison of the average monthly consumption from both participant group and the control group between May 2007 and May 2008. Taking the average monthly consumption for all months in the evaluation period, it was determined that on average, pilot participants consumed 52 kWh or 7% less than the control group per month.

However, the consumption for the pilot participants was also approximately 6-8% lower than the control group customers in the period preceding the pilot. Hence, there was no discernable conservation effect observed when comparing the pilot participants with the control group customers.

Figure 9: Comparison of Average Monthly Consumption for Pilot Participants and the Control Group during the Evaluation Period



Although the control group customers were chosen from a similar neighbourhood with houses of a similar vintage, there appears to be slightly higher consumption for the control group customers than the pilot participants – both before and during the pilot.

Change in Consumption – Pre TOU vs. TOU period

Navigant Consulting also developed a multivariate regression model for each of the pilot participants and the control group customers using on actual weather heating degree days and cooling degree days⁴ as independent variables. Time was also added to the regression equation as an independent variable to determine whether there was a steady upward or downward trend in consumption. Finally, for the pilot participants, an additional independent variable was created to differentiate the pre-TOU and TOU period.

Based on the results of the multivariate regression model, Navigant Consulting observed a downward trend in consumption, however the heating degree days variable had no impact on this decrease in consumption and was not statistically significant in the model. A “dummy” variable used to distinguish the between pre-TOU and TOU periods was also not statistically significant in the model. A secondary model was created time excluding the heating degree days variable (using cooling degree days, time and the pre-TOU and TOU period as independent variables), and the results continued to show the downward trend in consumption with the cooling degree days and time variables showing increased significance, however the pre-TOU and TOU period “dummy” variable continued to be insignificant. Finally, a third model was created using only the cooling degree days and time as independent variables with an R-squared of 0.54. This third model also indicated that both independent variables were statistically significant.

The same methodology was applied for historical consumption data for the control group, and results indicated a similar downward trend in average consumption use, with both the cooling degree days and time being significant variables in the model. The control group regression model exhibited a R-square value of 71.5%.

This downward trend in consumption observed for both the TOU pilot participants and the control group customers is consistent with the findings from the analysis of CK Hydro average customer consumption between the period from 2002 to 2007 (as described in *Impact of Chatham-Kent Hydro’s Pre-TOU Energy Conservation Efforts* on page 12).

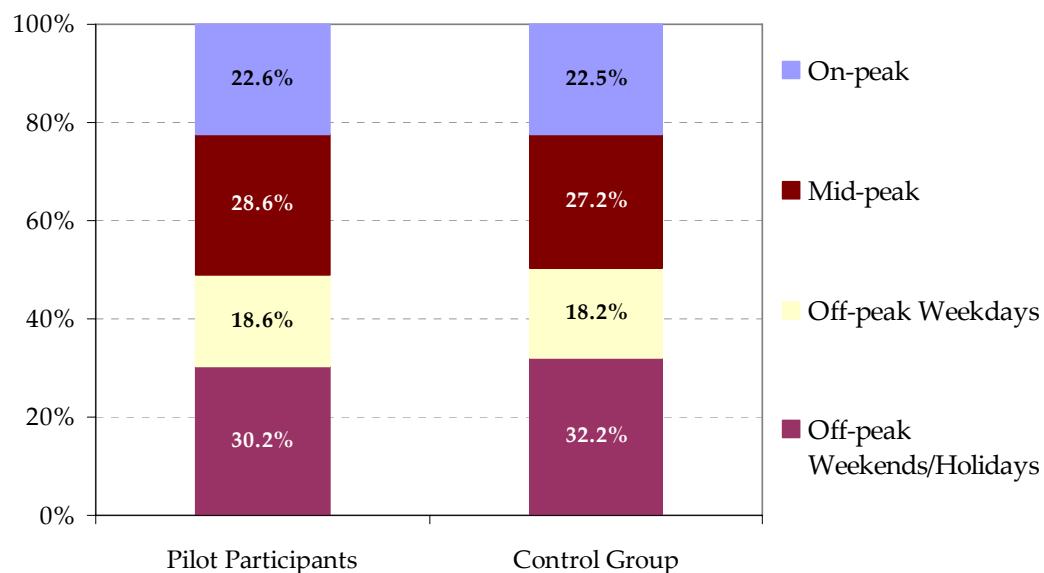
⁴ Average temperature data was available on an daily basis, so we compared the weather in the pre-TOU and TOU periods on a degree-day basis, with a degree-day representing the difference between the base temperature (21 °C for cooling and 15 °C for heating) and the average temperature for each day in the analysis period.

Load Shifting

The percentage of total consumption during each of the four periods (with the Off-Peak period divided into weekday and weekend Off-Peak periods) for TOU participants was compared with the breakdown for control group customers. Based on this analysis, Navigant Consulting determined that there were no statistically significant differences in the percentage of overall consumption by TOU period between the pilot participants and the control group during the evaluation period.

As illustration of the insignificant differences observed in relative percentage of total consumption between pilot participants and control group customers in the various TOU periods, Figure 10 shows the percent of total consumption determined for each of the four periods during the pilot period. Pilot participants exhibited marginally higher percentage of consumption during On-Peak (0.1% of total load) and Mid-Peak hours (1.4% of total load) relative to control group customers. Furthermore, pilot participants exhibited a 2% decrease in consumption during Off-Peak weekends (but not weekday) hours relative to control group customers. Note, however, that the differences presented in Figure 10 were determined not to be statistically significant.

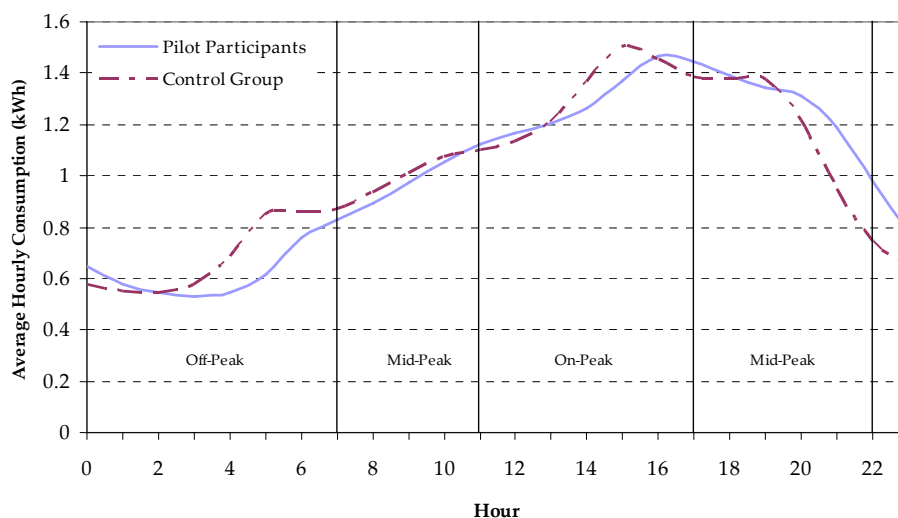
Figure 10: Comparison of Total Consumption by TOU Period for Pilot Participants and the Control Group during the Evaluation Period



The percent of total consumption during each of the TOU periods was also compared for the 34 pilot participants in the analysis dataset who signed up online to view their consumption data (web access) to the remaining TOU participant group. Navigant Consulting determined that there were no statistically significant differences between the two groups.

Figure 11 shows the average consumption for both pilot participants and control group, during the pilot period normalized to 24 kWh for a typical summer weekday for both groups. As shown, pilot participants tend to have lower consumption in the morning hours (Off-Peak and mid peak period) and slightly higher consumption in the later evening hours, in comparison to the control group. It also appears that pilot participants have marginally shifted their consumption away from the On-Peak period to later in the evening (Mid-Peak), when electricity is less expensive. This shift in the evening may be a result of shifting activities such as running the dishwasher later in the evening rather than immediately after dinner.

Figure 11: Comparison of Average Hourly Consumption for TOU Participants and the Control Group for a Summer Weekday



As shown in Figure 12, pilot participant consumption tends to be lower during winter evening On-Peak hours, but slightly higher in the morning On-Peak hours suggesting that participants may be more willing and able to shift their energy consumption in the winter evening hours rather than in the winter morning hours.

Figure 12: Comparison of Average Hourly Consumption for TOU Participants and the Control Group for a Winter Weekday

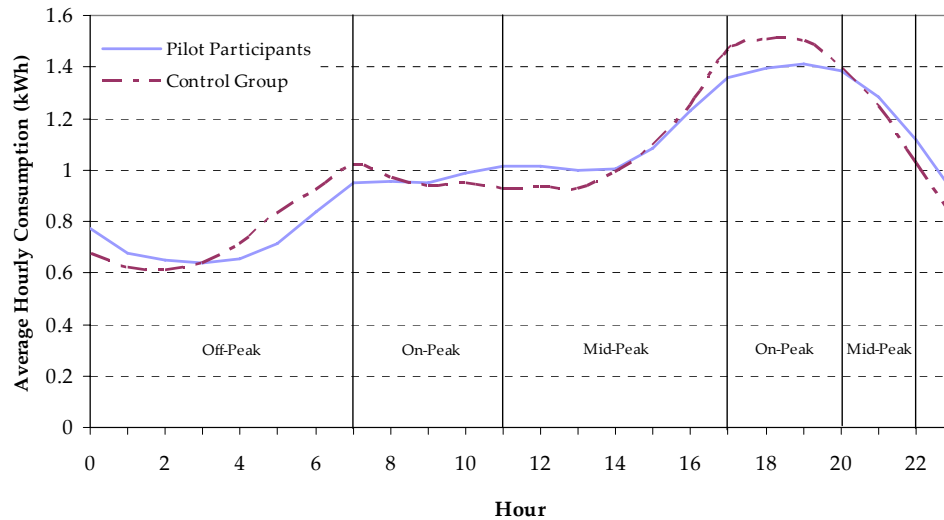


Figure 13 and Figure 14 present similar normalized average daily consumption profiles for the TOU participants who accessed their consumption data online compared with the remaining TOU participant group who did not. As shown, there were only very slight differences in the summer weekday and winter weekday consumption profiles between these subgroups of participants.

Figure 13: Comparison of Average Hourly Consumption for TOU participants who Accessed their Consumption Online and the Remaining TOU Participants for a Summer Weekday

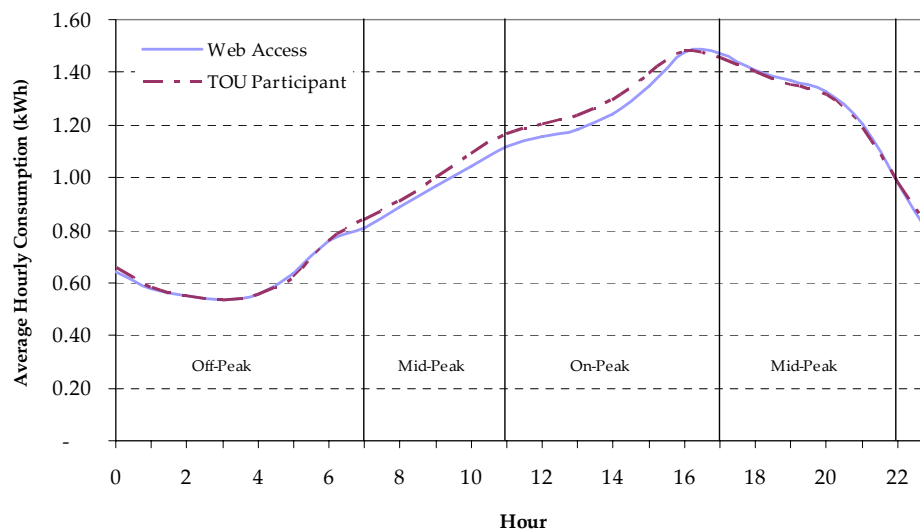
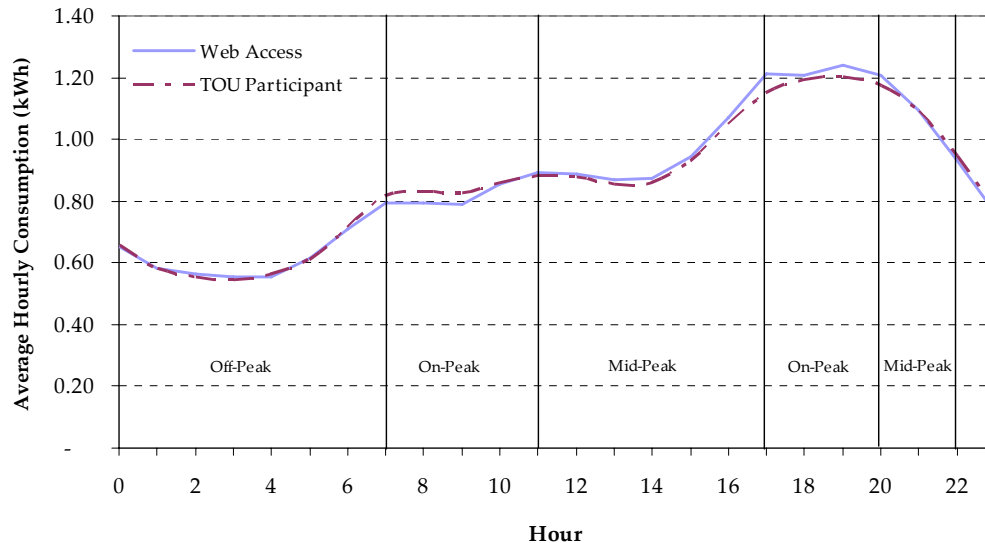


Figure 14: Comparison of Average Hourly Consumption for TOU participants who Accessed their Consumption Online and the Remaining TOU Participants for a Winter Weekday



Estimated Commodity Cost Impacts

One of the factors that is most important to consumers is how TOU pricing will affect their monthly bills relative to what they would have paid had they remained on the two-tiered RPP prices.

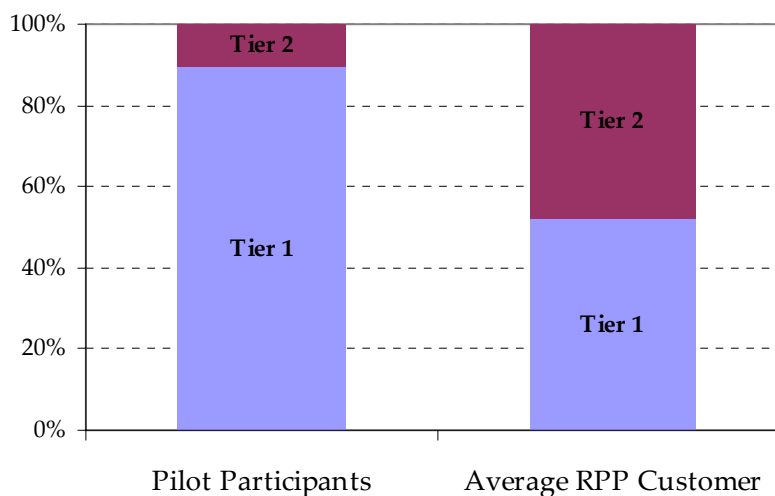
The commodity cost impact was calculated for each participant by taking their electricity consumption for each month during the full TOU period and estimating their commodity charge (excluding distribution charges and other regulated charges) under both pricing plans: what they paid under TOU prices and what they would have paid had they remained on the tiered RPP prices. For the TOU price estimates, the monthly distribution of On-Peak, Mid-Peak and Off-Peak usage was taken for each participant based on their usage patterns during the TOU period. Note that commodity costs under TOU and tier prices were calculated based on consumption during the analyzed period (May 2007 through May 2008).

The estimated bill impacts presented below are related to the way in which the tier and time-of-use prices are set under the Regulated Price Plan. Both are set so that the *average* price paid by the *average* RPP customer will be the same. Pilot participant have consumption patterns that do not exactly match those of the average RPP customer. In particular:

- A significantly higher percentage of the participants' consumption falls under the threshold: 90%, compared to just over 50% for the average RPP customer. This difference is illustrated in Figure 15. As a result, the average commodity charge paid

by study participants under tiered RPP prices would be lower than the average RPP price.

Figure 15: Average Monthly Consumption by Tier – Pilot Participants and Average RPP Customer



- The study participants' percentage of overall consumption during the On-Peak period is slightly less than for the average RPP customer (23% vs. 26% for the average RPP customer) and approximately the same in the Off-Peak period (49% vs. 50%). As a result, the average price paid by study participants under TOU prices would be slightly lower than the average RPP price.

While study participants will on average pay less than the average RPP prices under either set of prices, the difference is slightly greater under tier prices, meaning that the average price paid would be slightly lower under tiered prices.

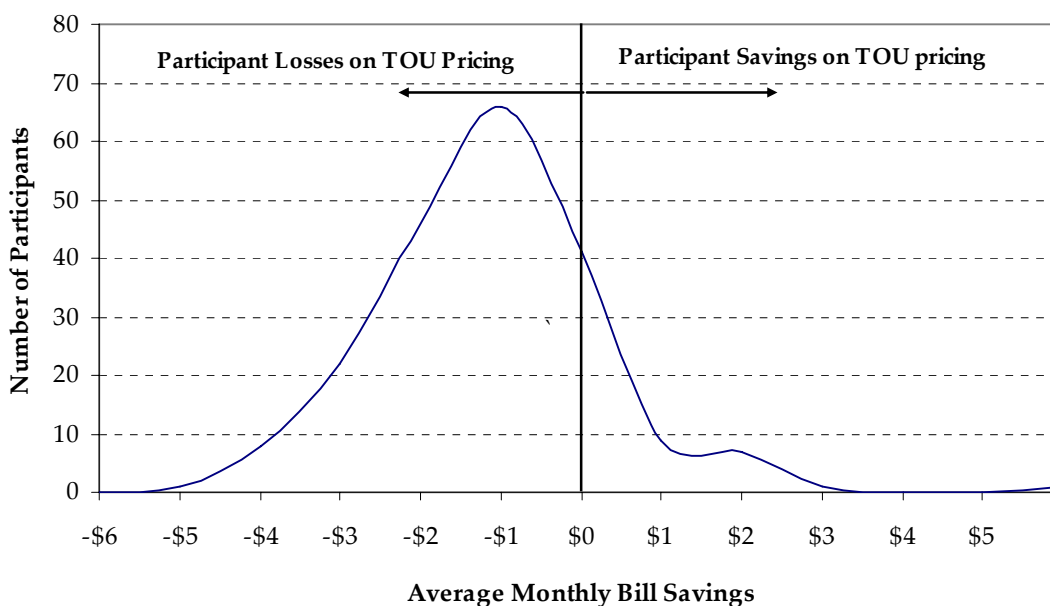
Table 6 shows the commodity cost impacts for the pilot participants on TOU rates in comparison to what they would have paid had they remained on two-tiered pricing over the TOU period. TOU prices resulted in slightly higher commodity costs for pilot participants over the 13 month period analyzed relative to the two-tiered prices. Commodity cost impacts ranged from a savings (commodity cost reduction) of 12% to an increase of 15%. Note that this is based only on the commodity portion of the bill, which accounts for approximately half of a typical residential customer's bill and *does not* reflect any changes in overall consumption in the TOU period relative to the pre-TOU period.

Table 6: Average Commodity Cost Savings under TOU Prices by Group

	Average Participant
Average Saving (%)	-5.0%
Largest Saving (%)	12.1%
Largest Increase (%)	15.1%
% of Participants Saving on TOU	9%

Just under 10% of study participants experienced lower commodity costs under TOU prices compared to tier prices, while 90% paid slightly more. Under tier prices, customers who consume less in a given month will tend to have a lower average price than customers who consume more, because more (or all) of their consumption will fall under the lower Tier 1 price. Prices will also vary under TOU prices, depending on the mix of On-Peak, Mid-Peak and Off-Peak consumption, but this variation is not necessarily related to a customer's total consumption. Thus, when comparing bills under TOU versus tier prices, it appears that customers who consume less are more likely to see a slight increase in their average price given the tiered pricing structure they are exposed to pre-TOU. As Figure 16 shows, the impact of the switch from tier to TOU prices was small for most study participants, though a few, presumably those with atypical consumption patterns, saw larger increases or decreases. The median average monthly change over the TOU period was determined to be a \$1.68 increase for the pilot participants.

Figure 16: Distribution of Average Monthly Commodity Cost Savings for Pilot Participants



As noted, it is important to keep in mind that these results essentially reflect the difference in commodity costs based on either tiered or time-of-use pricing given participant's consumption levels and consumption patterns in the TOU period.

While most RPP customers are single family households, like the study participants, RPP customers also include small businesses as well as public buildings such as municipalities, universities, schools and hospitals (the "MUSH" sector). MUSH customers in particular are likely to be larger than single-family households, and to use more electricity during On-Peak and Mid-Peak periods. It is expected that as of May 1, 2009, MUSH consumers will no longer be eligible for RPP prices (unless their annual usage is less than 250,000 kWh per year). This will change the allocation of consumption between Tier 1 and Tier 2, and between on-, mid- and Off-Peak, as used in setting RPP prices. The effect of this change on the commodity costs of customers like the study participants under either tiered or time-of-use pricing are not known at this time.

CONCLUSIONS

Based on Navigant Consulting's analysis of the consumption patterns of the participants in CK Hydro's TOU pricing pilot and those of control group customers in a similar subdivision, the following conclusions can be drawn. Note that the TOU response observed reflects short-term behaviour changes only and it is expected that the response will increase over time.

1. CK Hydro average residential customer consumption decreased by 8% from 2002 to 2007, compared with a decline of only 3% for residential customers in fourteen similar Ontario LDCs. In 2007, CK Hydro's average residential customer consumption was 10% less than for residential customers in similar LDCs. This observation was confirmed through Navigant Consulting's regression analysis, with a statistically significant downward trend in consumption among CK Hydro customers. Navigant Consulting attributes this effect to CK Hydro's aggressive conservation education efforts. Further, this effect appears to have dampened the conservation effect typically seen among customers switching to TOU rates. In effect, the CK Hydro customers had already reduced their consumption prior to the implementation of the TOU pilot, whereas TOU pilot participants elsewhere who had not been exposed to a similar level of conservation education pre-TOU would have more conservation opportunities available to them post-TOU (and would generally be expected to have greater conservation awareness post-TOU).
2. There was no discernable conservation effect observed when comparing the pilot participants' consumption in the pre-TOU and TOU period and with the control group customers' consumption in the same periods, likely due to the earlier conservation efforts of these and other CK Hydro customers.
3. There were no statistically significant differences in the percentage of overall consumption by TOU period between the pilot participants and the control group during the pilot period.
4. Given their level of monthly consumption and consumption patterns, pilot participants would pay less than the average RPP prices under either TOU prices or tiered prices, but the difference is slightly greater under tier prices. As a result, pilot participants paid, on average, just under \$2 per month more under TOU prices than they would have paid under tiered prices.

It is important to keep in mind that all forms of "flat" (or non-time varying) electricity pricing such as the tiered RPP prices inherently result in cross-subsidies between consumers with different consumption patterns, as the actual cost of power changes on an hourly basis. Two consumers could have identical overall consumption levels, but if one uses most of their electricity during the Off-Peak period and the other uses most during On- and Mid-

Peak periods, the cost to supply the latter consumer will be much higher. The time-of-use prices better reflect the true cost of power and significantly reduce such cross-subsidies.

In addition, the impact of time-of-use prices on the average commodity charges experienced by customers is also dependent on the relative percentage of their consumption in each of the two tiers under the RPP tiered pricing structure. Consumers, such as many in this pilot project, with most of their monthly consumption below the tier threshold pay somewhat less under tiered pricing than the average actual cost of electricity.