## Hydro One Brampton Networks Inc.

175 Sandalwood Pkwy West
Brampton, Ontario L7A 1E8

February 21, 2013

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

Dear Ms. Walli,

## Re: Hydro One Brampton Networks Inc. 2013 Smart Meter Cost Recovery Application Board File No. EB-2012-0440 - Responses to OEB Staff and VECC Interrogatories

Enclosed are Hydro One Brampton Networks Inc.'s ("HOBNI") responses to OEB staff and Vulnerable Energy Consumers Coalition (VECC) Interrogatories relating to HOBNI's standalone Rate Application for disposition of the balances of Smart Meter Cost Variance Accounts 1555 and 1556; as well as the recovery of associated revenue requirement through Smart Meter Disposition Riders and Smart Meter Incremental Revenue Requirement Riders with an effective date of May 1, 2013.

HOBNI has submitted two hard copies of this submission and a CD containing the above captioned Application in PDF format, together with electronic copies (in Excel format) of the completed Board and HOBNI models. The electronic copies of the document and spreadsheet files have also been filed electronically through the Board's web portal.

Please contact myself should anything further be required.
Sincerely,


Scott Miller
Director of Regulatory Affairs and Communications
Hydro One Brampton Networks Inc.
Phone: (905) 452-5504
Email: smiller@hydroonebrampton.com
cc: Remy Fernandes, President \& CEO, Hydro One Brampton Networks Inc. Aldo Mastrofrancesco, Vice President of Engineering \& Operations, Hydro One Brampton Networks Inc.
Marc Villett, Vice-President Finance, Hydro One Brampton Networks Inc.
Encl.

## APPLICANT COUNSEL

## Michael Engelberg

## Assistant General Counsel

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Hydro One Brampton Networks Inc. Final Disposition of Smart Meter Costs Interrogatory Responses ED-2003-0038/EB-2012-0440
Filed: February 21, 2013

## Index of Submission

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## TAB 1 <br> SCHEDULE 1.0 RESPONSES TO BOARD STAFF INTERROGATORIES

# Hydro One Brampton Networks Inc. 2012 Smart Meter Cost Recovery EB-2012-0440 

## Board staff Interrogatories

## 1. Ref: Smart Meter Model, Sheet 2 "Smart_Meter_Costs" (2.2.1 Maintenance)

On Sheet 2 of the Residential and GS < 50 kW Smart Meter Model, HOBNI has increasing expenses for 2.2.1 maintenance and no expenses incurred in the GS 50-699 kW Smart Meter Model.
a) Please explain the increasing Maintenance expenses under "2.2.1 Maintenance" for the period from 2010 to 2013 inclusive. Also explain whether these costs are one-time or recurring.
b) Please explain why the GS 50-699 kW Smart Meter Model has no maintenance expenses incurred under 2.2.1 for the period from 2010 to 2013 inclusive.

Response:
a) Table 1 below provides an analysis deriving the OM\&A costs for each year from 2010 to 2013 that HOBNI submitted as part of its evidence filed with this application. The "Total OM\&A Expenditures" detailed in this table are the total OM\&A costs incurred by year for all smart meters installed since the inception of HOBNI's Smart Meter Program in 2006. The "OM\&A Expenditures Allocated" are the portion of these costs that HOBNI has determined are incremental OM\&A costs relating to the smart meters installed for the Residential and General Service < 50 kW classes during 2010 and 2011 and for the smart meters installed for the General Service 50 to 699 kW customer class from 2010 to 2012.

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Table 1: Total Actual \& Forecasted OM\&A Expenditures for 2010 to 2013 as Filed

| Description of Expenditure | 2010 | 2011 | 2012 | 2013 |
| :---: | :---: | :---: | :---: | :---: |
|  | Actual | Actual | Forecast | Forecast |
| Labour | \$ 24,042 | \$ 13,254 |  |  |
| Material | \$ 6,399 |  |  |  |
| SM Plans and Cellular Usage | \$ 43,143 | \$ 32,625 | \$ 46,915 | \$ 36,000 |
| Operations Costs, Infrastructure and Application Management, Software Upgrades | \$100,563 | \$119,853 | \$130,947 | \$154,488 |
| Smart Meter \& Network Operations costs | \$162,000 | \$179,780 | \$182,153 | \$248,485 |
| Trilliant ServiewCom Sortware Updates Services |  | \$ 66,738 | \$ 38,411 | \$ 40,000 |
| Trilliant Help Desk, Monthly Mission Critical System Support Services |  | \$ 22,722 | \$ 13,078 | \$ 13,260 |
| Physical Infrastructure Operations and Maintenance * |  |  |  | \$ 32,428 |
| Telephone Monthly Charges (SM Project Manager + SM Mechanic) | \$ 1,313 | \$ 843 |  |  |
| Parts \& Labour for Meter Base Repairs | \$ 10,665 | \$ 3,136 |  |  |
| Miscellaneous | \$ 1,937 | \$ 2,981 |  |  |
| Totals | \$350,061 | \$441,932 | \$411,504 | \$524,661 |
| Allocation Factor | 100.0\% | 6.9\% | 8.1\% | 8.1\% |
| Allocated OM\&A Expenditures 2010 to 2013 |  |  |  |  |
| Description of Expenditure | 2010 | 2011 | 2012 | 2013 |
|  | Actual | Actual | Forecast | Forecast |
| Labour | \$ 24,042 | \$ 914 |  |  |
| Material | \$ 6,399 |  |  |  |
| SM Plans and Cellular Usage | \$ 43,143 | \$ 2,251 | \$ 3,778 | \$ 2,899 |
| Operations Costs, Infrastructure and Application Management, Software Upgrades | \$100,563 | \$ 8,268 | \$ 10,545 | \$ 12,440 |
| Smart Meter \& Network Operations costs | \$162,000 | \$ 12,401 | \$ 14,668 | \$ 20,009 |
| Trilliant ServiewCom Sortware Updates Services |  | \$ 4,604 | \$ 3,093 | \$ 3,221 |
| Trilliant Help Desk, Monthly Mission Critical System Support Services |  | \$ 1,567 | \$ 1,053 | \$ 1,068 |
| Physical Infrastructure Operations and Maintenance |  |  |  | \$ 32,428 |
| Telephone Monthly Charges (SM Project Manager + SM Mechanic) | \$ 1,313 | \$ 58 |  |  |
| Parts \& Labour for Meter Base Repairs | \$ 10,665 | \$ 216 |  |  |
| Miscellaneous | \$ 1,937 | \$ 206 |  |  |
| Totals Originally Requested for Disposition | \$350,061 | \$ 30,485 | \$ 33,136 | \$ 72,065 |
|  |  |  |  |  |
| OM\&A used in Smart Meter Model: |  |  |  |  |
| 2010 Smart Meter Stub Year Model for Residenctial and GS<50 kW Classes | \$325,914 |  |  |  |
| OEB Smart Meter Model for Residential and GS<50 kWh | \$ 24,096 | \$ 28,125 | \$ 30,425 | \$ 66,169 |
| OEB Smart Meter Model for GS >50 KWh | \$ 51 | \$ 2,360 | \$ 2,711 | \$ 5,896 |
| Total OM\&A Originally Requested for Disposition | \$350,061 | \$ 30,485 | \$ 33,136 | \$ 72,065 |

* The 2013 Forecast for Physical Infrastructure Operations and Maintenance was not allocated based on the $8.1 \%$ proration factor, it was determined that this full amount was incremental and was included in the OM\&A requested for recovery.

The 2010 Total OM\&A Expenditures of $\$ 350,061$ pertain to the smart meters installed on a 2010 life to date basis, i.e. the year before HOBNI's 2011 Cost of service year. 100\% of the 2010 OM\&A costs are recoverable in this application.

The 2011 Total OM\&A Expenditures of \$441,932 pertain to all smart meters installed on a 2011 life to date basis, i.e. HOBNI's cost of service year. As HOBNI previously recovered costs pertaining to
smart meters installed to the end of 2009, and HOBNI included smart meter OM\&A costs for smart meters installed to the end of 2009 in its 2011 test year operating meter OM\&A costs a portion of this \$441,932 have been factored into HOBNI's 2011 Board approved revenue requirement. However, a portion of the $\$ 441,932$ is not being recovered through current distribution rates such that HOBNI has allocated part of these costs to the 1555 Smart Meter Capital Cost Variance Account. HOBNI allocated 6.9\% or \$30,485 to Account 1555. The $6.9 \%$ was derived based on the expected number of smart meters installed in 2010 and 2011 as compared to the expected number of smart meters installed life to date 2011.

Similarly a 8.1\% portion of the 2012 Total OM\&A Expenditures of $\$ 411,504$ were allocated to Account 1555 based on the expected number of smart meters installed from 2010 to 2012 as compared to the expected number of smart meters installed life to date 2012.

Also, for 2013, HOBNI also allocated 8.1\% of the forecast \$524,661 for use in the SMIRR forecast revenue requirement calculation for 2013.

As per the "OM\&A Expenditures Allocated" in Table 1 below, the smart meter OM\&A costs submitted for recovery in this application were $\$ 350,061$ for 2010, $\$ 30,485$ for 2011, $\$ 33,136$ for 2012 and $\$ 72,065$ for 2013 for all customer classes.

The drivers of the costs requested for disposition are the Total OM\&A Expenditures and the \% allocations for each year.

Change in Total OM\&A Expenditures:
2011 vs. 2010 OM\&A Expenditures
The OM\&A Expenditures increased by approximately $\$ 92 \mathrm{~K}$ from $\$ 350,061$ in 2010 to $\$ 441,932$ in 2011 mainly attributable to the Trilliant ServiewCom Update costs of approximately $\$ 67 \mathrm{~K}$ and the Trilliant Mission Critical System Support Services costs of approximately \$23K.

2012 vs. 2011 OM\&A Expenditures
The OM\&A Expenditures fell by approximately $\$ 30 \mathrm{~K}$ from $\$ 441,932$ in 2011 to \$411,504 in 2012 mainly attributable to lower Trilliant ServiewCom Update costs which fell by approximately \$28K.

2013 forecast vs. 2012 OM\&A Expenditures
The OM\&A Expenditures are forecasted to increase by approximately \$113K from \$411,504 in 2012 to \$524,661 in 2013 due to the following:

- An increase of approximately $\$ 66 \mathrm{~K}$ for Smart Meter \& Network Operations for an additional part time Network Analyst necessitated by the volume of work to operate the systems,
- ServiewCom cost increased by approximately $\$ 24 \mathrm{~K}$ for IT application and infrastructure support, which has increased to the point that additional effort and services are required from the software vendor, and
- As the work on the Smart Meter Program is complete and the AMI system is fully operational and all assets are in service and are used and useful in the manner in which they were intended; additional costs of approximately $\$ 32 \mathrm{~K}$ associated with operating and maintaining the physical infrastructure in the distribution system will require labour, trucking and material costs. Previously these costs were associated with the initial asset installation and formed part of the Capital Costs.

Due to the nature of the costs forecast for 2013; forecasted costs for smart meter OM\&A Expenditures are expected to be annually recurring costs. The type of annual expenditures incurred each year since 2010 have persisted through to 2013 and have grown due to the nature of the work, the network infrastructure technical requirements, the physical asset maintenance and upkeep, and volume of work required due to the increased number of customer connections.

As a result of HOBNI's analysis pertaining to cost allocation, cost causality, and the analysis performed to answer this interrogatory, HOBNI has taken a closer look at the incremental OM\&A Maintenance Expenditures associated with smart meters installed since HOBNI's last cost of service rate application in 2011. HOBNI has determined that the allocations originally submitted with this application for the 2013 forecasted smart meter OM\&A Expenditures are not representative of the causes of the cost increases and HOBNI has recalculated the original smart meter OM\&A costs submitted and has amended its application for the change in OM\&A Expenditure.

Furthermore, as a result of this interrogatory and OEB staff interrogatory \#3, HOBNI has updated the OM\&A Expenditures it is seeking recovery for as detailed in Table 2 below.

Table 2 below provides the updated calculations HOBNI used to amend the OM\&A Expenditures. In addition, HOBNI has updated the Smart Meter models and Rate Riders submitted with the responses to interrogatories as requested in OEB staff Interrogatories 5 and 6.

Per Table 2 below, HOBNI has determined that components of some of the costs forecasted in 2013 have grown substantially enough to justify that they are fully incremental to the costs that were included in HOBNI's 2011 Cost of Service Rate Application. In addition, HOBNI has updated the allocation percentages used to reflect the number of smart meters installed cumulatively for 2010 and 2011, and the LTD smart meters installed for both 2010 and 2011.

HOBNI has separated the following three OM\&A Expenditure items totalling $\$ 122,281$ as fully incremental to 2013 rather than partially incremental and should be recoverable through the Smart Meter Incremental Revenue Rate Rider. The costs that HOBNI has updated to be fully incremental are as follows:

- Incremental Smart Meter Network Operations costs of $\mathbf{\$ 6 6 , 3 3 2}$,
- Incremental Physical Infrastructure Operations and Maintenance of \$32,428, and
- Incremental Operations costs pertaining to the ServiewCom IT application and infrastructure support of $\$ 23,521$.

Table 2 below provides the determination of the updated OM\&A expenditures HOBNI is seeking recovery for, as follows:

- No change to 2010 OM\&A expenditures,
- 2011 OM\&A has been updated to \$41,178,
- 2012 OM\&A has been updated to $\$ 35,832$, and
- 2013 OM\&A forecast has been updated to $\mathbf{\$ 1 5 7 , 3 3 7}$

Table 2 also includes the determination of the updated \% allocations that have been used to determine the OM\&A Expenditures HOBNI is seeking recovery for. Note that $100 \%$ of the three items noted above totalling \$122,281 are being sought for recovery.

Table 2 also provides the OM\&A Expenditures that HOBNI has used in the three Smart Meter models being resubmitted.

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Table 2: Amended Total Actual \& Forecasted OM\&A Expenditures for 2010 to 2013

| Description of Expenditure | 2010 | 2011 | 2012 | 2013 |
| :---: | :---: | :---: | :---: | :---: |
|  | Actual | Actual | Forecast | Forecast |
| Labour | \$ 24,042 | \$ 13,254 |  |  |
| Material | \$ 6,399 |  |  |  |
| SM Plans and Cellular Usage | \$ 43,143 | \$ 32,625 | \$ 46,915 | \$ 36,000 |
| Operations Costs, Infrastructure and Application Management, Software Upgrades | \$ 100,563 | \$ 119,853 | \$ 130,947 | \$ 130,947 |
| 2013 Incremental Operation Costs, Infrastructure and Application Management |  |  |  | \$ 23,541 |
| Smart Meter \& Network Operations costs | \$ 162,000 | \$ 179,780 | \$ 182,153 | \$ 182,153 |
| 2013 Incremental Smart Meter \& Network Operation Costs |  |  |  | \$ 66,332 |
| Trilliant ServiewCom Sortware Updates Services |  | \$ 66,738 | \$ 38,411 | \$ 40,000 |
| Trilliant Help Desk, Monthly Mission Critical System Support Services |  | \$ 22,722 | \$ 13,078 | \$ 13,260 |
| Physical Infrastructure Operations and Maintenance |  |  |  | \$ 32,428 |
| Telephone Monthly Charges (SM Project Manager + SM Mechanic) | \$ 1,313 | \$ 843 |  |  |
| Parts \& Labour for Meter Base Repairs | \$ 10,665 | \$ 3,136 |  |  |
| Miscellaneous | \$ 1,937 | \$ 2,981 |  |  |
| Totals | \$ 350,061 | \$ 441,932 | \$ 411,504 | \$ 524,661 |


| Allocation Factor |  |  |  |
| :--- | ---: | ---: | ---: |
| total meters installed LTD |  | 137,076 | 137,133 |
| meters installed 2010-2011 | 137,133 |  |  |
| meters installed 2010-2011-2012 | 11,884 |  |  |
| Percentage of total meters installed |  |  |  |
|  |  |  | 11,941 |
| Allocated OM\&A Expenditures (based on number of Smart Meters installed) |  | 11,941 |  |


b) HOBNI did have maintenance expenses incurred for the GS 50-699 kW class; however, the maintenance costs were recorded under section "2.6 OM\&A Costs related to Beyond Minimum Functionality", subsection "2.6.2 Costs for deployment of smart meters to customers other than residential and small general service". As HOBNI reported all costs associated with smart metering the GS 50699 kW class as part of the costs beyond minimum functionality, HOBNI classified such costs in this manner.

## 2. Ref: Smart Meter Model - Taxes/PILS Rates

HOBNI has input the following rates for taxes/PILS rates on Sheet 3 row 40, for the years 2006, 2007, 2008, 2009, 2010, 2011, 2012, and beyond. These are summarized in the following table:

| Taxes/PILS |  |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Year | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
| Aggregate Corporate Tax Rate | $36.12 \%$ | $36.12 \%$ | $33.50 \%$ | $33.00 \%$ | $31.00 \%$ | $28.25 \%$ | $26.50 \%$ | $26.50 \%$ |
| Capital Tax (until July 1st, 2010) | $0.30 \%$ | $0.225 \%$ | $0.225 \%$ | $0.225 \%$ | $0.075 \%$ | $0.00 \%$ | $0.00 \%$ | $0.00 \%$ |

Please confirm that these are the tax rates corresponding to the taxes or PILS that underpin distribution rates in each of the historical years, and that HOBNI forecasts it will pay in 2012 and 2013. In the alternative, please explain the tax rates input and their derivation.

## Response:

HOBNI confirms that the tax rates used correspond with the payments in lieu of taxes that underpin distribution rates to the end of 2011; and, HOBNI confirms that the tax rates used for 2012 and 2013 are the tax rates that it forecasts it will pay for those years. HOBNI provides Table 3 below that provides the federal and provincial Corporate Income Tax Rates for the past 8 years used in the derivation of the Annualized Corporate Income Tax Rates found in Table 4 below.

Table 3: Corporate Income Tax Rates

|  | Federal |  | Provincial |  | Combined |
| ---: | :--- | ---: | ---: | ---: | ---: |
| Year | Date <br> Effective | Tax Rate |  |  |  | | Date |
| :--- |
| Effective | Tax Rate | Annualized |
| :--- |
| Tax Rate |$|$| 2005 | 1-Jan-05 | $22.12 \%$ | 1-Jul-05 | $14.00 \%$ |
| ---: | ---: | ---: | ---: | ---: |
| 2006 | 1-Jan-06 | $22.12 \%$ | 1-Jul-06 | $14.00 \%$ |
| 2007 | 1-Jan-07 | $22.12 \%$ | 1-Jul-07 | $14.00 \%$ |
| 2008 | 1-Jan-08 | $19.50 \%$ | 1-Jul-08 | $14.00 \%$ |
| 2009 | 1-Jan-09 | $19.00 \%$ | 1-Jul-09 | $14.00 \%$ |
| 2010 | 1-Jan-10 | $18.00 \%$ | 1-Jul-10 | $12.00 \%$ |
| 2011 | 1-Jan-11 | $16.50 \%$ | 1-Jul-11 | $11.50 \%$ |
| 2012 | 1-Jan-12 | $15.00 \%$ |  | $11.50 \%$ |
| 2013 |  | $15.00 \%$ |  | $11.50 \%$ |

Table 4: Annualized Corporate Income Tax Rates

| Tax Year <br> Rederal <br> Rate | Provincial <br> Rate | Total |  |
| ---: | ---: | ---: | ---: |
| 2006 | $22.12 \%$ | $14.00 \%$ | $36.12 \%$ |
| 2007 | $22.12 \%$ | $14.00 \%$ | $36.12 \%$ |
| 2008 | $19.50 \%$ | $14.00 \%$ | $33.50 \%$ |
| 2009 | $19.00 \%$ | $14.00 \%$ | $33.00 \%$ |
| 2010 | $18.00 \%$ | $13.00 \%$ | $31.00 \%$ |
| 2011 | $16.50 \%$ | $11.75 \%$ | $28.25 \%$ |
| 2012 | $15.00 \%$ | $11.50 \%$ | $26.50 \%$ |
| 2013 | $15.00 \%$ | $11.50 \%$ | $26.50 \%$ |

In addition, the Ontario Capital Tax Rates which were eliminated on July 1, 2010, are consistent with the tax rates published on the Ontario Ministry of Finance Website.

## 3. Ref: Application, Table 1.1 and Smart Meter Model

In its Application, HOBNI proposes the following SMDRs and SMIRRs for residential and GS < 50 kW customer classes:

|  |  | Residential | GS < 50 kW |
| :--- | :--- | :--- | :--- |
| SMDR | May 1, 2013 to December <br> 31,2013 | $\$ 1.39$ | $\$ 1.39$ |
| SMIRR | May 1, 2013 until the <br> effective date of rates <br> HOBNI's next cost of <br> service application | $\$ 0.71$ | $\$ 0.71$ |

Board staff observes that HOBNI is proposing a SMDR for the GS < 50 kW class that is equal to the SMDR for the residential class. This appears unintuitive as in general, the Board's experience is that the average cost for a GS < 50 kW smart meter is greater than that for an average residential smart meter, due to a higher proportion of more expensive polyphase meters for customers with 2-phase or 3phase service. This should mean that the GS < 50 kW SMDR is no less than, and generally would be greater than, that for the residential smart meter.

Please explain why HOBNI does not have the information on the costs and types of smart meters installed per class, since this information is necessary for allocating meter costs in a cost allocation model (i.e. Sheet I7.1 of the Board-issued Cost Allocation model from HOBNI`s most recent Cost of Service application which would have had the volumes, costs and different types of meters to determine a capital weighted meter cost by class).

## Response:

As Utilities were not specifically directed by the Board to record smart meter costs on a class-specific basis; HOBNI tracked and recorded costs on a combined basis, such that HOBNI does not have class specific cost information available.

Moreover, HOBNI acknowledges that smart meter costs (per class) information is available in the Board-issued Cost Allocation model that HOBNI submitted and the Board approved in HOBNI's 2011 forward test year Cost of Service rate application. Although this information is available, the data used to complete the 2011 Cost Allocation model was based on information that was forecasted in early 2010 and was long before the actual costs were known. Since then HOBNI has completed its Smart Meter

Program and the total actual costs are known, albeit on a class combined basis such that an allocation of smart meter costs between the Residential and the General Service $<50 \mathrm{~kW}$ classes of customers is required in order to establish class specific smart meter rate riders. HOBNI has taken a closer look at all data available and made estimates so a reasonable cost allocation can be made. However, HOBNI advises Board Staff to be cognizant that although the data HOBNI has mined is more current and reliable than what was used in its 2011 Cost Allocation model, estimates have been used that are not substitutes for direct costing.

In order to reasonably allocate and validate the smart meter costs between the Residential and General Service < 50 kW classes to be used in the Smart Meter models, HOBNI employed the following approach:
i. Identified the number of smart meters by type that HOBNI installed for each specific customer class. This was done by querying the Customer Information System master files for all active customer accounts as of December 31, 2011 and used Metering Department information to determine the total number of Residential Class Smart Meters that were installed via mass deployment. The number of smart meters were analysed on a life-to-date basis, at this point, see Table 5 below,

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Table 5: Number of Smart Meters Installed by Part Number by Customer Class

| Total Smart Meters Installed |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Meter Part Number | Description | Residential | GS $<50 \mathrm{~kW}$ | Total |
| M780 | SMART METER 240V 200A 1.5 EL. | 126,131 | 965 | 127,096 |
| M782 | SMART METER NETWORK 200A 2 EL. | 1,314 | 165 | 1,479 |
| M791 | 3 S SMART METER 1P-2W-1EL TX TYPE | 503 | 122 | 625 |
| M792 | 16S SMART METER 3P-4W-200A |  | 5,895 | 5,895 |
| M802 | 3PH 3W 120-480V 20A TX DMD MESH RADIO |  | 92 | 92 |
| M803 | 3PH 4W 120-480V 20A TX DMD MESH RADIO |  | 682 | 682 |
| M806 | 3PH 3W 600V 200A ENERGY SOCKT METER |  | 272 | 272 |
| M811 | 3PH 4W 120-480V 200A SOCKET DMD METER |  | 15 | 15 |
| M812 | 1PH 3W 240V 200A 2S NET METER |  | 13 | 13 |
| M813 | 1PH 2W 240V 20A TX TYPE DEMAND METER | 1 | 3 | 4 |
| Total Smart Meters |  | 127,949 | 8,224 | 136,173 |

Smart Meters Installed by HOBNI Staff

| Meter Part <br> Number |  | Rmart Meters Installed by HOBNI Staff |  |  |
| :--- | :--- | ---: | ---: | ---: |
| M780 | SMART METER 240V 200A 1.5 EL. | Residential | GS < 50 kW | Total |
| M782 | SMART METER NETWORK 200A 2 EL. | 5,960 | 965 | 6,925 |
| M791 | 3S SMART METER 1P-2W-1EL TX TYPE | 1,314 | 165 | 1,479 |
| M792 | 16S SMART METER 3P-4W-200A | 503 | 122 | 625 |
| M802 | 3PH 3W 120-480V 20A TX DMD MESH RADIO |  | 5,895 | 9,895 |
| M803 | 3PH 4W 120-480V 20A TX DMD MESH RADIO |  | 92 | 92 |
| M806 | 3PH 3W 600V 200A ENERGY SOCKT METER |  | 682 | 682 |
| M811 | 3PH 4W 120-480V 200A SOCKET DMD METER |  | 15 | 272 |
| M812 | 1PH 3W 240V 200A 2S NET METER |  | 13 | 15 |
| M813 | 1PH 2W 240V 20A TX TYPE DEMAND METER |  | 3 | 13 |
| Total Smart Meters |  | 1,778 | 8,224 | 16,002 |

Smart Meters Installed by 3rd Party Contractors

| Meter Part <br> Number |  | Residential | GS < $\mathbf{5 0} \mathbf{k W}$ | Total |
| :--- | :--- | :---: | :---: | :---: |
| M780 | SMART METER 240V 200A 1.5 EL. | $\mathbf{1 2 0 , 1 7 1}$ |  | 120,171 |
| M782 | SMART METER NETWORK 200A 2 EL. |  | - |  |
| M791 | 3S SMART METER 1P-2W-1EL TX TYPE |  | - |  |
| M792 | 16S SMART METER 3P-4W-200A |  | - |  |
| M802 | 3PH 3W 120-480V 20A TX DMD MESH RADIO |  | - |  |
| M803 | 3PH 4W 120-480V 20A TX DMD MESH RADIO |  | - |  |
| M806 | 3PH 3W 600V 200A ENERGY SOCKT METER |  | - |  |
| M811 | 3PH 4W 120-480V 200A SOCKET DMD METER |  | - |  |
| M812 | 1PH 3W 240V 200A 2S NET METER |  | - |  |
| M813 | 1PH 2W 240V 20A TX TYPE DEMAND METER |  | - |  |
| Total Smart Meters |  | - | - |  |

ii. HOBNI queried data from its work order costing system to determine the unit cost of material of each type of smart meter, used contractor installation unit costs of mass deployed Residential Class smart meters, and estimated the average HOBNI cost to install each type of smart meter, see Tables 6a and 6b below

Table 6a: Total Average Unit Costs by Type of Smart Meter - HONBI Installed

| Meter Part <br> Number | Description | Total Unit <br> Cost |
| :--- | :--- | :--- |
| M780 | SMART METER 240V 200A 1.5 EL. | 207.08 |
| M782 | SMART METER NETWORK 200A 2 EL. | $\$ 293.59$ |
| M791 | 3S SMART METER 1P-2W-1EL TX TYPE | $\$ 261.96$ |
| M792 | 16S SMART METER 3P-4W-200A | $\$ 5533.35$ |
| M802 | 3PH 3W 120-480V 20A TX DMD MESH RADIO | $\$ 1,109.53$ |
| M803 | 3PH 4W 120-480V 20A TX DMD MESH RADIO | $\$ 1,138.28$ |
| M806 | 3PH 3W 600V 200A ENERGY SOCKT METER | $\$ 1,181.44$ |
| M811 | 3PH 4W 120-480V 200A SOCKET DMD METER | $\$ 1,039.07$ |
| M812 | 1PH 3W 240V 200A 2S NET METER | $\$ 261.67$ |
| M813 | 1PH 2W 240V 20A TX TYPE DEMAND METER | $\$ 831.88$ |

Table 6b: Total Average Unit Costs by Type of Smart Meter - Contractor Installed

| Meter Part <br> Number | Description | Total Unit <br> Cost |
| :--- | :---: | :---: |
| M780 | SMART METER 240V 200A 1.5 EL. | $\$ 140.97$ |

iii. Determined a proxy capital cost of smart meters by customer class based on the number of smart meters installed, and the installed average unit capital cost of smart meters from i. and ii. above, respectively, see Table 7 below. Note as the mass deployment of residential smart meters was completed by the end of 2009, the smart meters that were installed for the Residential Class in 2010 and 2011 were installed by HOBNI staff.

Table 7: Total Estimated Capital Cost of Installed Smart Meters

| Meter Part Number | Description |  | Residential |  | S < 50 kW |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| M780 | SMART METER 240V 200A 1.5 EL. | \$ | 18,175,199.57 | \$ | 199,834.30 | \$ | 18,375,033.86 |
| M782 | SMART METER NETWORK 200A 2 EL. | \$ | 385,773.42 | \$ | 48,441.87 | \$ | 434,215.29 |
| M791 | 3S SMART METER 1P-2W-1EL TX TYPE | \$ | 131,768.36 | \$ | 31,959.72 | \$ | 163,728.09 |
| M792 | 16 S SMART METER 3P-4W-200A | \$ | - | \$ | 3,144,072.30 | \$ | 3,144,072.30 |
| M802 | 3PH 3W 120-480V 20A TX DMD MESH RADIO | \$ | - | \$ | 102,077.08 | \$ | 102,077.08 |
| M803 | 3PH 4W 120-480V 20A TX DMD MESH RADIO | \$ | - | \$ | 776,309.33 | \$ | 776,309.33 |
| M806 | 3PH 3W 600V 200A ENERGY SOCKT METER | \$ | - | \$ | 321,352.31 | \$ | 321,352.31 |
| M811 | 3PH 4W 120-480V 200A SOCKET DMD METER | \$ | - | \$ | 15,586.08 | \$ | 15,586.08 |
| M812 | 1PH 3W 240V 200A 2 S NET METER | \$ | - | \$ | 3,401.74 | \$ | 3,401.74 |
| M813 | 1PH 2W 240V 20A TX TYPE DEMAND METER | \$ | 831.88 | \$ | 2,495.64 | \$ | 3,327.52 |
| Total Cost of Installed Smart Meter |  | \$ | 18,693,573.23 | \$ | 4,645,530.37 | \$ | 23,339,103.59 |

Average Unit Cost by Class

| $\$$ | 146.10 | $\$$ | 564.87 | $\$$ | 171.39 |
| :--- | :--- | :--- | :--- | :--- | :--- |

iv. As a data integrity check, HOBNI validated the reliability of the costs allocated by comparing total cost of smart meters determined from iii. above for each customer class to the combined life-to-date capital costs incurred to install smart meters for the Residential and the General Service < 50 kW customer classes, see Table 8 below.

Table 8: Total Life to Date Costs of Installed Smart Meters

| Work Order \# | Description | Combined Residential and \& General Service < 50 kW - * |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LTD 2009 | 2010 | 2011 | 2012 | Subtotal |
| A084-1 | Res SM Material | 17,236,899.24 | 918,451.80 | 314,636.63 | 17,117.79 | 18,469,987.67 |
| A084-2 | Res SM Labour (Contract) | 830,716.40 | - | 48,381.74 |  | 879,098.14 |
| A084-3 | Res SM Labour ( ln -house) | 11,143.44 | - | - |  | 11,143.44 |
| A084-4 | Res SM Material (Contract) | 4,298.00 | - | - |  | 4,298.00 |
| A084-5 | Res SM Warranty Repairs | 160,379.60 | (95,558.45) | 36,243.97 |  | 101,065.12 |
| A084-6 | Meter Base Repairs (In-house) | 121,082.38 | 30,434.23 | 3,051.97 |  | 154,568.58 |
| A084-7 | Meter Base Repairs (Contract) | 160,215.68 | 44,309.21 | 12,115.70 |  | 216,640.59 |
| A084-9 | Res SM IT Development | - | - | - |  | - |
| A180-1 | SM Capital Non-Material | 740,345.62 | 347,224.29 | 506,080.59 |  | 1,593,650.50 |
| A180-2 | SM Administration |  |  |  |  |  |
| A180-3 | SM Computer Equipment |  |  |  |  |  |
| A180-4 | SM Trilliant AMI Network Design |  |  |  |  |  |
| A180-9 | SM Capital Non-Material IT Development |  |  |  |  |  |
| A356-1 | Commercial SM Material | - | 1,697,041.20 | 128,652.22 | $(60,558.46)$ | 1,765,134.96 |
| A356-3 | Commercial SM Labour | - | 283,437.35 | 63,454.74 | 122,367.86 | 469,259.95 |
|  |  | \$ 19,265,080.36 | \$ 3,225,339.63 | \$ 1,112,617.56 | \$ 78,927.19 | \$ 23,664,846.95 |

*     - Total installed cost of Smart Meters only.

The life-to-date smart meter material and installation costs incurred by HOBNI for its Smart Meter Program was $\$ 23,664,846.95$ per Table 8 above, and the total estimated material and installation costs per Table 7 were $\$ 23,339,103.59$. Approximately $98.6 \%$ of the total costs incurred are accounted for using this approach; HOBNI concluded that on the whole this approach yielded reasonable results.
v. Based on the preceding information HOBNI then determined the cost allocation percentages for use in the OEB Smart Meter Model for 2010 to 2011 and in the 2010 Stub Year model. In Table 9a below, for the Residential class an average installed unit capital cost of $\$ 207.08$ was used as determined in Table 6a above, and for the General Service < 50 kW class the average installed unit capital costs used were $\$ 564.87$ as determined in Table 7 above.

As per Table 9a, the total material and installation costs applied for by HOBNI in this final disposition application were $\$ 4,416,675.42$, the difference between this amount and $\$ 3,929,175.57$ of $\$ 487,499.85$ was allocated based on the number of smart meters installed for each class. Non installation costs for Smart Meter Administration \& Non-Material IT Development costs of $\$ 496,759.26$ were also allocated based on the number of smart meters installed for each class. Lastly, Computer Software and AMI Design costs of $\$ 1,204,937.41$ were allocated based on Life-to-Date ("LTD") number of smart meters installed by customer class, as this capital was required so all smart meters could function as part of the AMI network.

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Table 9a: Smart Meter Capital Cost Ratios for 2010 to 2011 Smart Meter Model

| Description |  | Residential |  | GS < 50 kW |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LTD 2009 Smart Meters Installed |  | 121,622 |  | 3,570 |  | 125,192 |
| 2010 Smart Meters Installed |  | 3,221 |  | 4,317 |  | 7,538 |
| 2011 Smart Meters Installed |  | 3,107 |  | 319 |  | 3,426 |
| LTD 2011 Smart Meters Installed |  | 127,950 |  | 8,206 |  | 136,156 |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| \# Installed - 2010 to 2011 |  | 6,328 |  | 4,636 |  | 10,964 |
| Average installed unit capital cost per meter | \$ | 207.08 | \$ | 564.87 | \$ | 358.37 |
| Total Installed Cost of SM | \$ | 1,310,415.99 | \$ | 2,618,759.58 | \$ | 3,929,175.57 |
|  |  |  |  |  |  |  |
| Additions: |  |  |  |  |  |  |
| Costs Above Average Costing | \$ | 281,366.20 | \$ | 206,133.65 | \$ | 487,499.85 |
| Total Expected Cost of Installed SM | \$ | 1,591,782.19 | \$ | 2,824,893.23 | \$ | 4,416,675.42 |
|  |  |  |  |  |  |  |
| Addition of Costs Allocated: |  |  |  |  |  |  |
| Smart Meter Administration \& Non-Material IT Development | \$ | 286,710.38 | \$ | 210,048.88 | \$ | 496,759.26 |
| Computer Software \& AMI Design | \$ | 1,132,316.91 | \$ | 72,620.50 | \$ | 1,204,937.41 |
| Smart Meter Costs to Allocate | \$ | 3,010,809.48 | \$ | 3,107,562.60 | \$ | 6,118,372.09 |
|  |  |  |  |  |  |  |
| Ratio for 2010-2013 Smart Meter Model |  | 49.21\% |  | 50.79\% |  | 100.00\% |

Based on the preceding cost allocation approach, it was determined that $49.21 \%$ of the total smart meter capital costs requested for disposition of $\$ 6,118,372.09$ pertained to the Residential class, and the balance of $50.79 \%$ pertained to the General Service < 50 kW class. These percentage allocations were based on best data available coupled with the assumptions as stated above. These allocation percentages were used to apportion the revenue requirement calculated in the OEB Smart Meter model, between the Residential and General Service < 50 kW classes, in Tabs "10A. Cost_Alloc_SMDR" and "10B. Cost_Alloc_SMIRR".

Table 9b below determines the percentage allocations to use in the Smart Meter 2010 Stub Year model. The allocation below, assumes that the 2010 Stub Year costs are allocated based on Smart Meter Capital Cost installed by customer class to December 31, 2009. The allocations are based on the proxy amounts per Table 7 above less the estimated installed cost of smart meters put into service in 2010 and 2011, i.e from Table 9a.

Table 9b: Smart Meter Capital Cost Ratios for 2010 Stub Year Smart Meter Model

| Description | Residential |  | GS < 50 kW |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total LTD 2011 Cost of Installed Smart Meters | \$ | 18,693,573.23 | \$ | 4,645,530.37 | \$ | 23,339,103.59 |
| Less Installed cost of Smart Meters for 2010-2011 | \$ | (1,310,415.99) | \$ | (2,618,759.58) | \$ | (3,929,175.57) |
| Total LTD 2009 Cost of Installed Smart Meters | \$ | 17,383,157.24 | \$ | 2,026,770.79 | \$ | 19,409,928.02 |
|  |  |  |  |  |  |  |
| Stub Year |  | 89.56\% |  | 10.44\% |  | 100.00\% |

## 4. Ref: Operational Efficiencies and Cost Saving

On page 19 of Guideline G-2011-0001: Smart Meter Funding and Cost
Recovery - Final Disposition, the Board states:
"In considering the recovery of smart meter costs, the Board also expects that a distributor will provide evidence on any operational efficiencies and cost savings that result from smart meter implementation."
a) Please discuss operational efficiencies and cost savings achieved by HOBNI. In particular, please identify any operational efficiencies, cost savings or other benefits incremental to any reflected in HOBNI`s 2011 Cost of Service application.
b) With respect to any incremental operational efficiencies or savings identified in a), please explain how these have been reflected in this Application.

Response:
a) The installation of smart meters in HOBNI's service territory for all Residential and General Service customers < 200 kW will eliminate the need for manual meter reads for these customers. In HOBNI's 2011 Cost of Service application, HOBNI submitted the following actual and forecasted expenses for 2008 to 2011.

|  | 5310 Meter Reading Expense |
| :--- | :--- |
| 2008 | $(861,229.95)$ Actual |
| 2009 | $(683,555.40)$ Actual |
| 2010 | $(242,752.00)$ Forecasted |
| 2011 | $(332,414.00)$ Forecasted |

The majority of these costs are associated with manual meter reading. As illustrated in the above table, HOBNI has saved approximately $\$ 1.3 \mathrm{M}$ since 2008 on meter reading costs. These cost savings were reflected on our 2011 Cost of Service rate application and therefore reflected in the current revenue requirement.

Smart Meters also provide the customer with hourly consumption and will help to facilitate the customers control over their usage. This
will prove beneficial to customers, but there will be no direct savings to HOBNI.

Smart meter data can be used by HOBNI to in order to provide more accurate unbilled information on a monthly basis. Although there is no direct financial benefit to HOBNI, it will facilitate more accurate revenue estimations and PBR reporting data.

HOBNI will also be considering utilizing its AMI to operate remote meter disconnects. This will allow HOBNI to remotely disconnect meters for final billing purposes or nonpayment and reduce the trucking and labour costs of performing this function manually. Since this is a future project for consideration, it is not possible to determine the costs savings as program implementation costs are unknown at this time.

HOBNI's smart meters are equipped with the ability to provide outage management information. Once this program is implemented, HOBNI will be able to detect a customer outage immediately. As this program is under development, it is unknown what cost savings are associated with this project.
b) As noted above, it is not possible to quantify these expected future savings associated with the proposed projects as they have not been fully developed. As a result, the expected costs associated with their implementation are not known at this time. Because of this, this application does not reflect any future savings associated with these projects.

## 5. Ref: Smart Meter Model

If HOBNI has changed its inputs to the Smart Meter Model as a result of any of the above interrogatory responses, please update and re-file the Smart Meter Model in working Microsoft Excel format, using version 3.00 of the model.

## Response:

HOBNI has updated the OEB Smart Meter model and the 2010 Stub Year model to establish class specific SMDR and SMIRR rate riders for the Residential and General Service $<50 \mathrm{~kW}$ classes. The updated models are included in Appendices A and B.

In addition, Appendix C, includes the updated OEB Smart Meter model for the General Service $50-699 \mathrm{~kW}$ class, Appendix D includes the updated carrying charge calculations for January 1 to April 30, 2013 used in the OEB Smart Meter models, and Appendix E includes updated tables for SMDR Model Mapping, and Bill Impact Tables. The Bill Impact Tables have been updated to include HOBNI's current rates which were implemented on January 1, 2013.

## 6. Ref: Cost Allocation

a) If HOBNI has made revisions to its Smart Meter Model as a result of its responses to interrogatories, please update the proposed class-specific SMDRs accordingly.
b) Similarly, please update the calculation of class-specific SMIRRs.

## Response:

a) HOBNI has updated the Smart Meter Models to reflect changes to the class specific SMDRs. Table 10 below provides a summary of the updated SMDRs.

Table 10: Class Specific Smart Meter Disposition Rate Riders

| Customer Class | Revenue Requirement | SMFA <br> Collected | Carrying <br> Charges | True Up | Forecast <br> Customers | Disposition Period Months | Rate Rider |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Residential | \$ 3,939,220 | \$(3,524,531) | \$(39,753) | \$ 374,936 | 132,507 | 8 | \$ 0.35 |
| General Service < 50 kW | \$ 1,446,217 | \$ $(223,427)$ | \$ 10,550 | \$1,233,339 | 8,600 | 8 | \$ 17.93 |
| General Service 50 to 699 kW | \$ 323,208 | \$ $(42,297)$ | \$ 770 | \$ 281,681 | 1,521 | 8 | \$ 23.15 |
| Total | \$ 5,708,645 | \$(3,790,255) | \$ $(28,433)$ | \$1,889,956 | 142,628 |  |  |

b) HOBNI provides an updated calculation of class-specific SMIRRs in Table 11 below.

Table 11: Class Specific Smart Meter Incremental Revenue Rate Riders

| Customer Class | Forecasted Customers | 2013 Incremental <br> Revenue |  | Monthly Charge |
| :--- | ---: | ---: | ---: | ---: |
| Residential | 132,507 | $\$$ | 644,903 | $\$$ |
| GS<50kW | 8,600 | $\$$ | 635,890 | $\$$ |
| GS $>50 \mathrm{~kW}$ | 1,521 | $\$$ | 181,321 | $\$$ |
| Total | 142,628 | $\$$ | $1,462,115$ | 6.16 |

## 7. Ref: Application, page 16 - Smart Metering Charge

HOBNI notes that no costs for the MDM/R are included for recovery in this Application, and that the amount, allocation and recovery mechanism for the Smart Metering Charge ("SMC") is being considered separately in another application under File No. EB-2012-0011. HOBNI then goes on to state:

HOBNI understands that these costs could be deferred for future recovery. If this is the case, HOBNI submits that Account 1556 would then be used to track costs related to the Provincial MDM/R for future disposition. Therefore, HOBNI does not propose to close account 1556 at this time.

What is the basis for HOBNI stating that Account 1556 be used for tracking the costs, and potentially, the recovery of the SMC?

## Response:

The Board is currently adjudicating the Independent Electricity System Operator's (IESO) application (as Smart Meter Entity) for the approval of a Smart Metering Charge (SMC) effective July 1, 2012 to December 31, 2017. In the Board's Decision and Order on Issues List November 2, 2012, cases EB-2012-0100 and EB-2012-0211, the allocation and recovery of the SMC and the SME/LDC Agreement ${ }^{1}$ have not been included in the scope of the final issues list. It is not known how soon after the Board's decision on proceeding EB-2012-0100, will the Board decide on proceeding EB-20120211 on the allocation and recovery of the SMC and the SME/LDC Agreement.

To clarify, if the IESO commences billing HOBNI the SMC before the Board decides on the recovery of the Smart Meter Charge from customers, case EB-2012-0211, HOBNI requests that it be permitted to use account 1556 to capture the amount SMC paid to the IESO for future disposition. As an alternative, if the Board determines that both accounts 1555 and 1556 should no longer be used, then HOBNI proposes to use account 1508 Other Regulatory Assets under a new Sub-account Smart Meter Cost Variance.

[^0]
## 8. Ref: Application, pages 25-26 - Depreciation Expense

 Please confirm that HOBNI has used the "Half-year" rule for calculating the depreciation expense related to smart meter capital costs in the first year (i.e., the year that the assets go into service), for the depreciation expenses documented in Table 4 and explained on pages 25 and 26. If not, please explain why.Response:
HOBNI confirms that it used the "Half-year" rule for calculating depreciation expense related to smart meter capital costs in the year that the assets went into service, as totalled in Table 4 on page 26 of 55.

## 9. Ref: Application, page 27 - Actual versus Forecast Variances

The following questions relate to Table 7.
a. Please explain the overage of $\$ 1,158,237$ for Smart Metering Computer Software (\$1,191,937 actual versus $\$ 33,700$ budget).
b. Please explain the underage of $(\$ 581,617)$ for Smart Metering Capital IT Development (\$227,308 actual versus $\$ 808,925$ budget).

## Response:

Preamble - Upon further review of forecast capital costs that were submitted with its previous 2011 Smart Meter disposition application HOBNI determined that $\$ 808,925$ was classified as Smart Metering Capital IT Development and $\$ 33,700$ had been classified as Smart Metering Computer Software. These forecast amounts should be reversed. $\$ 33,700$ should have been forecast as Smart Metering Capital IT Development and $\$ 808,925$ should have been classified as Smart Metering Computer Software. HOBNI provides Table 12 below showing the actual costs, original forecast costs, and updated forecast costs.

Table 12: Actual vs Forecast Capital Cost for 2010 to 2012 (Updated)

| Capital Category | Actual |  | Forecast in 2011 COS <br> Application |  | Adjusted Forecast for 2011 COS Application |  | Over (under) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Smart Meter Material | \$ | 3,722,826 | \$ | 3,213,409 | \$ | 3,213,409 | \$ | 509,417 |
| Smart Meter Labour (in-house) | \$ | 1,725,368 | \$ | 680,502 | \$ | 680,502 | \$ | 1,044,866 |
| Smart Meter Labour (contract) | \$ | 48,382 | \$ | - | \$ | - | \$ | 48,382 |
| Meter Base Repair (in-house) | \$ | 33,486 | \$ | 667,128 | \$ | 667,128 | \$ | $(633,642)$ |
| Meter Base Repair (contract) | \$ | 56,425 | \$ | 5,743 | \$ | 5,743 | \$ | 50,682 |
| Smart Metering Management Labour and Truck | \$ | 269,451 | \$ | 245,268 | \$ | 245,268 | \$ | 24,184 |
| Smart Metering Computer Software | \$ | 1,191,937 | \$ | 33,700 | \$ | 808,925 | \$ | 383,012 |
| Smart Metering AMI Network Design | \$ | 13,000 | \$ | 25,000 | \$ | 25,000 | \$ | $(12,000)$ |
| Smart Metering Capital IT Development | \$ | 227,308 | \$ | 808,925 | \$ | 33,700 | \$ | 193,608 |
| Total | \$ | 7,288,184 | \$ | 5,679,675 | \$ | 5,679,675 | \$ | 1,608,508 |
|  |  |  |  |  |  |  |  |  |
| Number of Smart Meters Installed |  | 11,941 |  | 8,390 |  | 8,390 |  | 3,551 |
| Capital Cost per Meter Installed | \$ | 610.35 | \$ | 676.96 | \$ | 676.96 | \$ | (66.61) |

a) Based on the preceding Table 12, the overage for the Smart Metering Computer Software has been adjusted to \$383,012 ( $\$ 1,191,937$ actual versus $\$ 808,925$ budget). This cost variance was due to a decision to expand the original scope of work to include the development of a system recovery solution not previously incorporated in the original plan. At the time of the development of the system required for communications and processing of smart metering data, a decision had been made that system recovery would not be implemented. That meant that the head-end system was being operated without an active system recovery plan in the event of material failure at the data centre. Since our phased implementation, it had been identified that further service requirements that include the implementation of system recovery and the migration to production of SerViewCom 1.60.10 and Unity Suite 9.x. had to be implemented. In order to accommodate this requirement, additional programming and development work had to be done in order to incorporate these new requirements. The above identified variance is a result of these changes to our original scope of work.
b) Based on the preceding Table 12, the overage for the Smart Meting Capital IT Development has been adjusted to $\$ 193,608$ ( $\$ 227,308$ actual versus $\$ 33,700$ budget). This cost variance is associated with additional programming requirements, associated with interfacing HOBNI's CIS with the MDMR. Various programs were developed, tested and implemented for TOU billing. This included work to ensure proper synchronization of customer data, meter changes and the retrieval of data associated with TOU billing.

## TAB 2 <br> SCHEDULE 1.0 <br> RESPONSES TO VECC INTERROGATORIES

# Hydro One Brampton Networks Inc. 2012 Smart Meter Cost Recovery EB-2012-0440 <br> <br> Responses to Vulnerable Energy Consumers Coalition (VECC) <br> <br> Responses to Vulnerable Energy Consumers Coalition (VECC) Interrogatories 

 Interrogatories}

## VECC Question \# 1

Reference: Application, Page 11
Preamble: The evidence indicates HOBNI previously applied for disposition and recovery of smart meter costs on two separate occasions (EB-2007-0882 \& EB-2010-0132).
a) Please provide a schedule that summarizes the total capital and OM\&A smart meter costs (show minimum functionality and costs beyond minimum functionality separately), the total number of installed meters and total unit costs per installed meter approved in EB-2007-0882 \& EB-2010-0132.
b) Please confirm the types and quantities of smart meters installed by customer class for each application noted above.
c) Please provide the average unit cost of installed meters by customer class previously approved in EB-2007-0882 \& EB-2010-0132.
d) Please confirm the SMDR and SMIRR rate riders by customer class for each application noted above.
e) Please provide the planned date for HOBNI's next cost of service application.

## Response:

a) Table 13 below provides a summary schedule of data from the previous OEB decisions - EB-2007-0882 and EB-2010-0132.

Table 13: OEB Approved Capital and OM\&A Expenditure (2006 to 2009)*

| Description | 2006 to 2009 OEB Approved |  |
| :---: | :---: | :---: |
| Minimum Functionality Costs | \$ | 17,440,950 |
| Cost Beyond Minimum Functionality | \$ | 2,372,388 |
| Total Capital | \$ | 19,813,338 |
| Total OM\&A Costs | \$ | 343,345 |
| Total Smart Meter Costs | \$ | 20,156,683 |
| Total Number of Smart Meters Installed |  | 125,192 |
| Average Cost per Smart Meter Installed | \$ | 161.01 |

*     - Previously approved costs are based on OEB decisions EB-2007-0882 \& EB-2010-0132
b) HOBNI did not track the data being requested by VECC and it is not readily available; however, HOBNI was able to query the meters that were active on customer's premises as at December 31, 2011 and has provided the quantities of smart meters by customer class in aggregate, in Table 14 below. The quantities in Table 14 are effectively the cumulative number of Smart Meters installed by customer class, with some minor differences.

Table 14: Active Smart Meters on Customers Premises as at December 31, 2011

| Meter Part Number | Description | Residential * | $\begin{gathered} \text { General } \\ \text { Service < } 50 \\ \text { kW * } \end{gathered}$ | General Service 50699 kW ** | Total |
| :---: | :---: | :---: | :---: | :---: | :---: |
| M780 | SMART METER 240V 200A 1.5 EL. | 126,131 | 965 |  | 127,096 |
| M782 | SMART METER NETWORK 200A 2 EL. | 1,314 | 165 |  | 1,479 |
| M791 | 3S SMART METER 1P-2W-1EL TX TYPE | 503 | 122 |  | 625 |
| M792 | 16S SMART METER 3P-4W-200A |  | 5,895 |  | 5,895 |
| M802 | 3PH 3W 120-480V 20A TX DMD MESH RADIO |  | 92 | 23 | 115 |
| M803 | 3PH 4W 120-480V 20A TX DMD MESH RADIO |  | 682 | 810 | 1,492 |
| M806 | 3PH 3W 600V 200A ENERGY SOCKT METER |  | 272 |  | 272 |
| M811 | 3PH 4W 120-480V 200A SOCKET DMD METER |  | 15 | 134 | 149 |
| M812 | 1PH 3W 240V 200A 2S NET METER |  | 13 |  | 13 |
| M813 | 1PH 2W 240V 20A TX TYPE DEMAND METER | 1 | 3 | 10 | 14 |
| Total Active Smart Meters as at December 31, 2011 |  | 127,949 | 8,224 | 977 | 137,150 |

* The smart meter quantities for the Residential and General Service < 50 kW classes are based on the Active Meter Master file as at December 31, 2011, which is reflective of the smart meters associated with all metered customer premises. Actual meters installed by year data is not available. Note there are small differences between the quantities reported in this table vs the number of meters actually installed by year due to customer reclassifications between the General Service customer classes, and other electrical service changes.
** The smart meter quantities for the General Service $50-699 \mathrm{~kW}$ class is based on the meters installed in 2011 and 2012.

Note: Some small differences in number of meters as compared to Table 2, page 18 of 55 of the application due to customer reclassifications between GS < 50 kW and GS 50-699 kW classes and other electrical service related changes.
c) The Board did not approve the average unit cost of installed meters by customer class in its two previous smart meter applications. The Board approved an average unit cost of installed meters as a combined unit cost for the Residential and the General Service < 50 kW Classes. HOBNI is unable to provide the information requested as it is not available.
d) The Board did not approve SMDR or SMIRR rate riders by customer class in its two previous smart meter applications. The Board approved a single SMDR and SMIRR used by both the Residential and General Service < 50 kW customer classes. In response to OEB staff interrogatory \#3 HOBNI has updated the Smart Meter Models and allocated costs between the Residential and General Service < 50 kW classes. Please refer to responses to OEB staff interrogatory 6 a) and 6b) for updated SMDR and SMIRR rate riders by customer class.

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e) HOBNI's plans of filing its next Cost of Service rate application for 2015 rates by April 2014, based on the Board's deadline.

## VECC Question \# 2

Reference: Application, Page 12
a) The evidence indicates the application is based on costs to September 30, 2012. Please update Table 1 Summary of Audited vs. Unaudited Smart Meter Program Costs to reflect updated 2012 actuals and forecasted costs for the balance of 2012 if required and 2013.

Response:
Table 1 has been updated to reflect 2012 audited actual costs. The forecast for 2013 has been updated to reflect more representative OM\&A cost allocations for the year based on the activities as originally filed. See response to OEB staff interrogatory 1 a) for further information.

Table 15: Audited vs Unaudited Costs

| Year |  |  |  |  |  |  |  |  |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |

## VECC Question \# 3

Reference: Application, Page 13, lines 7-11
a) Please explain the need and discuss in more detail the work and cost required in 2013 for polyphase meters related to "firmware and hardware related communications issues" to make them fully functional with the AMI.

## Response:

a) Residential and small general service customers are billed on kwh consumption. The software requirements to bill these customers are fully functional with ServiewCom. However, customers with polyphase meters who are billed on both demand and energy values require additional firmware and programming in order to extract the demand component of the customers usage.

In some cases, additional hardware such as repeaters have been required for customers who signal strength of the transmission of their smart meter has been attenuated by various obstacles. For instance, in some cases, customer's meters are located in a buildings underground facility or are surrounded by a steal encasement. In these cases, these physical obstacles do not readily allow the smart meter transmission to propagate out beyond these obstructions. Repeaters may be installed in order to ensure that the signal from the smart meter gets to a collector.

## VECC Question \# 4

Reference: Application, Page 13, lines 17-24
a) Please explain why and how HOBNI was unable to reliably disaggregate smart meter costs between residential and GS $<50 \mathrm{~kW}$ customers.
b) Please explain why and how HOBNI was able to reliably segregate smart meter costs for the GS 50 to 699 kW class.

Response:
a) HOBNI did not segregate smart meter costs by customer class in accounts 1555 and 1556 as its cost tracking system was not set up to separate costs between customer classes as this was not a Board smart meter filing requirement. Note however; that in HOBNI's responses to OEB staff interrogatory \#3, HOBNI has disaggregated smart meter costs between the Residential and General Service < 50 kW customer classes.
b) One of the smart meter filing requirements is to clearly identify and support all costs beyond minimum functionality ${ }^{2}$. Since the installation costs of smart meters for the General Service > 50-699 kW class is a cost beyond minimum functionality HOBNI set up its cost tracking system to segregate its smart meter costs for this class so it could obtain cost recovery.

[^1]
## VECC Question \# 5

Reference: Application, Page 22, lines 5-14
a) Please discuss if the smart meter system architecture purchased by HOBNI that facilitates an outage management notification system was approved by the Board for residential and GS<50 kW customers in prior applications (EB-2007-0882 \& EB-2010-0132) and included in the determination of the rate riders. If not, why not?
b) Please provide the incremental capital cost per meter for smart meters with capabilities beyond the minimum functionality requirement as per part (a) approved by the Board in prior applications (EB-2007-0882 \& EB-2010-0132).

Response:
a) In its previous application EB-2010-0132, HOBNI submitted that:
"In the course of selecting an Advanced Metering Infrastructure (AMI), Hydro One Brampton wanted to select a system that could be leverage in a way that would best serve its customers. The company saw merit in choosing a system that would not only provide AMI capabilities, but also facilitate an outage management response system. This system will allow Hydro One Brampton operators to identify customer outages in real time and facilitate a faster response and restoration times ${ }^{3}$."

HOBNI also submitted that the incremental costs associated with purchasing Smart Meters with capabilities beyond the minimum functionality requirement outlined by the OEB was approximately $\$ 2.4$ million to the end of 2009.

The Board approved HOBNI's submission including the cost of HOBNI's AMI system and the incremental costs of meters with the capability of facilitating an outage management response system. These costs were included in the determination of the rate riders.
b) As indicated in part a), the Board approved incremental capital costs per meter for smart meters with capabilities beyond the minimum functionality requirements of $\$ 18.95$ per meter, in its previous application EB-2010-0132.

[^2]
## VECC Question \# 6

Reference: Application, Page 24
a) Please explain why HOBNI tracked the capital and OM\&A expenditures and depreciation expenses separately for the GS 50-699 kW customer class, and not for the other customer classes.
b) Please explain how HOBNI tracked the capital and OM\&A expenditures and depreciation expenses for the residential and GS $<50 \mathrm{~kW}$ customer classes.

## Response:

a) See response to VECC question \#4 b). The response to this question is effectively the same; however, as much of the OM\&A costs incurred were common costs benefitting all classes it was not possible to break out specific costs per customer class, therefore HOBNI allocated the OM\&A costs between the GS 50-699 kW class and the low volume customer classes on the basis of number of smart meters installed.
b) When HOBNI commenced its Smart Meter Program it set up work orders in its work order costing system to capture Capital and OM\&A costs by cost activity, they were not set up to segregate between the Residential and the General Service < 50 kW customer classes. HOBNI did not create dual groupings of work orders to capture the costs for each class exclusively since there was not a Board requirement to report costs on a customer class basis.

All costs by activity were captured on a combined bases, such that for example, all material, labour and vehicle costs for the various activities were combined and include costs to install, operate and maintain smart meters for both the Residential Class and the General Service < 50 kW customer classes. As many of the source data that drive costs were not broken out by customer class at the time the activities were performed it is now not possible to reliably break out those costs after the activities were completed.

Note however, that in its responses to OEB staff interrogatory \#3, HOBNI has disaggregated smart meter costs between the Residential and General Service < 50 kW customer classes.

## VECC Question \# 7

Reference: Application, Page 27, Table 6
a) Of the 11,941 smart meters installed from 2010 to 2012 , please provide the total number of polyphase meters and single phase meters installed.
b) Please provide a breakdown of the number of polyphase meters installed by customer class.

## Response:

a) HOBNI does not have the data available to determine the total number of single phase or polyphase smart meters installed by calendar year.
b) HOBNI does not have the data available to provide a breakdown of the data requested in a) above for the polyphase smart meters installed by customer class, by year. HOBNI is able to provide the total number of smart meters installed for its entire smart meter program, per Table 16 below. Table 16 provides the number of single phase and polyphase meters by customer class for HOBNI's entire Smart Meter Program.

Table 16: Total Number of Smart Meters Installed For Program - By Type of Phase By Class

| Number of <br> Customer Class | Number of Poly <br> Meters | Phase <br> Phase Meters | Total Meters |
| :--- | ---: | ---: | ---: |
| Residential Class | 127,949 |  | 127,949 |
| General Service < 50 kW | 1,268 | 6,956 | 8,224 |
| General Service $>50-699 \mathrm{~kW}$ | 10 | 967 | 977 |
| Totals | 129,217 | 6,956 | 136,173 |

## VECC Question \# 8

Reference: Application, Page 33, Table 10
a) Please explain the variance in SM operating expenses, actual compared to forecast.
b) Please explain the nature of the following costs: communication costs meter reading, HONI operations costs meter read and communications costs meter read.

Response:
a) With respect to the variance for SM Operating Expenses, it should not be looked at in isolation from other SM OM\&A accounts as there is an overlap in activities between this expense category and the SM Maintenance Expenses category. To have a better understanding of the variances for these two expenses the Actual costs and the Forecast costs should be compared on a combined basis.

Table 17: Smart Meter Operating \& Maintenance Expenses Category

| Expenditure Description |  | Actual Costs | Forecasted Costs | Variance <br> Over/(Under) |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Sm Operating Expenses | $\$$ | 327,613 | $\$$ | 236,669 | $\$$ |
| SM Maintenance Expenses | $\$$ | 24,858 | $\$$ | 333,944 |  |
| Total SM O\&M | $\$$ | $\mathbf{3 5 2 , 4 7 1}$ | $\$$ | $\mathbf{5 7 0 , 5 7 3}$ | $\mathbf{\$}$ |

Based on the preceding Table 17 there is a favourable variance of $\$(218,102)$ on a combined basis. On the whole, OM\&A expenses are considerably lower than what was forecasted due to more of the Smart Meter work being capital work rather than OM\&A related work. HOBNI cautions that the forecasts submitted with the last smart meter disposition filing were not actually budgeted and approved expenditures for the smart meter program, the forecasts were approximations based on best information at that time.
b) Communication Costs Meter Reading - These are costs associated with communicating to the regional collectors and downloading the hourly meter reads for all meters associated with the collector. HOBNI utilizes a Bell Canada's cellular network to achieve this function.

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HONI Operations Costs Meter Read - HOBNI has a contract with HONI for services relating to HOBNI's share of costs associated with the information technology, information software application and Infrastructure Management costs (computers servers and storage).

Communication Costs Meter Read: Under the contract mentioned above, these costs are for services from HONI for daily file transmission to the MDMR.

## VECC Question \# 9

Reference: Application, Page 34, lines 13-19
a) Please confirm the additional number of collectors and repeaters installed so data would flow from source to destination.
b) Please discuss if HOBNI's contract with Trilliant considers the responsibility of costs (Trilliant vs. HOBNI) to achieve system stability (i.e. costs to install additional collectors and repeaters).

Response:
a) The contract between HOBNI and Trilliant segregated the city into a series of "Production Areas" These areas were basically identical to HOBNI's billing cycles. Due to overlap of hardware and geographical coverage, it was agreed upon that a production area was completed when $98 \%$ of all meters were fully functioning. Based on this criteria, there were no additional collectors or repeaters required to achieve completion of these production areas.
b) As per the above, the contract between HOBNI and Trilliant defined that a "Production Area" was completed and was to be signed off when $98 \%$ of all meters were fully functioning. Trilliant was responsible for the costs of all material to achieve the above criteria for all residential and GS<50 kw customers. Any additional collectors and repeaters required were to be installed at HOBNI's expense. In some cases, additional collectors and repeaters were required to ensure further connectivity, stability and to accommodate our GS > 50 kW < 200 kW customers for future growth. These costs were the responsibility of HOBNI.

## VECC Question \# 10

Reference: Application, Page 35, lines 1-3
a) Please provide the data HOBNI relies upon to make the statement "...and installed the majority of these higher cost polyphase meters on the General Service 50 to 699 kW class for customers less than 200kW in 2011".

Response:
In the evidence provided by HONBI in its Smart Meter Application in "Table 2: Smart Meter Program Status" page 18 of 55 the table indicates that 319 meters were installed in 2011 for the General Service < 50 kW class, and 904 smart meters were installed for the General Service > 50 kW class. The General Service 50-699 kW class had only 10 smart meters installed by the end of 2012 that were Single Phase meters.

Based on the proceeding a conservative assumption was made that all of the 319 smart meters installed for the General Service < 50 kW class smart meters were polyphase meters; and, 894 (904-10 Single Phase meters) smart meters installed for the General Service 50-699 kW class were polyphase meters. It was concluded that the majority of polyphase smart meters installed were for the General Service 50699 kW class.

HOBNI's average material cost per unit for a polyphase meter for the General Service < 50 kW class was approximately $\$ 480$, whereas the average material cost per unit for a polyphase meter for the General Service 50-699 kW class was approximately \$920.

In addition, for the General Service 50-699 kW class, HOBNI only installed smart meters for customers with demands less than 200 kW in 2011 as part of HOBNI's smart metering implementation plan. As per HOBNI's Conditions of Service, all General Service 50-699 kW class customers with demands 200 kW or greater are required to have an interval meter.

Based on the above information, HOBNI concluded that the majority of the higher cost polyphase meters that were installed in 2011 were for the General Service 50-699 kW class.

## VECC Question \# 11

Reference: Application, Page 49, lines 10-14
Preamble: The evidence indicates HOBNI was unable to break out cost data between the residential and $\mathrm{GS}<50 \mathrm{~kW}$ class customers reliably enough to allocate reasonably between classes but was able to run a combined class model separately from the GS 50 to 699 class model since HOBNI was able to break out cost data in sufficient enough detail to do so.
a) Please discuss the cost data HOBNI has separately for the residential and $\mathrm{GS}<50 \mathrm{~kW}$ customer classes.
b) Please comment on the cost to install a polyphase meter in the GS<50 kW class compared to the GS 50 to 699 kW class.

## Response:

a) HOBNI has the following separate cost data for the Residential and General Service < 50 kW classes:

- Number of smart meters in the distribution system by type as physically connected to the customer's premises as at December 31, 2011.
- Estimated average installed cost for each type of smart meter, for both HOBNI installed and $3^{\text {rd }}$ party contractor installed.

Note that in response to OEB staff interrogatory \#3, HOBNI has presented this data and used it to allocate smart meter capital costs between the Residential and the General Service < 50 kW customer classes.
b) Customers with polyphase meters in the General Service < 50 kW are generally grouped together in electrical rooms. This facilitates installation efficiencies as travel time and setup; in addition, trucking and labour costs are considerably reduced on a per meter basis. Whereas, a General Service 50-699 kW customer is usually at an individual address and requires access through the customer's facility.

In addition, there are greater complexities associated with arranging customer outages with a General Service 50-699 kW customer then there are for a General Service < 50 kW customer. Also, the Ministry of Labour requires additional manpower when on working with voltages greater than 300 volts.

## VECC Question \# 12

Reference: Smart Meter Recovery Model, Residential \& GS<50 kW, 20121214, Sheet 2
a) Please explain the negative entry $(\$ 239,602)$ under capital costs, line 1.1.1 Smart Meters, in 2012.
b) Please explain the installation costs in 2012 of $\$ 305,750$ since no smart meters are shown as being installed in 2012.
c) Please provide a breakdown of the $\$ 1,339,603$ in 2011 under line 1.3.2 computer software.
d) Please explain the negative entry $(\$ 147,666)$ in 2012 under line 1.3.2 computer software.
e) Please provide a breakdown and details of the costs under line 1.6 . 1 by year.
f) Please explain the costs under line 2.2.1 maintenance costs and account for the increase in 2013.

Response:
a) Table 18 below provides a summary of the components that relate to the entry of $(\$ 239,602)$ in the combined OEB Residential and General Service < 50 kW model.

Material returns in 2012 that were originally issued from stores for deployment in 2011 were not installed in 2011, but were subsequently returned to stores in 2012 and credited to smart meter material capital costs. In addition, material returns also included materials that were installed prior to 2012 but subsequently removed, returned to stores in 2012, returned to the supplier under warranty in 2012, and credited to smart meter material capital costs.

Actual and forecasted costs for 2012 included spending of $\$ 70,624.68$ on network infrastructure equipment such as collectors and repeaters needed to ensure proper communication with installed Smart Meters. In addition, work order costs totaling $(\$ 61,656.38)$ were transferred out of smart meter material capital in 2012 relating to
costs incurred prior to 2012 as these costs did not relate to smart meter capital.

Table 18: Breakdown of Residential and GS<50 kW Material Cost for 2012

| Description | Amount |
| :--- | ---: |
| Material Returns Jan to Sept 2012 | $(248,570.57)$ |
| Cost incurred Jan to Sept 2012 | $52,408.97$ |
| Forecast cost for Oct to Dec 2012 | $18,215.71$ |
| Transfers to and from Other Accounts | $(61,656.38)$ |
| Total | $\mathbf{( 2 3 9 , 6 0 2 . 2 7 )}$ |

b) Table 19 below summarizes the components of the $\$ 305,749.75$ amount shown in the combined OEB Residential and General Service < 50 kW model.

Although additional costs to install smart meters for the Residential and General Service < 50 kW classes in 2012 were not included and captured in the Smart Meter Capital Variance Account 1555; additional costs were incurred in 2012 for labour and material costs to deploy the network infrastructure required to ensure proper communication with installed Smart Meters. In addition, work order costs totaling $\$ 39,454.90$ were transferred into smart meter labour capital in 2012 relating to costs incurred prior to 2012 for costs related to smart meter capital.

Table 19: Breakdown of Residential and GS<50 kW Labour Cost for 2012

| Description | Amount |
| :--- | ---: |
| Labour Costs Jan to Sept 2012 | $183,381.89$ |
| SM Labour Forecast Oct to Dec 2012 | $82,912.96$ |
| Transfers to and from Other Accounts | $39,454.90$ |
| Total | $\mathbf{3 0 5 , 7 4 9 . 7 5}$ |

c) Table 20 below provides a breakdown of the \$1,339,603 2011 LTD under line 1.3.2 Computer Software. The costs relate to services for setting-up and running the SerViewCom system, 3rd party Headend Systems support and management services, SerViewCom Systems Management, SerViewCom commissioning and infrastructure costs, and interest costs while the IT Computer software implementation project was in the Construction Work-In-Progress stage of implementation and was not used and useful.

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Table 20 : Breakdown of Computer Software Costs

| Description | Amount |  |  | Definition/Explanation |
| :---: | :---: | :---: | :---: | :---: |
|  | 2011 | 2012 | Total |  |
| HP Servers for ServiewCom | 115,141 | - | 115,141 | Third Party costs of hardware for running ServiewCom Software. |
| Trilliant ServiewCom Software License | 259,420 | - | 259,420 | Software Licensing for ServiewCom. |
| Capgemini \& Inergi Headend System Support Team | 112,519 | - | 112,519 | Third party costs for implementing ServiewCom. |
| Hardware | 38,261 | - | 38,261 | Third Party costs of additional server and storage hardware. |
| SVC Commissioning Costs | 25,596 | - | 25,596 | Third party costs for implementing ServiewCom. |
| SVC Commissioning Costs Cap/Inergi/Contractors | 58,606 | - | 58,606 | Third party costs for implementing ServiewCom. |
| ServiewCom Systems Management, Commissioning Costs, and Head-End Systems Management Services | 299,633 | - | 299,633 | Third party costs for implementing ServiewCom. |
| Build new environment to support Remote Disconnect Meters (CR\# C0195) 2012 | - | 76,153 | 76,153 | Third party costs for implementing ServiewCom. |
| Build out SVC Infrastructure (CR\# C0196) 2012 | - | 89,999 | 89,999 | Third party costs for implementing ServiewCom. |
| Accrual and Reversal Cost of Environment and Infrastructure | 297,729 | $(297,729)$ | - | Accrual and Reversal for third party costs for implementing ServiewCom |
| Interest Capitalized on Construction Work-in-Progress | 132,698 | $(16,089)$ | 116,609 | Net Interest on life-to-date Construction Work-in-Progress |
| Totals | 1,339,603 | $(147,666)$ | 1,191,937 |  |

a) Table 20 above provides a breakdown of the negative entry of $(\$ 147,666)$ in 2012 under line 1.3.2 of computer software. The key reason for the negative entry relates to actual costs accrued for 2011 that did not materialize in 2012. Invoices totalling \$166,152 were paid in 2012 offset by an accrual reversal in 2012 of $(\$ 297,729)$ and an adjustment of $(\$ 16,089)$ to previously booked interest costs on CWIP.
b) Breakdown and details of costs provided in Table 21 below.

Table 21: Capital Costs Beyond Minimum Functionality - Technical Capabilities of Meter

| Description | $\mathbf{2 0 1 0}$ | $\mathbf{2 0 1 1}$ |
| :--- | ---: | ---: |
| Number of Smart Meters installed Residential <br> and GS < 50 Classes |  |  |
| Incremental Cost per Smart Meter for Outage <br> Management Capabilities | $\mathbf{7 , 5 3 8}$ | 3,426 |
| Total Costs Beyond Minimum Functionality | $\mathbf{\$ 1 4 2 , 8 4 5 . 1 0}$ | $\mathbf{\$ 6 4 , 9 2 2 . 7 0}$ |

c) Please refer to HOBNI's response to OEB IR \#1 which provides the information VECC requests in this interrogatory pertaining to smart meter maintenance costs.

## TAB 3 <br> SCHEDULE 1.0 Models and Updated Tables

## TAB 3

SCHEDULE 1.0

## APPENDIX A - OEB SMART METER MODEL FOR

 RESIDENTIAL AND GENERAL SERVICE < 50 KW CUSTOMER CLASSES


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

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

While this model has been provided in Excel format and is required to be filed with the applications, the onus remains on the applicant to ensure the accuracy of the data and the results. The use of any models and spreadsheets does not automatically imply Board approval. The onus is on the distributor to prepare, document and support its application. Board-issued Excel models and spreadsheets are offered to assist parties in providing the necessary information so as to facilitate an expeditious review of an application. The onus remains on the applicant to ensure the accuracy of the data and the results. Distributors must enter all incremental costs related to their smart meter program and all revenues recovered to date in the applicable tabs except for those costs (and
associated revenues) for which the Boaard has approved on a final basis, i.e. .apital 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 distributor has deployments in 2012, distributors should enter the forecasted OM\&A for 2012 for all smart meters in service.

## Smart Meter Capital Cost and Operational Expense Data

## Smart Meter Installation Plan

ActuallPlanned number of Smart Meters installed during the Calendar Year Residential
General Service < 50 kW
Actualplanned number of Smart Meters installed (Residential and $G S<50 \mathrm{kw}$ only)
Percentage of Residential and $G S<50 \mathrm{~kW}$ Smart Meter Installations Complete
ActualPlanned number of $G S>50 \mathrm{~kW}$ meters installed
Other (please identify)
$\square$

## Capital Costs

1.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)
1.1.1 Smart Meters (may inculud new meters and mooulus, etc.)
1.1.2 Installation Costs (may include socketkits, abour, venicie, benefits, etc.)
1.1.3a Workforce Automation Hardware (may include feieldwork handheless, barcoode hardorware, etc.)
1.1.3b Workforce Automation Software (may incolude fielwwork handoheds, barcoode hardware, etc.,

Total Advanced Metering Communications Devices (AMCD)
1.2 ADVANCED METERING REGIONAL COLLECTOR (AMRC) (includes LAN)
1.2.1 Collectors
1.2.2 Repeaters (may include radio icience, etc.)
1.2.3 Installation (may include meter seals and rings, collectio computer rardware, etc)

Total Advanced Metering Regional Collector (AMRC) (Includes LAN)



## OM\&A Expenses

2.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)
2.1.1 Maintenance (may include meter reverification costs, etc.)
2.1.2 Other (pleases specifiy) $\square$

Total Incremental AMCD OMEA Costs
2.2 ADVANCED METERING REGIONAL COLLECTOR (AMRC) (includes LAN)
2.2.1 Maintenance
2.2.2 Other fleases spectivy $\square$
Total Incremental AMRC OM\&A Costs
2.3 ADVANCED METERING CONTROL COMPUTER (AMCC)
2.3.1 Hardware Maintenance (may include severes support, etc.)
2.3.2 Software Maintenance (may include maintenance support, etic)
2.3.2 Other (pleases specifiy)

Total Incremental AMCC OM\&A Costs
2.4 WIDE AREA NETWORK (WAN)
2.4.1 WAN Maintenance
2.4.2 Other (pleases specifiy) $\square \square$

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

Total Other AMM OM\&A Costs Related to Minimum Functionality
TOTAL OM\&A COSTS RELATED TO MINIMUM FUNCTIONALITY
2.6 OM2A COSTS RELATED TO BEYOND MINIIUM FUNCTIONALITY
(PPease provide a descriptive etite end dientity natur of beyenond minimum Anctionalit costs
2.6.1 Costs reatated to technical capabailities in the the smart meters or related communications infrastructur exceed those specified in 0 .Reg 42506
2.6. Costs for deployment
and smal general sevice
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


## 3 Aggregate Smart Meter Costs by Category

| 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 Sotware |
| 3.1.7 | Total Capital Costs |
| 3.2 | OM\&A Costs |
| 3.2. | Total OM\& Costs |




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

## Capital Structure ${ }^{1}$

Deemed Short-term Debt Capitalization Deemed Long-term Debt Capitalization Deemed Equity Capitalization
Preferred Shares
Total
Cost of Capital Parameters
Deemed Short-term Debt Rate
Long-term Debt Rate (actual/embedded/deemed) ${ }^{2}$ Target Return on Equity (ROE) Return on Preferred Shares

## WACC

$\square$
$\square$
$\square$ 15.0\%
15.0\%
$15.0 \%$

2006

$\square$
0.00\%
$\square$
$\square$
$\square$
2007


2009
2010
2011
2012
2013



$\square$
$15.0 \%$ .


Aggregate Corporate Income Tax Rate
Capital Tax (until July 1st, 2010)

## Depreciation Rates

(expressed as expected useful life in years)
Smart Meters - years

- rate (\%)

Computer Hardware - years

- rate (\%)

Computer Software - years - rate (\%)

Tools \& Equipment - years

- rate (\%)

Other Equipment - years

- rate (\%)

CCA Rates
Smart Meters - CCA Class Smart Meters - CCA Rate

Computer Equipment - CCA Class
Computer Equipment - CCA Rate
General Equipment - CCA Class General Equipment - CCA Rate

Applications Software - CCA Class Applications Software - CCA Rate

$\square$



Assumptions
${ }^{1}$ Planned smart meter installations occur evenly throughout the year
${ }^{2}$ Fiscal calendar year (January 1 to December 31) used.
3 Amortization is done on a striaght line basis and has the "half-year" rule applied


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

Gross Book Value
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
Average Net Book Value
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
Average Net Book Value

2006

$\qquad$

## $4,208,052$ $3,879,623$

 3,879,623$4,043,837$
$\square$


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)

Accumulated Depreciation
pening Balance
mortization expense during year
Retirements/Removals (if applicable)

Net Book Value
Opening Balanc
Closing Balance
Average Net Book Value
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
mortization expense during year
Retirements/Removals (if applicable)
Closing Balance
Net Book Value
Opening Balance
Closing Balance
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 Valu


| $\$$ | $1,191,937$ |
| :--- | :--- |
| $\$$ | - |
| $\$$ | $1,191,937$ |


$\qquad$

$\$$
$\$$
$\$$



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

Average Net Fixed Asset Values (from Sheet 4)
Smart Meters
Computer Har
Computer Hardware
Computer Software
Tools \& Equipment
Other Equipment
Total Net Fixed Assets
Working Capital
Operating Expenses (from Sheet 2)
Working Capital Factor (from Sheet 3)
Working Capital Allowance
Incremental Smart Meter Rate Base
Return on Rate Base
Capital Structure
Deemed Short Term Debt
Deemed Long Term Debt
Equity
Preferred Shares
Total Capitalization
Return on
Deemed Short Term Debt
Deemed Long Term Debt
Equity
Preferre
Total Return on Capita

Operating Expenses
Amortization Expenses (from Sheet 4) Smart Meters
Computer Hardware
Computer Software
Tools \& Equipment
Tools \& Equipment
Other Equipment
Total Amortization Expense in Year
Incremental Revenue Requirement before Taxes/PILs
Calculation of Taxable Income
Incremental Operating Expenses
Amortization Expense
Amortization Expe
Interest Expense
Net Income for Taxes/PILs
Grossed-up Taxes/PILs (from Sheet 7)
Revenue Requirement, including Grossed-up Taxes/PILs


## For PILs Calculation





PILs Calculation

Smart Meter Model for
Electricity Distributors
(2013 Filers)

This worksheet calculates the funding adder revenues.

Account 1555-Sub-account Funding Adder Revenues

| Interest Rates | Approved Deferral and Variance Accounts | CWIP | Date | Year | Quarter |  | Opening Balance (Principal) | Funding Adder Revenues | Interest <br> Rate |  | Interest | Closing Balance | Annual amounts | Board Approved Smart Meter Funding Adder |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2006 Q1 |  |  | Jan-06 | 2006 | Q1 | \$ | - |  | 0.00\% | \$ | - | \$ |  |  |
| 2006 Q2 | 4.14\% | 4.68\% | Feb-06 | 2006 | Q1 | \$ | - |  | 0.00\% | \$ | - | \$ |  |  |
| 2006 Q3 | 4.59\% | 5.05\% | Mar-06 | 2006 | Q1 | \$ | - |  | 0.00\% | \$ | - | \$ |  |  |
| 2006 Q4 | 4.59\% | 4.72\% | Apr-06 | 2006 | Q2 | \$ | - |  | 4.14\% | \$ | - | \$ |  |  |
| 2007 Q1 | 4.59\% | 4.72\% | May-06 | 2006 | Q2 | \$ | - |  | 4.14\% | \$ | - | \$ |  |  |
| 2007 Q2 | 4.59\% | 4.72\% | Jun-06 | 2006 | Q2 | \$ | - |  | 4.14\% | \$ | - | \$ |  |  |
| 2007 Q3 | 4.59\% | 5.18\% | Jul-06 | 2006 | Q3 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2007 Q4 | 5.14\% | 5.18\% | Aug-06 | 2006 | Q3 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2008 Q1 | 5.14\% | 5.18\% | Sep-06 | 2006 | Q3 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2008 Q2 | 4.08\% | 5.18\% | Oct-06 | 2006 | Q4 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2008 Q3 | 3.35\% | 5.43\% | Nov-06 | 2006 | Q4 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2008 Q4 | 3.35\% | 5.43\% | Dec-06 | 2006 | Q4 | \$ | - |  | 4.59\% | \$ | - | \$ | \$ |  |
| 2009 Q1 | 2.45\% | 6.61\% | Jan-07 | 2007 | Q1 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2009 Q2 | 1.00\% | 6.61\% | Feb-07 | 2007 | Q1 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2009 Q3 | 0.55\% | 5.67\% | Mar-07 | 2007 | Q1 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2009 Q4 | 0.55\% | 4.66\% | Apr-07 | 2007 | Q2 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2010 Q1 | 0.55\% | 4.34\% | May-07 | 2007 | Q2 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2010 Q2 | 0.55\% | 4.34\% | Jun-07 | 2007 | Q2 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2010 Q3 | 0.89\% | 4.66\% | Jul-07 | 2007 | Q3 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2010 Q4 | 1.20\% | 4.01\% | Aug-07 | 2007 | Q3 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2011 Q1 | 1.47\% | 4.29\% | Sep-07 | 2007 | Q3 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2011 Q2 | 1.47\% | 4.29\% | Oct-07 | 2007 | Q4 | \$ | - |  | 5.14\% | \$ | - | \$ |  |  |
| 2011 Q3 | 1.47\% | 4.29\% | Nov-07 | 2007 | Q4 | \$ | - |  | 5.14\% | \$ | - | \$ |  |  |
| 2011 Q4 | 1.47\% | 3.92\% | Dec-07 | 2007 | Q4 | \$ | - |  | 5.14\% | \$ | - | \$ | \$ |  |
| 2012 Q1 | 1.47\% | 3.92\% | Jan-08 | 2008 | Q1 | \$ | - |  | 5.14\% | \$ | - | \$ |  |  |
| 2012 Q2 | 1.47\% | 3.51\% | Feb-08 | 2008 | Q1 | \$ | - |  | 5.14\% | \$ | - | \$ |  |  |
| 2012 Q3 | 1.47\% | 3.51\% | Mar-08 | 2008 | Q1 | \$ | - |  | 5.14\% | \$ | - | \$ |  |  |
| 2012 Q4 | 1.47\% | 3.51\% | Apr-08 | 2008 | Q2 | \$ | - |  | 4.08\% | \$ | - | \$ |  |  |
| 2013 Q1 |  |  | May-08 | 2008 | Q2 | \$ | - |  | 4.08\% | \$ | - | \$ |  |  |
| 2013 Q2 |  |  | Jun-08 | 2008 | Q2 | \$ | - |  | 4.08\% | \$ | - | \$ |  |  |



This worksheet calculates the funding adder revenues.

Account 1555-Sub-account Funding Adder Revenues

| $\begin{aligned} & \text { Interest Rates } \\ & 2013 \text { Q3 } \\ & 2013 \text { Q4 } \end{aligned}$ | Approved Deferral and Variance Accounts | CWIP | Date | Year | Quarter |  | Opening Balance (Principal) |  | ling Adder venues | Interest Rate |  | Interest | Closing Balance \$ | Annual amounts | Board Approved Smart Meter Funding Adder |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 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 | \$ | \$ - | \$ | 66,404.04 | 0.55\% | \$ | - | \$ 66,404.04 |  |  |
|  |  |  | Feb-10 | 2010 | Q1 | \$ | 66,404.04 | \$ | 129,468.00 | 0.55\% | \$ | 30.44 | \$ 195,902.48 |  |  |
|  |  |  | Mar-10 | 2010 | Q1 | \$ | 195,872.04 | \$ | 129,758.00 | 0.55\% | \$ | 89.77 | \$ 325,719.81 |  |  |
|  |  |  | Apr-10 | 2010 | Q2 | \$ | 325,630.04 | \$ | 130,339.00 | 0.55\% | \$ | 149.25 | \$ 456,118.29 |  |  |
|  |  |  | May-10 | 2010 | Q2 | \$ | 455,969.04 | \$ | 130,003.00 | 0.55\% | \$ | 208.99 | \$ 586,181.03 |  |  |
|  |  |  | Jun-10 | 2010 | Q2 | \$ | 585,972.04 | \$ | 130,534.00 | 0.55\% | \$ | 268.57 | \$ 716,774.61 |  |  |
|  |  |  | Jul-10 | 2010 | Q3 | \$ | 716,506.04 | \$ | 130,345.00 | 0.89\% | \$ | 531.41 | \$ 847,382.45 |  |  |
|  |  |  | Aug-10 | 2010 | Q3 | \$ | 846,851.04 | \$ | 130,728.00 | 0.89\% | \$ | 628.08 | \$ 978,207.12 |  |  |
|  |  |  | Sep-10 | 2010 | Q3 | \$ | 977,579.04 | \$ | 131,152.00 | 0.89\% | \$ | 725.04 | \$ 1,109,456.08 |  |  |
|  |  |  | Oct-10 | 2010 | Q4 | \$ | 1,108,731.04 | \$ | 131,585.00 | 1.20\% | \$ | 1,108.73 | \$ 1,241,424.77 |  |  |
|  |  |  | Nov-10 | 2010 | Q4 | \$ | \$ 1,240,316.04 | \$ | 131,895.00 | 1.20\% | \$ | 1,240.32 | \$ 1,373,451.36 |  |  |
|  |  |  | Dec-10 | 2010 | Q4 | \$ | 1,372,211.04 | \$ | 132,191.00 | 1.20\% | \$ | 1,372.21 | \$ 1,505,774.25 | \$ 1,510,754.85 |  |
|  |  |  | Jan-11 | 2011 | Q1 | \$ | 1,504,402.04 | \$ | 132,738.00 | 1.47\% | \$ | 1,842.89 | \$ 1,638,982.93 |  |  |



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 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Feb-11 | 2011 | Q1 | \$ | 1,637,140.04 | \$ | 132,818.00 | 1.47\% | \$ | 2,005.50 |  | 1,771,963.54 |  |  |  |
|  |  |  | Mar-11 | 2011 | Q1 | \$ | 1,769,958.04 | \$ | 133,113.00 | 1.47\% | \$ | 2,168.20 | \$ | 1,905,239.24 |  |  |  |
|  |  |  | Apr-11 | 2011 | Q2 | \$ | 1,903,071.04 | \$ | 133,304.00 | 1.47\% | \$ | 2,331.26 | \$ | 2,038,706.30 |  |  |  |
|  |  |  | May-11 | 2011 | Q2 | \$ | 2,036,375.04 | \$ | 167,462.00 | 1.47\% | \$ | 2,494.56 | \$ | 2,206,331.60 |  |  |  |
|  |  |  | Jun-11 | 2011 | Q2 | \$ | 2,203,837.04 | \$ | 203,986.00 | 1.47\% | \$ | 2,699.70 | \$ | 2,410,522.74 |  |  |  |
|  |  |  | Jul-11 | 2011 | Q3 | \$ | 2,407,823.04 | \$ | 203,950.00 | 1.47\% | \$ | 2,949.58 | \$ | 2,614,722.62 |  |  |  |
|  |  |  | Aug-11 | 2011 | Q3 | \$ | 2,611,773.04 | \$ | 204,421.00 | 1.47\% | \$ | 3,199.42 | \$ | 2,819,393.46 |  |  |  |
|  |  |  | Sep-11 | 2011 | Q3 | \$ | 2,816,194.04 | \$ | 205,162.00 | 1.47\% | \$ | 3,449.84 | \$ | 3,024,805.88 |  |  |  |
|  |  |  | Oct-11 | 2011 | Q4 | \$ | 3,021,356.04 | \$ | 205,599.00 | 1.47\% | \$ | 3,701.16 | \$ | 3,230,656.20 |  |  |  |
|  |  |  | Nov-11 | 2011 | Q4 | \$ | 3,226,955.04 | \$ | 206,291.00 | 1.47\% | \$ | 3,953.02 | \$ | 3,437,199.06 |  |  |  |
|  |  |  | Dec-11 | 2011 | Q4 | \$ | 3,433,246.04 | \$ | 206,702.00 | 1.47\% | \$ | 4,205.73 | \$ | 3,644,153.77 | \$ | 2,170,546.86 |  |
|  |  |  | Jan-12 | 2012 | Q1 | \$ | 3,639,948.04 | \$ | 107,938.00 | 1.47\% | \$ | 4,458.94 | \$ | 3,752,344.98 |  |  |  |
|  |  |  | Feb-12 | 2012 | Q1 | \$ | 3,747,886.04 | \$ | 66.00 | 1.47\% | \$ | 4,591.16 | \$ | 3,752,543.20 |  |  |  |
|  |  |  | Mar-12 | 2012 | Q1 | \$ | 3,747,952.04 | -\$ | 15.00 | 1.47\% | \$ | 4,591.24 | \$ | 3,752,528.28 |  |  |  |
|  |  |  | Apr-12 | 2012 | Q2 | \$ | 3,747,937.04 | \$ | 19.00 | 1.47\% | \$ | 4,591.22 | \$ | 3,752,547.26 |  |  |  |
|  |  |  | May-12 | 2012 | Q2 | \$ | 3,747,956.04 | \$ | 2.00 | 1.47\% | \$ | 4,591.25 | \$ | 3,752,549.29 |  |  |  |
|  |  |  | Jun-12 | 2012 | Q2 | \$ | 3,747,958.04 | -\$ | 10.00 | 1.47\% | \$ | 4,591.25 | \$ | 3,752,539.29 |  |  |  |
|  |  |  | Jul-12 | 2012 | Q3 | \$ | 3,747,948.04 | \$ | 10.00 | 1.47\% | \$ | 4,591.24 | \$ | 3,752,549.28 |  |  |  |
|  |  |  | Aug-12 | 2012 | Q3 | \$ | 3,747,958.04 | \$ | - | 1.47\% | \$ | 4,591.25 | \$ | 3,752,549.29 |  |  |  |
|  |  |  | Sep-12 | 2012 | Q3 | \$ | 3,747,958.04 | \$ | - | 1.47\% | \$ | 4,591.25 | \$ | 3,752,549.29 |  |  |  |
|  |  |  | Oct-12 | 2012 | Q4 | \$ | 3,747,958.04 |  |  | 1.47\% | \$ | 4,591.25 | \$ | 3,752,549.29 |  |  |  |
|  |  |  | Nov-12 | 2012 | Q4 | \$ | 3,747,958.04 |  |  | 1.47\% | \$ | 4,591.25 | \$ | 3,752,549.29 |  |  |  |
|  |  |  | Dec-12 | 2012 | Q4 | \$ | 3,747,958.04 |  |  | 1.47\% | \$ | 4,591.25 | \$ | 3,752,549.29 | \$ | 162,972.55 |  |
|  |  |  | Jan-13 | 2013 | Q1 | \$ | 3,747,958.04 |  |  | 0.00\% | \$ | - | \$ | 3,747,958.04 |  |  |  |
|  |  |  | Feb-13 | 2013 | Q1 | \$ | 3,747,958.04 |  |  | 0.00\% | \$ | - | \$ | 3,747,958.04 |  |  |  |
|  |  |  | Mar-13 | 2013 | Q1 | \$ | 3,747,958.04 |  |  | 0.00\% | \$ | - | \$ | 3,747,958.04 |  |  |  |
|  |  |  | Apr-13 | 2013 | Q2 | \$ | 3,747,958.04 |  |  | 0.00\% | \$ | - | \$ | 3,747,958.04 |  |  |  |
|  |  |  | May-13 | 2013 | Q2 | \$ | 3,747,958.04 |  |  | 0.00\% | \$ | - | \$ | 3,747,958.04 |  |  |  |
|  |  |  | Jun-13 | 2013 | Q2 | \$ | 3,747,958.04 |  |  | 0.00\% | \$ | - | \$ | 3,747,958.04 |  |  |  |
|  |  |  | Jul-13 | 2013 | Q3 | \$ | 3,747,958.04 |  |  | 0.00\% | \$ | - | \$ | 3,747,958.04 |  |  |  |
|  |  |  | Aug-13 | 2013 | Q3 | \$ | 3,747,958.04 |  |  | 0.00\% | \$ | - | \$ | 3,747,958.04 |  |  |  |

This worksheet calculates the funding adder revenues.

Account 1555 - Sub-account Funding Adder Revenues



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 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2006 Q1 | 0.00\% | 0.00\% | Jan-06 | 2006 | Q1 | \$ |  |  | - | 0.00\% | - |  |
| 2006 Q2 | 4.14\% | 4.68\% | Feb-06 | 2006 | Q1 | - |  |  | - | 0.00\% | - |  |
| 2006 Q3 | 4.59\% | 5.05\% | Mar-06 | 2006 | Q1 | - |  |  | - | 0.00\% | - |  |
| 2006 Q4 | 4.59\% | 4.72\% | Apr-06 | 2006 | Q2 | - |  |  | - | 4.14\% | - |  |
| 2007 Q1 | 4.59\% | 4.72\% | May-06 | 2006 | Q2 | - |  |  | - | 4.14\% | - |  |
| 2007 Q2 | 4.59\% | 4.72\% | Jun-06 | 2006 | Q2 | - |  |  | - | 4.14\% | - |  |
| 2007 Q3 | 4.59\% | 5.18\% | Jul-06 | 2006 | Q3 |  |  |  | - | 4.59\% | - |  |
| 2007 Q4 | 5.14\% | 5.18\% | Aug-06 | 2006 | Q3 | - |  |  | - | 4.59\% |  |  |
| 2008 Q1 | 5.14\% | 5.18\% | Sep-06 | 2006 | Q3 | - |  |  | - | 4.59\% | - |  |
| 2008 Q2 | 4.08\% | 5.18\% | Oct-06 | 2006 | Q4 | - |  |  | - | 4.59\% | - |  |
| 2008 Q3 | 3.35\% | 5.43\% | Nov-06 | 2006 | Q4 | - |  |  | - | 4.59\% | - |  |
| 2008 Q4 | 3.35\% | 5.43\% | Dec-06 | 2006 | Q4 | - |  |  | - | 4.59\% | - |  |
| 2009 Q1 | 2.45\% | 6.61\% | Jan-07 | 2007 | Q1 | - |  |  | - | 4.59\% | - |  |
| 2009 Q2 | 1.00\% | 6.61\% | Feb-07 | 2007 | Q1 | - |  |  | - | 4.59\% | - |  |
| 2009 Q3 | 0.55\% | 5.67\% | Mar-07 | 2007 | Q1 | - |  |  | - | 4.59\% | - |  |
| 2009 Q4 | 0.55\% | 4.66\% | Apr-07 | 2007 | Q2 | - |  |  | - | 4.59\% | - |  |
| 2010 Q1 | 0.55\% | 4.34\% | May-07 | 2007 | Q2 | - |  |  | - | 4.59\% | - |  |
| 2010 Q2 | 0.55\% | 4.34\% | Jun-07 | 2007 | Q2 | - |  |  | - | 4.59\% | - |  |
| 2010 Q3 | 0.89\% | 4.66\% | Jul-07 | 2007 | Q3 | - |  |  | - | 4.59\% | - |  |
| 2010 Q4 | 1.20\% | 4.01\% | Aug-07 | 2007 | Q3 | - |  |  | - | 4.59\% |  |  |
| 2011 Q1 | 1.47\% | 4.29\% | Sep-07 | 2007 | Q3 | - |  |  | - | 4.59\% | - |  |
| 2011 Q2 | 1.47\% | 4.29\% | Oct-07 | 2007 | Q4 | - |  |  | - | 5.14\% | - |  |
| 2011 Q3 | 1.47\% | 4.29\% | Nov-07 | 2007 | Q4 | - |  |  | - | 5.14\% | - |  |
| 2011 Q4 | 1.47\% | 3.92\% | Dec-07 | 2007 | Q4 | - |  |  | - | 5.14\% | - |  |
| 2012 Q1 | 1.47\% | 3.92\% | Jan-08 | 2008 | Q1 | - |  |  | - | 5.14\% | - |  |
| 2012 Q2 | 1.47\% | 3.51\% | Feb-08 | 2008 | Q1 | - |  |  | - | 5.14\% | - |  |
| 2012 Q3 | 1.47\% | 3.51\% | Mar-08 | 2008 | Q1 | - |  |  | - | 5.14\% | - |  |
| 2012 Q 4 | 1.47\% | 3.51\% | Apr-08 | 2008 | Q2 | - |  |  | - | 4.08\% | - |  |
| 2013 Q1 | 0.00\% | 0.00\% | May-08 | 2008 | Q2 | - |  |  | - | 4.08\% | - |  |
| 2013 Q2 | 0.00\% | 0.00\% | Jun-08 | 2008 | Q2 | - |  |  | - | 4.08\% | - |  |
| 2013 Q3 | 0.00\% | 0.00\% | Jul-08 | 2008 | Q3 | - |  |  | - | 3.35\% | - |  |
| 2013 Q4 | 0.00\% | 0.00\% | Aug-08 | 2008 | Q3 | - |  |  | - | 3.35\% | - |  |
|  |  |  | Sep-08 | 2008 | Q3 | - |  |  | - | 3.35\% | - |  |


| Oct-08 | 2008 | Q4 | - |  |  |  |  | - | 3.35\% | - | - |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Nov-08 | 2008 | Q4 | - |  |  |  |  | - | 3.35\% | - | - |
| Dec-08 | 2008 | Q4 | - |  |  |  |  | - | 3.35\% | - | - |
| Jan-09 | 2009 | Q1 | - |  |  |  |  | - | 2.45\% | - | - |
| Feb-09 | 2009 | Q1 | - |  |  |  |  | - | 2.45\% | - | - |
| 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 | - | \$ | 1,339.39 | \$ | 10,876.24 | 12,215.63 | 0.55\% | - | - |
| Feb-10 | 2010 | Q1 | 12,215.63 | \$ | 1,467.22 | \$ | 12,505.96 | 26,188.80 | 0.55\% | 5.60 | 5.60 |
| Mar-10 | 2010 | Q1 | 26,188.80 | \$ | 1,643.42 | \$ | 5,391.96 | 33,224.19 | 0.55\% | 12.00 | 17.60 |
| Apr-10 | 2010 | Q2 | 33,224.19 | \$ | 3,641.65 | \$ | 9,466.60 | 46,332.43 | 0.55\% | 15.23 | 32.83 |
| May-10 | 2010 | Q2 | 46,332.43 | \$ | 1,560.20 | \$ | 5,836.20 | 53,728.83 | 0.55\% | 21.24 | 54.07 |
| Jun-10 | 2010 | Q2 | 53,728.83 | \$ | 3,124.84 | \$ | 10,876.80 | 67,730.47 | 0.55\% | 24.63 | 78.69 |
| Jul-10 | 2010 | Q3 | 67,730.47 | \$ | 2,507.71 | \$ | 5,142.65 | 75,380.83 | 0.89\% | 50.23 | 128.92 |
| Aug-10 | 2010 | Q3 | 75,380.83 | \$ | 894.96 | \$ | 7,652.38 | 83,928.18 | 0.89\% | 55.91 | 184.83 |
| Sep-10 | 2010 | Q3 | 83,928.18 | \$ | 1,515.16 | \$ | 7,303.24 | 92,746.58 | 0.89\% | 62.25 | 247.08 |
| Oct-10 | 2010 | Q4 | 92,746.58 | \$ | 1,649.41 | \$ | 8,917.88 | 103,313.87 | 1.20\% | 92.75 | 339.83 |
| Nov-10 | 2010 | Q4 | 103,313.87 | \$ | 1,564.53 | \$ | 19,633.60 | 124,512.00 | 1.20\% | 103.31 | 443.14 |
| Dec-10 | 2010 | Q4 | 124,512.00 | \$ | 3,187.71 | \$ | 12,418.44 | 140,118.15 | 1.20\% | 124.51 | 567.65 |
| Jan-11 | 2011 | Q1 | 140,118.15 | \$ | 2,941.64 | \$ | 24,563.79 | 167,623.58 | 1.47\% | 171.64 | 739.30 |
| Feb-11 | 2011 | Q1 | 167,623.58 | \$ | 1,869.92 | \$ | 22,936.44 | 192,429.94 | 1.47\% | 205.34 | 944.63 |
| Mar-11 | 2011 | Q1 | 192,429.94 | \$ | 1,864.02 | \$ | 27,922.49 | 222,216.46 | 1.47\% | 235.73 | 1,180.36 |
| Apr-11 | 2011 | Q2 | 222,216.46 | \$ | 1,629.60 | \$ | 21,394.85 | 245,240.91 | 1.47\% | 272.22 | 1,452.58 |
| May-11 | 2011 | Q2 | 245,240.91 | \$ | 1,510.68 | \$ | 23,805.83 | 270,557.42 | 1.47\% | 300.42 | 1,753.00 |
| Jun-11 | 2011 | Q2 | 270,557.42 | \$ | 1,662.63 | \$ | 21,694.59 | 293,914.63 | 1.47\% | 331.43 | 2,084.43 |
| Jul-11 | 2011 | Q3 | 293,914.63 | \$ | 1,855.79 | \$ | 22,193.09 | 317,963.51 | 1.47\% | 360.05 | 2,444.48 |
| Aug-11 | 2011 | Q3 | 317,963.51 | \$ | 1,750.38 | \$ | 21,352.70 | 341,066.58 | 1.47\% | 389.51 | 2,833.98 |
| Sep-11 | 2011 | Q3 | 341,066.58 | \$ | 1,762.77 | \$ | 20,726.55 | 363,555.90 | 1.47\% | 417.81 | 3,251.79 |
| Oct-11 | 2011 | Q4 | 363,555.90 | \$ | 7,413.57 | \$ | 150,424.36 | 521,393.83 | 1.47\% | 445.36 | 3,697.14 |
| Nov-11 | 2011 | Q4 | 521,393.83 | \$ | 1,793.87 | \$ | 17,221.66 | 540,409.36 | 1.47\% | 638.71 | 4,335.85 |
| Dec-11 | 2011 | Q4 | 540,409.36 | \$ | 11,935.26 | \$ | 36,808.25 | 589,152.88 | 1.47\% | 662.00 | 4,997.85 |
| Jan-12 | 2012 | Q1 | 589,152.88 | \$ | 3,092.82 | \$ | 54,486.82 | 646,732.52 | 1.47\% | 721.71 | 5,719.56 |
| Feb-12 | 2012 | Q1 | 646,732.52 | \$ | 3,024.19 | \$ | 55,080.67 | 704,837.38 | 1.47\% | 792.25 | 6,511.81 |
| Mar-12 | 2012 | Q1 | 704,837.38 | \$ | 1,764.31 | \$ | 48,283.26 | 754,884.96 | 1.47\% | 863.43 | 7,375.24 |
| Apr-12 | 2012 | Q2 | 754,884.96 | \$ | 2,601.72 | \$ | 46,011.85 | 803,498.53 | 1.47\% | 924.73 | 8,299.97 |
| May-12 | 2012 | Q2 | 803,498.53 | \$ | 2,601.72 | \$ | 47,708.01 | 853,808.26 | 1.47\% | 984.29 | 9,284.26 |
| Jun-12 | 2012 | Q2 | 853,808.26 | \$ | 2,381.39 | \$ | 42,896.66 | 899,086.30 | 1.47\% | 1,045.92 | 10,330.17 |
| Jul-12 | 2012 | Q3 | 899,086.30 | \$ | 3,138.76 | \$ | 58,311.88 | 960,536.94 | 1.47\% | 1,101.38 | 11,431.55 |
| Aug-12 | 2012 | Q3 | 960,536.94 | \$ | 1,757.97 | \$ | 51,099.48 | 1,013,394.38 | 1.47\% | 1,176.66 | 12,608.21 |
| Sep-12 | 2012 | Q3 | 1,013,394.38 | \$ | 2,456.08 | \$ | 52,006.13 | 1,067,856.59 | 1.47\% | 1,241.41 | 13,849.62 |
| Oct-12 | 2012 | Q4 | 1,067,856.59 | \$ | 2,535.44 | \$ | 51,309.30 | 1,121,701.33 | 1.47\% | 1,308.12 | 15,157.74 |
| Nov-12 | 2012 | Q4 | 1,121,701.33 | \$ | 2,535.44 | \$ | 19,927.50 | 1,144,164.27 | 1.47\% | 1,374.08 | 16,531.83 |
| Dec-12 | 2012 | Q4 | 1,144,164.27 | \$ | 5,010.55 | \$ | 51,309.30 | 1,200,484.11 | 1.47\% | 1,401.60 | 17,933.43 |
| Jan-13 | 2013 | Q1 | 1,200,484.11 | \$ | 12,038.63 | \$ | 47,234.71 | 1,259,757.45 | 0.00\% | - | 17,933.43 |
| Feb-13 | 2013 | Q1 | 1,259,757.45 | \$ | 12,038.63 | \$ | 47,234.71 | 1,319,030.79 | 0.00\% | - | 17,933.43 |
| Mar-13 | 2013 | Q1 | 1,319,030.79 | \$ | 12,038.63 | \$ | 47,234.71 | 1,378,304.12 | 0.00\% | - | 17,933.43 |
| Apr-13 | 2013 | Q2 | 1,378,304.12 | \$ | 12,038.63 | \$ | 47,234.71 | 1,437,577.46 | 0.00\% | - | 17,933.43 |
| May-13 | 2013 | Q2 | 1,437,577.46 | \$ | 12,038.63 | \$ | 47,234.71 | 1,496,850.80 | 0.00\% | - | 17,933.43 |
| Jun-13 | 2013 | Q2 | 1,496,850.80 | \$ | 12,038.63 | \$ | 47,234.71 | 1,556,124.13 | 0.00\% | - | 17,933.43 |
| Jul-13 | 2013 | Q3 | 1,556,124.13 | \$ | 12,038.63 | \$ | 47,234.71 | 1,615,397.47 | 0.00\% | - | 17,933.43 |
| Aug-13 | 2013 | Q3 | 1,615,397.47 | \$ | 12,038.63 | \$ | 47,234.71 | 1,674,670.81 | 0.00\% | - | 17,933.43 |
| Sep-13 | 2013 | Q3 | 1,674,670.81 | \$ | 12,038.63 | \$ | 47,234.71 | 1,733,944.14 | 0.00\% | - | 17,933.43 |


| Oct-13 | 2013 | Q4 | 1,733,944.14 | \$ | 12,038.63 | \$ | 47,234.71 | 1,793,217.48 | 0.00\% |  | 17,933.43 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Nov-13 | 2013 | Q4 | 1,793,217.48 | \$ | 12,038.63 | \$ | 47,234.71 | 1,852,490.82 | 0.00\% | - | 17,933.43 |
| Dec-13 | 2013 | Q4 | 1,852,490.82 | \$ | 12,038.63 | \$ | 47,234.71 | 1,911,764.15 | 0.00\% | - | 17,933.43 |



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

|  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  | Average Annual <br> Prescribed Interest <br> Rate for Deferral | Simple Interest on <br> and Variance |
| OM\&A |  |  |  |  |  |  |

This worksheet calculates the Smart Meter Disposition Rider and the Smart Meter Incremental Revenue Requirement Rate Rider, if applicable. This worksheet also calculates any new Smart Meter Funding Adder that a distributor may wish to request. However, please note that in many 2011 IRM decisions, the Board noted that current funding adders will is a tool derigo, the oberved 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
obsear designed to fund future investment, and not fully fund prior capital investment. Distributors that seeek a new SMMA 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 adderslriders.


| Calculation of Smart Meter Disposition Rider (per metered customer per month) |  |  |  |
| :---: | :---: | :---: | :---: |
| Years for collection or refunding | 0.666666667 |  |  |
| Deferred Incremental Revenue Requirement from 2006 to December 31, 2012 plus Interest on OM\&A and Amortization | \$ | 1,877,764.07 |  |
| SMFA Revenues collected from 2006 to 2013 test year (inclusive) | \$ | 3,844,274.26 |  |
| Plus Simple Interest on SMFA Revenues Net Deferred Revenue Requirement |  |  |  |
|  | -s | 1,966,510.19 |  |
| SMDR May 1, 2013 to December 31, 2013 | -\$ | 1.74 | Match |
| Check: Forecasted SMDR Revenues | -\$ | 1,964,209.44 |  |
| Calculation of Smart Meter Incremental Revenue Requirement Rate Rider (per metered customer per month) |  |  |  |
| Incremental Revenue Requirement for 2013 \$ 1,280,793.67 |  |  |  |
| SMIRR | \$ | 0.76 | Match |
| Check: Forecasted SMIRR Revenues |  | 1,286,895.84 |  |



## Smart Meter Model for <br> Electricity Distributors <br> (2013 Filers)

This worksheet calculates the class-specific SMDRs according to accepted prate
support for its allocation and derivation of class-specific SMDRs and SMIRRs.



Smart Meter Model for Electricity Distributors (2013 Filers)

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

Class-specific SMDRs
Revenue Requirement for 2013

Return on Capital
Depreciation/Amortization
expense
Operating Expenses

Revenue Requirement before Taxes/PILs

Grossed-up Taxes/PILs
${ }_{2013}^{\text {Total Revenue Requirement for }}$

Average number of metered customers by class (2013)
The SMIRR is recovered as an annualized rate until the effective date of the distributor's next rebased rates resulting from a cost of service application

Smart Meter Incremental Revenue Requirement Rate Rider (\$/month per metered customer in the customer class)
Estimated SMIRR Revenues


1 year
\$ 1,287,646.44

$\begin{array}{lll}-0.41 & \$ & 6.16\end{array}$
651,934.44 \$ 635,712.00

00\%

100\%

00\%

# TAB 3 SCHEDULE 1.0 <br> APPENDIX B - HOBNI 2010 STUB YEAR SMART METER MODEL FOR RESIDENTIAL AND GENERAL SERVICE < 50 KW CUSTOMER CLASSES 

## Smart Meter Stub Year (2010) Calculations

| Smart Meter Costs Recovery: | Residential | GS<50 kW | Total |
| :--- | ---: | ---: | ---: |
| 2010 Rate Year Entitlement (2009 Capital) | $2,801,843$ | 296,833 | $3,098,675$ |
| Total Carrying Charges | 55,789 | 5,437 | 61,226 |
| Smart Meter Costs Recovery | $\mathbf{2 , 8 5 7 , 6 3 2}$ | $\mathbf{3 0 2 , 2 7 0}$ | $\mathbf{3 , 1 5 9 , 9 0 1}$ |

## Smart Meter Fixed Asset Continuity 2006 to 2009 Capital

## For Accounting

|  | Amortization Period | Opening Balance | Actual 2006 <br> Additions | Actual Amortization For 2006 | 2006 Net Book Value | 2006 Average NBV |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OH \& UG Services |  | - | - | - | - | - |
| Smart meters-1860 |  | - | - | - | - | - |
| Computers-1920-HDW |  | - | - |  | - | - |
| Computers-1925-SFT |  | - |  |  | - | - |
| Tools, Shops - 1940 |  | - |  |  | - | - |
|  |  | - | - | - | - | - |
|  | Amortization Period | Opening Balance | Actual 2007 Additions | Actual Amortization For 2007 | 2007 Net Book Value | 2007 Average NBV |
| OH \& UG Services |  | - |  | - | - | - |
| Smart meters-1860 | 15 | - | 4,302,123 | 143,404 | 4,158,719 | 2,079,360 |
| Computers-1920 |  | - |  |  | - | - |
| Computers-1925 |  | - |  |  | - | - |
| Tools, Shops - 1940 |  | - |  |  | - | - |
|  |  | - | 4,302,123 | 143,404 | 4,158,719 | 2,079,360 |
|  |  | Opening Balance | Actual 2008 Additions | Actual Amortization For 2008 | 2008 Net Book Value | 2008 Average NBV |
| OH \& UG Services |  | - | - | - | - | - |
| Smart meters-1860 | 15 | 4,158,719 | 5,908,201 | 483,748 | 9,583,172 | 6,870,945 |
| Computers-1920 |  | - |  |  | - | - |
| Computers-1925 |  | - |  |  | - | - |
| Tools, Shops - 1940 |  | - |  |  | - | - |
|  |  | 4,158,719 | 5,908,201 | 483,748 | 9,583,172 | 6,870,945 |
|  |  | Opening Balance | Actual 2009 <br> Additions | Actual Amortization <br> For 2009 | 2009 Net Book Value | 2009 Average NBV |
| OH \& UG Services | 25 | - | - | - | - | - |
| General Office | 10 |  | - | - | - | - |
| Building Renovations | 30 |  | - | - | - | - |
| Smart meters-1860 | 15 | 9,583,172 | 8,663,014 | 969,455 | 17,276,730 | 13,429,951 |
| Computers-1920 | 5 | - |  |  | - | - |
| Computers-1925 | 5 | - |  |  | - | - |
| Tools, Shops - 1940 | 10 | - |  |  | - | - |
|  |  | 9,583,172 | 8,663,014 | 969,455 | 17,276,730 | 13,429,951 |
|  |  | Opening Balance | Forecast 2010 <br> Additions | Forecast Amortization For 2010 | 2010 Net Book Value | 2010 Average NBV |
| OH \& UG Services | 25 | - | - | - | - | - |
| General Office | 10 | - | - | - | - | - |
| Building Renovations | 30 | - | - | - | - | - |
| Smart meters-1860 | 15 | 17,276,730 | - | 1,258,223 | 16,018,508 | 16,647,619 |
| Computers-1920 | 5 | - | - | - | - | - |
| Computers-1925 | 5 | - | - | - | - | - |
| Tools, Shops - 1940 | 10 | - | - |  | - | - |
|  |  | 17,276,730 | - | 1,258,223 | 16,018,508 | 16,647,619 |

OH \& UG Services

Smart meters-1860
Computers-1920
Computers-1925
Tools, Shops - 1940

OH \& UG Services
Smart meters-1860
Computers-1920
Computers-1925
Tools, Shops - 1940

OH \& UG Services General Office Building Renovations Smart meters-1860
Computers-1920
Computers-1925
Tools, Shops - 1940

OH \& UG Services
General Office
Building Renovations
Smart meters-1860
Computers-1920
Computers-1925
Tools, Shops - 1940

## Smart Meter Fixed Asset Continuity 2006 to 2009 Capital

## For Tax Purposes

|  | CCA Class | CCA Rate | Opening UCC Balance | 2006 Actual Additions | CCA For Opening UCC | CCA For 2006 Additions | Total CCA - 2006 | Closing UCC Balance |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OH \& UG Services | Class 47 | 8\% | 0 | - |  | - | - | - |
| Smart meters-1860 | Class 47 | 8\% | 0 | - |  | - | - | - |
| Computers-1920 | Class 45.1 | 55\% | 0 | - |  | - | - | - |
| Computers-1925 | Class 12 | 100\% | 0 | - |  | - | - | - |
| Tools, Shops - 1940 | Class 8 | 20\% | 0 | - |  | - | - | - |
|  |  |  | 0 | - |  | - | - | - |
|  |  |  |  |  | CCA For Opening | CCA For 2007 |  |  |
|  | CCA Class | CCA Rate | Opening UCC Balance | 2007 Actual Additions | UCC | Additions | Total CCA - 2007 | Closing UCC Balance |
| OH \& UG Services | Class 47 | 8\% | - | - |  | - | - | - |
| Smart meters-1860 | Class 47 | 8\% | - | 4,302,123 |  | 172,085 | 172,085 | 4,130,038 |
| Computers-1920 | Class 45.1 | 55\% | - | - |  | - | - | - |
| Computers-1925 | Class 12 | 100\% | - | - |  | - | - | - |
| Tools, Shops - 1940 | Class 8 | 20\% | - | - |  | - | - | - |
|  |  |  | - - | 4,302,123 |  | 172,085 | 172,085 | 4,130,038 |


|  | CCA Class | CCA Rate | Opening UCC Balanc | 2008 Actual Additions | CCA For Opening UCC | CCA For 2008 Additions | Total CCA - 2008 | g UCC Balance |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OH \& UG Services | Class 47 | 8\% | - | - | - | - | - | - |
| Smart meters-1860 | Class 47 | 8\% | 4,130,038 | 5,908,201 | 330,403 | 236,328 | 566,731 | 9,471,508 |
| Computers-1920 | Class 45.1 | 55\% | - | - | - | - | - | - |
| Computers-1925 | Class 12 | 100\% | - | - | - | - | - | - |
| Tools, Shops - 1940 | Class 8 | 20\% | - | - | - | - | - | - |
|  |  |  | 4,130,038 | 5,908,201 | 330,403 | 236,328 | 566,731 | 9,471,508 |



|  | CCA Class | CCA Rate | Opening UCC Balan | 2010 Forecast Additions | CCA For Opening UCC | CCA For 2010 Additions |  | Total CCA - 2010 | Closing UCC Balance |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OH \& UG Services | Class 47 | 8\% | - | - | - |  | - | - | - |
| General Office | Class 8 | 20\% | - | - | - |  | - | - | - |
| Building Renovations | Class 6 | 10\% | - | - | - |  | - | - | - |
| Smart meters-1860 | Class 47 | 8\% | 17,030,281 | - | 1,362,422 |  | - | 1,362,422 | 15,667,858 |
| Computers-1920 | Class 45.1 | 55\% | - | - | - |  | - | - | - |
| Computers-1925 | Class 12 | 100\% | - | - | - |  | - | - | - |
| Tools, Shops - 1940 | Class 8 | 20\% | - | - | - |  | - | - | - |
|  |  |  | 17,030,281 | - | 1,362,422 |  | - | 1,362,422 | 15,667,858 |

Hydro One Brampton Networks Inc.
EB

## 2012 Smart Meter

Revenue Requirement Calculations

Average Fixed Asset Values
OH \& UG Services
General Office
Building Renovations
Smart meters
Computer Hardware
Computer Software
Stores \& Tools
Working Capital
Operation Expense
15\% Working Capital
Smart Meters Fixed Assets in Rate Base
Return on Rate Base
Deemed Debt - Long Term
Deemed Debt - Short Term
Deemed Equity

Weighted Debt Rate - Long Term
Short Term Debt Rate
Equity Rate
Return on Rate Base
Operating Expenses
Incremental Operating Expenses
Amortization Expenses
Revenue Requirement before PILs
Calculation of Taxable Income
Incremental Operating Expenses
Depreciation Expense
Interest Expense
Taxable Income for PILs
Grossed up PILs
Revenue Requirement before PILs
Grossed up PILs
Revenue Requirement for Smart Meters
Smart Meter Rate Adder
Revenue Requirement for Smart Meters
Total Metered Customers
Annualized amount required per metered customer
Number of months in year
Smart Meter Rate Adder

Smart Meter Deferral Account Balance - PILs Calculation

## Income Tax

Net Income
Amortization
CCA
Revised Taxable Income
Tax Rate
Income Taxes Payable
Ontario Capital Tax
Smart Meter Related Fixed Assets
Less: Exemption
Deemed Taxable Capital
Ontario Capital Tax Rate
NET OCT Amount

Change in Income Taxes Payable
Change in OCT
PILs



| Prescribed Interest Rates | Approved <br> Deferral and <br> Variance <br> CWIP <br> Accounts | Date | Year | Quarter | Opening <br> Balance <br> (Principal) | OM\&A Expenses | Amortization / Depreciation Expense | Closing Balance (Principal) | (Annual) Interest Rate | Interest (on opening balance) | Cumulative Interest |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 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 | - | \$ 18,115.92 | \$ 104,851.88 | 122,967.80 | 0.55\% | - | - |
|  |  | Feb-10 | 2010 | Q1 | 122,967.80 | \$ 19,844.98 | \$ 104,851.88 | 247,664.66 | 0.55\% | 56.36 | 56.36 |
|  |  | Mar-10 | 2010 | Q1 | 247,664.66 | \$ 22,228.12 | \$ 104,851.88 | 374,744.66 | 0.55\% | 113.51 | 169.87 |
|  |  | Apr-10 | 2010 | Q2 | 374,744.66 | \$ 49,255.24 | \$ 104,851.88 | 528,851.77 | 0.55\% | 171.76 | 341.63 |
|  |  | May-10 | 2010 | Q2 | 528,851.77 | \$ 21,102.59 | \$ 104,851.88 | 654,806.24 | 0.55\% | 242.39 | 584.02 |
|  |  | Jun-10 | 2010 | Q2 | 654,806.24 | \$ 42,265.12 | \$ 104,851.88 | 801,923.24 | 0.55\% | 300.12 | 884.14 |
|  |  | Jul-10 | 2010 | Q3 | 801,923.24 | \$ 33,918.14 | \$ 104,851.88 | 940,693.25 | 0.89\% | 594.76 | 1,478.90 |
|  |  | Aug-10 | 2010 | Q3 | 940,693.25 | \$ 12,104.82 | \$ 104,851.88 | 1,057,649.95 | 0.89\% | 697.68 | 2,176.58 |
|  |  | Sep-10 | 2010 | Q3 | 1,057,649.95 | \$ 20,493.36 | \$ 104,851.88 | 1,182,995.19 | 0.89\% | 784.42 | 2,961.01 |
|  |  | Oct-10 | 2010 | Q4 | 1,182,995.19 | \$ 22,309.14 | \$ 104,851.88 | 1,310,156.21 | 1.20\% | 1,183.00 | 4,144.00 |
|  |  | Nov-10 | 2010 | Q4 | 1,310,156.21 | \$ 21,161.08 | \$ 104,851.88 | 1,436,169.17 | 1.20\% | 1,310.16 | 5,454.16 |
|  |  | Dec-10 | 2010 | Q4 | 1,436,169.17 | \$ 43,115.51 | \$ 104,851.88 | 1,584,136.56 | 1.20\% | 1,436.17 | 6,890.33 |
|  |  | Jan-11 | 2011 | Q1 | 1,584,136.56 |  |  | 1,584,136.56 | 1.47\% | 1,940.57 | 8,830.89 |
|  |  | Feb-11 | 2011 | Q1 | 1,584,136.56 |  |  | 1,584,136.56 | 1.47\% | 1,940.57 | 10,771.46 |
|  |  | Mar-11 | 2011 | Q1 | 1,584,136.56 |  |  | 1,584,136.56 | 1.47\% | 1,940.57 | 12,712.03 |
|  |  | Apr-11 | 2011 | Q2 | 1,584,136.56 |  |  | 1,584,136.56 | 1.47\% | 1,940.57 | 14,652.60 |
|  |  | May-11 | 2011 | Q2 | 1,584,136.56 |  |  | 1,584,136.56 | 1.47\% | 1,940.57 | 16,593.16 |
|  |  | Jun-11 | 2011 | Q2 | 1,584,136.56 |  |  | 1,584,136.56 | 1.47\% | 1,940.57 | 18,533.73 |
|  |  | Jul-11 | 2011 | Q3 | 1,584,136.56 |  |  | 1,584,136.56 | 1.47\% | 1,940.57 | 20,474.30 |
|  |  | Aug-11 | 2011 | Q3 | 1,584,136.56 |  |  | 1,584,136.56 | 1.47\% | 1,940.57 | 22,414.86 |
|  |  | Sep-11 | 2011 | Q3 | 1,584,136.56 |  |  | 1,584,136.56 | 1.47\% | 1,940.57 | 24,355.43 |
|  |  | Oct-11 | 2011 | Q4 | 1,584,136.56 |  |  | 1,584,136.56 | 1.47\% | 1,940.57 | 26,296.00 |
|  |  | Nov-11 | 2011 | Q4 | 1,584,136.56 |  |  | 1,584,136.56 | 1.47\% | 1,940.57 | 28,236.57 |
|  |  | Dec-11 | 2011 | Q4 | 1,584,136.56 |  |  | 1,584,136.56 | 1.47\% | 1,940.57 | 30,177.13 |
|  |  | Jan-12 | 2012 | Q1 | 1,584,136.56 |  |  | 1,584,136.56 | 1.47\% | 1,940.57 | 32,117.70 |
|  |  | Feb-12 | 2012 | Q1 | 1,584,136.56 |  |  | 1,584,136.56 | 1.47\% | 1,940.57 | 34,058.27 |
|  |  | Mar-12 | 2012 | Q1 | 1,584,136.56 |  |  | 1,584,136.56 | 1.47\% | 1,940.57 | 35,998.84 |
|  |  | Apr-12 | 2012 | Q2 | 1,584,136.56 |  |  | 1,584,136.56 | 1.47\% | 1,940.57 | 37,939.40 |
|  |  | May-12 | 2012 | Q2 | 1,584,136.56 |  |  | 1,584,136.56 | 1.47\% | 1,940.57 | 39,879.97 |
|  |  | Jun-12 | 2012 | Q2 | 1,584,136.56 |  |  | 1,584,136.56 | 1.47\% | 1,940.57 | 41,820.54 |
|  |  | Jul-12 | 2012 | Q3 | 1,584,136.56 |  |  | 1,584,136.56 | 1.47\% | 1,940.57 | 43,761.10 |
|  |  | Aug-12 | 2012 | Q3 | 1,584,136.56 |  |  | 1,584,136.56 | 1.47\% | 1,940.57 | 45,701.67 |
|  |  | Sep-12 | 2012 | Q3 | 1,584,136.56 |  |  | 1,584,136.56 | 1.47\% | 1,940.57 | 47,642.24 |
|  |  | Oct-12 | 2012 | Q4 | 1,584,136.56 |  |  | 1,584,136.56 | 1.47\% | 1,940.57 | 49,582.81 |

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

| Prescribed Interest Rates | Approved <br> Deferral and Variance Accounts | CWIP | Date | Year | Quarter | Opening <br> Balance <br> (Principal) | OM\&A Expenses | Amortization I <br> Depreciation Expense | Closing Balance (Principal) | (Annual) Interest Rate | Interest (on opening balance) | Cumulative Interest |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Nov-12 | 2012 | Q4 | 1,584,136.56 |  |  | 1,584,136.56 | 1.47\% | 1,940.57 | 51,523.37 |
|  |  |  | Dec-12 | 2012 | Q4 | 1,584,136.56 |  |  | 1,584,136.56 | 1.47\% | 1,940.57 | 53,463.94 |
|  |  |  | Jan-13 | 2013 | Q1 | 1,584,136.56 |  |  | 1,584,136.56 | 1.47\% | 1,940.57 | 55,404.51 |
|  |  |  | Feb-13 | 2013 | Q1 | 1,584,136.56 |  |  | 1,584,136.56 | 1.47\% | 1,940.57 | 57,345.08 |
|  |  |  | Mar-13 | 2013 | Q1 | 1,584,136.56 |  |  | 1,584,136.56 | 1.47\% | 1,940.57 | 59,285.64 |
|  |  |  | Apr-13 | 2013 | Q2 | 1,584,136.56 |  |  | 1,584,136.56 | 1.47\% | 1,940.57 | 61,226.21 |
|  |  |  | May-13 | 2013 | Q2 | 1,584,136.56 |  |  | 1,584,136.56 | 0.00\% | - | 61,226.21 |
|  |  |  | Jun-13 | 2013 | Q2 | 1,584,136.56 |  |  | 1,584,136.56 | 0.00\% | - | 61,226.21 |
|  |  |  | Jul-13 | 2013 | Q3 | 1,584,136.56 |  |  | 1,584,136.56 | 0.00\% | - | 61,226.21 |
|  |  |  | Aug-13 | 2013 | Q3 | 1,584,136.56 |  |  | 1,584,136.56 | 0.00\% | - | 61,226.21 |
|  |  |  | Sep-13 | 2013 | Q3 | 1,584,136.56 |  |  | 1,584,136.56 | 0.00\% | - | 61,226.21 |
|  |  |  | Oct-13 | 2013 | Q4 | 1,584,136.56 |  |  | 1,584,136.56 | 0.00\% | - | 61,226.21 |
|  |  |  | Nov-13 | 2013 | Q4 | 1,584,136.56 |  |  | 1,584,136.56 | 0.00\% | - | 61,226.21 |
|  |  |  | Dec-13 | 2013 | Q4 | 1,584,136.56 |  |  | 1,584,136.56 | 0.00\% | - | 61,226.21 |
|  |  |  |  |  |  |  | \$ 325,914.03 | \$ 1,258,222.53 | \$ 1,584,136.56 |  | \$ 61,226.21 |  |

```
This worksheet calculates the class-specific SMDRs according to accepted practice. A
distributor may choose to use its own methodology, but should provide analogous suppor
distributor may choose to use its own methodology, but should provid
```

Class-specific SMDRs


## TAB 3 SCHEDULE 1.0 APPENDIX C - OEB SMART METER MODEL FOR GENERAL SERVICE 50-699 KW CUSTOMER CLASS



# Smart Meter Model for <br> Electricity Distributors (2013 Filers) 



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

This Workbook Model is protected by copyright and is being made available to you solely for the purpose of filing your application. You may use and copy this model for that purpose and provide a copy of this model to any person that is advising or assisting you in that regard. Except as indicated above, any copying, reproduction, publication, sale, adaptation translation, modification, reverse engineering or other use or dissemination of this model without the express written consent of the Ontario Energy Board is prohibited. If you provide a copy of this model to a person that is advising or assisting you in preparing the application or reviewing your draft rate order, you must ensure that the person understand 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. . .apital costs have been included in rate hase and OM\&A costs in revenue equirement. 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. distributor has deployments in 2012, distributors should enter the forecasted OM\&A for 2012 for all smart meters in service.

## Smart Meter Capital Cost and Operational Expense Data

Smart Meter Installation Plan
ActuallPlanned number of Smart Meters installed during the Calendar Year Residential
General Service < 50 kW
Actualplanned number of Smart Meters installed (Residential and $G S<50 \mathrm{kw}$ only)
Percentage of Residential and $\mathrm{GS}<50 \mathrm{~kW}$ Smart Meter Installations Completed
ActualPlanned number of $G S>50 \mathrm{~kW}$ meters installed
Other (please idenity)
$\square$

## Capital Costs

1.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)
1.1.1 Smart Meters (may inculud new meters and mooulus, etc.)
1.1.2 Installation Costs (may include socketkits, abour, venicie, benefits, etc.)
1.1.3a Workforce Automation Hardware (may include feieldwork handheless, barcoode hardorware, etc.)
1.1.3b Workforce Automation Software (may incolude fielwwork handoheds, barcoode hardware, etc.,

Total Advanced Metering Communications Devices (AMCD)
1.2 ADVANCED METERING REGIONAL COLLECTOR (AMRC) (includes LAN)
1.21 Collectors
1.2.2 Repeaters (may include radio icience, etc.)
1.2.3 Installation (may include meter seals and rings, collectio computer rardware, etc,

Total Advanced Metering Regional Collector (AMRC) (Includes LAN)



## OM\&A Expenses

2.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)
2.1.1 Maintenance (may inolude meter reverification costs, elc.)
2.1.2 Other (please specifiy) $\square$ Total Incremental AMCD OMEA Costs
2.2 ADVANCED METERING REGIONAL COLLECTOR (AMRC) (includes LAN)
2.2.1 Maintenance
2.2.2 Other (pleases specifiy $\square$
Total Incremental AMRC OM\&A Costs
2.3 ADVANCED METERING CONTROL COMPUTER (AMCC)
2.3.1 Hardware Maintenance (may include severes support, etc.)
2.3.2 Software Maintenance (may include maintenance support, etic)
2.3.2 Other (pleases spocifiy)

Total Incremental AMCC OM\&A Costs
2.4 WIDE AREA NETWORK (WAN)
2.4.1 WAN Maintenance
2.4.2 Other (please specifiy) $\square$

Total Incremental AMRC OM\&A Costs
2.5 OTHER AMI OM\&A COSTS RELATED TO MINIMUM FUNCTIONALTTY
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

Total Other AMM OM\&A Costs Related to Minimum Functionality
TOTAL OM\&A COSTS RELATED TO MINIMUM FUNCTIONALITY


2.6. Costs for deployment
and smal general sevice
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


Total Om\&A Costs



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

## Capital Structure ${ }^{1}$

Deemed Short-term Debt Capitalization Deemed Long-term Debt Capitalization Deemed Equity Capitalization
Preferred Shares
Total
Cost of Capital Parameters
Deemed Short-term Debt Rate
Long-term Debt Rate (actual/embedded/deemed) ${ }^{2}$ Target Return on Equity (ROE) Return on Preferred Shares

## WACC

$\square$
$\square$
$\square$ 15.0\%
15.0\%
$15.0 \%$

2006

$\square$
0.00\%
$\square$
$\square$
$\square$
2007


2009
2010
2011
2012
2013



$\square$
$15.0 \%$ .


Aggregate Corporate Income Tax Rate
Capital Tax (until July 1st, 2010)

## Depreciation Rates

(expressed as expected useful life in years)
Smart Meters - years

- rate (\%)

Computer Hardware - years

- rate (\%)

Computer Software - years - rate (\%)

Tools \& Equipment - years

- rate (\%)

Other Equipment - years

- rate (\%)

CCA Rates
Smart Meters - CCA Class Smart Meters - CCA Rate

Computer Equipment - CCA Class
Computer Equipment - CCA Rate
General Equipment - CCA Class General Equipment - CCA Rate

Applications Software - CCA Class Applications Software - CCA Rate

$\square$



Assumptions
${ }^{1}$ Planned smart meter installations occur evenly throughout the year
${ }^{2}$ Fiscal calendar year (January 1 to December 31) used.
3 Amortization is done on a striaght line basis and has the "half-year" rule applied


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

2009
2010
2011
2012
2013

Gross Book Value
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
Average Net Book Value
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 Average Net Book Value

$\qquad$


Net Fixed Assets - Computer Software (including Applications Software)



## Smart Meter Model for <br> Electricity Distributors <br> (2013 Filers)

Average Net Fixed Asset Values (from Sheet 4)
Smart Meters
Computer Har
Computer Hardware
Computer Software
Tools \& Equipment
Other Equipment
Total Net Fixed Assets
Working Capital
Operating Expenses (from Sheet 2)
Working Capital Factor (from Sheet 3)
Working Capital Allowance
Incremental Smart Meter Rate Base
Return on Rate Base
Capital Structure
Deemed Short Term Deb
Deemed Long Term Debt
Equity
Preferred Shares
len
Total Capitalization
Return on
Deemed Short Term Debt
Deemed Long Term Debt
Equity
Prefere
Total Return on Capita

Operating Expenses
Amortization Expenses (from Sheet 4)
Smart Meters
Computer Hardware
Computer Software
Tools \& Equipment
Tools \& Equipment
Other Equipment
Total Amortization Expense in Year
Incremental Revenue Requirement before Taxes/PILs
Calculation of Taxable Income
Incremental Operating Expenses
Amortization Expense
Amortization Expe
Interest Expense
Net Income for Taxes/PILs
Grossed-up Taxes/PILs (from Sheet 7)
Revenue Requirement, including Grossed-up Taxes/PILs


## For PILs Calculation





PILs Calculation

|  |  | Audited Actual |  | 2007 Audited Actual |  | 2008 Audited Actual |  | 2009 Audited Actual |  | 2010 Audited Actual |  | 2011 Audited Actual |  | 2012 Forecast |  | 2013 Forecast |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| income tax |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Net Income | \$ | - | \$ | - | \$ | - | \$ | - | \$ | 351.59 | \$ | 21,337.74 | \$ | 41,334.49 | \$ | 39,318.52 |
| Amortization | \$ | - | \$ | - | \$ | - | \$ | - | \$ | 673.02 | \$ | 38,097.51 | \$ | 76,418.21 | \$ | 77,987.44 |
| CCA - Smart Meters | \$ | - | \$ | - | \$ | - | \$ | - | \$ | 807.63 | -\$ | 45,652.40 | -\$ | 87,985.05 | -\$ | 82,829.32 |
| CCA - Computers | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - |
| CCA - Applications Software | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - |
| CCA - Other Equipment | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | $-$ |
| Change in taxable income | \$ | - | \$ | - | \$ | - | \$ | - | \$ | 216.99 | \$ | 13,782.85 | \$ | 29,767.65 | \$ | 34,476.64 |
| Tax Rate (from Sheet 3) |  | 36.12\% |  | 36.12\% |  | 33.50\% |  | 33.00\% |  | 31.00\% |  | 28.25\% |  | 26.50\% |  | 26.50\% |
| Income Taxes Payable | \$ | - | \$ | - | \$ | - | \$ | - | \$ | 67.27 | \$ | 3,893.66 | \$ | 7,888.43 | \$ | 9,136.31 |
| ONTARIO CAPITAL TAX |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Smart Meters | \$ | - | \$ | - | \$ | - | \$ | - | \$ | 19,517.63 | \$ | 1,083,964.06 | \$ | 1,054,622.89 | \$ | 976,635.45 |
| Computer Hardware | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - |
| Computer Software (Including Application Software) | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - |
| Tools \& Equipment | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - |
| Other Equipment | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | $-$ |
| Rate Base | \$ | - | \$ | - | \$ | - | \$ | - | \$ | 19,517.63 | \$ | 1,083,964.06 | \$ | 1,054,622.89 | \$ | 976,635.45 |
| Less: Exemption |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Deemed Taxable Capital | \$ | - | \$ | - | \$ | - | \$ | - | \$ | 19,517.63 | \$ | 1,083,964.06 | \$ | 1,054,622.89 | \$ | 976,635.45 |
| Ontario Capital Tax Rate (from Sheet 3) |  | 0.300\% |  | 0.225\% |  | 0.225\% |  | 0.225\% |  | 0.075\% |  | 0.000\% |  | 0.000\% |  | 0.000\% |
| Net Amount (Taxable Capital $\times$ Rate) | \$ | - | \$ | - | \$ | - | \$ | - | \$ | 14.64 | \$ | - | \$ | - | \$ |  |
| Change in Income Taxes Payable | \$ | - | \$ | - | \$ | - | \$ | - | \$ | 67.27 | \$ | 3,893.66 | \$ | 7,888.43 | \$ | 9,136.31 |
| Change in OCT | \$ | - | \$ | - | \$ | - | \$ | - | \$ | 14.64 | \$ | - | \$ | - | \$ | - |
| PILs | \$ | - | \$ | - | \$ | - |  | - | \$ | 81.90 | \$ | 3,893.66 | \$ | 7,888.43 | \$ | 9,136.31 |
| Gross Up PILs |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Tax Rate |  | 36.12\% |  | 36.12\% |  | 33.50\% |  | 33.00\% |  | 31.00\% |  | 28.25\% |  | 26.50\% |  | 26.50\% |
| Change in Income Taxes Payable | \$ | - | \$ | - | \$ | - | \$ | - | \$ | 97.49 | \$ | 5,426.70 | \$ | 10,732.56 | \$ | 12,430.35 |
| Change in OCT | \$ | - | \$ | - | \$ | - | \$ | - | \$ | 14.64 | \$ | - | \$ | - | \$ | - |
| PILs | \$ | - | \$ | - | \$ | - | \$ | - | \$ | 112.13 | \$ | 5,426.70 | \$ | 10,732.56 | \$ | 12,430.35 |

Smart Meter Model for
Electricity Distributors
(2013 Filers)

This worksheet calculates the funding adder revenues.

Account 1555-Sub-account Funding Adder Revenues

| Interest Rates | Approved Deferral and Variance Accounts | CWIP | Date | Year | Quarter |  | Opening Balance (Principal) | Funding Adder Revenues | Interest <br> Rate |  | Interest | Closing Balance | Annual amounts | Board Approved Smart Meter Funding Adder |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2006 Q1 |  |  | Jan-06 | 2006 | Q1 | \$ | - |  | 0.00\% | \$ | - | \$ |  |  |
| 2006 Q2 | 4.14\% | 4.68\% | Feb-06 | 2006 | Q1 | \$ | - |  | 0.00\% | \$ | - | \$ |  |  |
| 2006 Q3 | 4.59\% | 5.05\% | Mar-06 | 2006 | Q1 | \$ | - |  | 0.00\% | \$ | - | \$ |  |  |
| 2006 Q4 | 4.59\% | 4.72\% | Apr-06 | 2006 | Q2 | \$ | - |  | 4.14\% | \$ | - | \$ |  |  |
| 2007 Q1 | 4.59\% | 4.72\% | May-06 | 2006 | Q2 | \$ | - |  | 4.14\% | \$ | - | \$ |  |  |
| 2007 Q2 | 4.59\% | 4.72\% | Jun-06 | 2006 | Q2 | \$ | - |  | 4.14\% | \$ | - | \$ |  |  |
| 2007 Q3 | 4.59\% | 5.18\% | Jul-06 | 2006 | Q3 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2007 Q4 | 5.14\% | 5.18\% | Aug-06 | 2006 | Q3 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2008 Q1 | 5.14\% | 5.18\% | Sep-06 | 2006 | Q3 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2008 Q2 | 4.08\% | 5.18\% | Oct-06 | 2006 | Q4 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2008 Q3 | 3.35\% | 5.43\% | Nov-06 | 2006 | Q4 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2008 Q4 | 3.35\% | 5.43\% | Dec-06 | 2006 | Q4 | \$ | - |  | 4.59\% | \$ | - | \$ | \$ |  |
| 2009 Q1 | 2.45\% | 6.61\% | Jan-07 | 2007 | Q1 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2009 Q2 | 1.00\% | 6.61\% | Feb-07 | 2007 | Q1 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2009 Q3 | 0.55\% | 5.67\% | Mar-07 | 2007 | Q1 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2009 Q4 | 0.55\% | 4.66\% | Apr-07 | 2007 | Q2 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2010 Q1 | 0.55\% | 4.34\% | May-07 | 2007 | Q2 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2010 Q2 | 0.55\% | 4.34\% | Jun-07 | 2007 | Q2 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2010 Q3 | 0.89\% | 4.66\% | Jul-07 | 2007 | Q3 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2010 Q4 | 1.20\% | 4.01\% | Aug-07 | 2007 | Q3 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2011 Q1 | 1.47\% | 4.29\% | Sep-07 | 2007 | Q3 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2011 Q2 | 1.47\% | 4.29\% | Oct-07 | 2007 | Q4 | \$ | - |  | 5.14\% | \$ | - | \$ |  |  |
| 2011 Q3 | 1.47\% | 4.29\% | Nov-07 | 2007 | Q4 | \$ | - |  | 5.14\% | \$ | - | \$ |  |  |
| 2011 Q4 | 1.47\% | 3.92\% | Dec-07 | 2007 | Q4 | \$ | - |  | 5.14\% | \$ | - | \$ | \$ |  |
| 2012 Q1 | 1.47\% | 3.92\% | Jan-08 | 2008 | Q1 | \$ | - |  | 5.14\% | \$ | - | \$ |  |  |
| 2012 Q2 | 1.47\% | 3.51\% | Feb-08 | 2008 | Q1 | \$ | - |  | 5.14\% | \$ | - | \$ |  |  |
| 2012 Q3 | 1.47\% | 3.51\% | Mar-08 | 2008 | Q1 | \$ | - |  | 5.14\% | \$ | - | \$ |  |  |
| 2012 Q4 | 1.47\% | 3.51\% | Apr-08 | 2008 | Q2 | \$ | - |  | 4.08\% | \$ | - | \$ |  |  |
| 2013 Q1 |  |  | May-08 | 2008 | Q2 | \$ | - |  | 4.08\% | \$ | - | \$ |  |  |
| 2013 Q2 |  |  | Jun-08 | 2008 | Q2 | \$ | - |  | 4.08\% | \$ | - | \$ |  |  |

Smart Meter Model for
Electricity Distributors
(2013 Filers)

This worksheet calculates the funding adder revenues.

Account 1555-Sub-account Funding Adder Revenues



This worksheet calculates the funding adder revenues.

Account 1555 - Sub-account Funding Adder Revenues


This worksheet calculates the funding adder revenues.

Account 1555 - Sub-account Funding Adder Revenues



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 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2006 Q1 | 0.00\% | 0.00\% | Jan-06 | 2006 | Q1 | \$ |  |  | - | 0.00\% | - |  |
| 2006 Q2 | 4.14\% | 4.68\% | Feb-06 | 2006 | Q1 | - |  |  | - | 0.00\% | - |  |
| 2006 Q3 | 4.59\% | 5.05\% | Mar-06 | 2006 | Q1 | - |  |  | - | 0.00\% | - |  |
| 2006 Q4 | 4.59\% | 4.72\% | Apr-06 | 2006 | Q2 | - |  |  | - | 4.14\% | - |  |
| 2007 Q1 | 4.59\% | 4.72\% | May-06 | 2006 | Q2 | - |  |  | - | 4.14\% | - |  |
| 2007 Q2 | 4.59\% | 4.72\% | Jun-06 | 2006 | Q2 | - |  |  | - | 4.14\% | - |  |
| 2007 Q3 | 4.59\% | 5.18\% | Jul-06 | 2006 | Q3 |  |  |  | - | 4.59\% | - |  |
| 2007 Q4 | 5.14\% | 5.18\% | Aug-06 | 2006 | Q3 | - |  |  | - | 4.59\% |  |  |
| 2008 Q1 | 5.14\% | 5.18\% | Sep-06 | 2006 | Q3 | - |  |  | - | 4.59\% | - |  |
| 2008 Q2 | 4.08\% | 5.18\% | Oct-06 | 2006 | Q4 | - |  |  | - | 4.59\% | - |  |
| 2008 Q3 | 3.35\% | 5.43\% | Nov-06 | 2006 | Q4 | - |  |  | - | 4.59\% | - |  |
| 2008 Q4 | 3.35\% | 5.43\% | Dec-06 | 2006 | Q4 | - |  |  | - | 4.59\% | - |  |
| 2009 Q1 | 2.45\% | 6.61\% | Jan-07 | 2007 | Q1 | - |  |  | - | 4.59\% | - |  |
| 2009 Q2 | 1.00\% | 6.61\% | Feb-07 | 2007 | Q1 | - |  |  | - | 4.59\% | - |  |
| 2009 Q3 | 0.55\% | 5.67\% | Mar-07 | 2007 | Q1 | - |  |  | - | 4.59\% | - |  |
| 2009 Q4 | 0.55\% | 4.66\% | Apr-07 | 2007 | Q2 | - |  |  | - | 4.59\% | - |  |
| 2010 Q1 | 0.55\% | 4.34\% | May-07 | 2007 | Q2 | - |  |  | - | 4.59\% | - |  |
| 2010 Q2 | 0.55\% | 4.34\% | Jun-07 | 2007 | Q2 | - |  |  | - | 4.59\% | - |  |
| 2010 Q3 | 0.89\% | 4.66\% | Jul-07 | 2007 | Q3 | - |  |  | - | 4.59\% | - |  |
| 2010 Q4 | 1.20\% | 4.01\% | Aug-07 | 2007 | Q3 | - |  |  | - | 4.59\% |  |  |
| 2011 Q1 | 1.47\% | 4.29\% | Sep-07 | 2007 | Q3 | - |  |  | - | 4.59\% | - |  |
| 2011 Q2 | 1.47\% | 4.29\% | Oct-07 | 2007 | Q4 | - |  |  | - | 5.14\% | - |  |
| 2011 Q3 | 1.47\% | 4.29\% | Nov-07 | 2007 | Q4 | - |  |  | - | 5.14\% | - |  |
| 2011 Q4 | 1.47\% | 3.92\% | Dec-07 | 2007 | Q4 | - |  |  | - | 5.14\% | - |  |
| 2012 Q1 | 1.47\% | 3.92\% | Jan-08 | 2008 | Q1 | - |  |  | - | 5.14\% | - |  |
| 2012 Q2 | 1.47\% | 3.51\% | Feb-08 | 2008 | Q1 | - |  |  | - | 5.14\% | - |  |
| 2012 Q3 | 1.47\% | 3.51\% | Mar-08 | 2008 | Q1 | - |  |  | - | 5.14\% | - |  |
| 2012 Q 4 | 1.47\% | 3.51\% | Apr-08 | 2008 | Q2 | - |  |  | - | 4.08\% | - |  |
| 2013 Q1 | 0.00\% | 0.00\% | May-08 | 2008 | Q2 | - |  |  | - | 4.08\% | - |  |
| 2013 Q2 | 0.00\% | 0.00\% | Jun-08 | 2008 | Q2 | - |  |  | - | 4.08\% | - |  |
| 2013 Q3 | 0.00\% | 0.00\% | Jul-08 | 2008 | Q3 | - |  |  | - | 3.35\% | - |  |
| 2013 Q4 | 0.00\% | 0.00\% | Aug-08 | 2008 | Q3 | - |  |  | - | 3.35\% | - |  |
|  |  |  | Sep-08 | 2008 | Q3 | - |  |  | - | 3.35\% | - |  |


| Oct-08 | 2008 | Q4 | - |  |  |  |  | - | 3.35\% | - | - |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Nov-08 | 2008 | Q4 | - |  |  |  |  | - | 3.35\% | - | - |
| Dec-08 | 2008 | Q4 | - |  |  |  |  | - | 3.35\% | - | - |
| Jan-09 | 2009 | Q1 | - |  |  |  |  | - | 2.45\% | - | - |
| Feb-09 | 2009 | Q1 | - |  |  |  |  | - | 2.45\% | - | - |
| 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 | - | \$ | 2.84 | \$ | 56.09 | 58.93 | 0.55\% | - |  |
| Feb-10 | 2010 | Q1 | 58.93 | \$ | 3.11 | \$ | 56.09 | 118.13 | 0.55\% | 0.03 | 0.03 |
| Mar-10 | 2010 | Q1 | 118.13 | \$ | 3.49 | \$ | 56.09 | 177.70 | 0.55\% | 0.05 | 0.08 |
| Apr-10 | 2010 | Q2 | 177.70 | \$ | 7.73 | \$ | 56.09 | 241.52 | 0.55\% | 0.08 | 0.16 |
| May-10 | 2010 | Q2 | 241.52 | \$ | 3.31 | \$ | 56.09 | 300.91 | 0.55\% | 0.11 | 0.27 |
| Jun-10 | 2010 | Q2 | 300.91 | \$ | 6.63 | \$ | 56.09 | 363.63 | 0.55\% | 0.14 | 0.41 |
| Jul-10 | 2010 | Q3 | 363.63 | \$ | 5.32 | \$ | 56.09 | 425.04 | 0.89\% | 0.27 | 0.68 |
| Aug-10 | 2010 | Q3 | 425.04 | \$ | 1.90 | \$ | 56.09 | 483.02 | 0.89\% | 0.32 | 1.00 |
| Sep-10 | 2010 | Q3 | 483.02 | \$ | 3.22 | \$ | 56.09 | 542.32 | 0.89\% | 0.36 | 1.35 |
| Oct-10 | 2010 | Q4 | 542.32 | \$ | 3.50 | \$ | 56.09 | 601.91 | 1.20\% | 0.54 | 1.90 |
| Nov-10 | 2010 | Q4 | 601.91 | \$ | 3.32 | \$ | 56.09 | 661.32 | 1.20\% | 0.60 | 2.50 |
| Dec-10 | 2010 | Q4 | 661.32 | \$ | 6.77 | \$ | 56.09 | 724.17 | 1.20\% | 0.66 | 3.16 |
| Jan-11 | 2011 | Q1 | 724.17 | \$ | 246.84 | \$ | 3,174.79 | 4,145.80 | 1.47\% | 0.89 | 4.05 |
| Feb-11 | 2011 | Q1 | 4,145.80 | \$ | 156.91 | \$ | 3,174.79 | 7,477.50 | 1.47\% | 5.08 | 9.13 |
| Mar-11 | 2011 | Q1 | 7,477.50 | \$ | 156.41 | \$ | 3,174.79 | 10,808.70 | 1.47\% | 9.16 | 18.29 |
| Apr-11 | 2011 | Q2 | 10,808.70 | \$ | 136.74 | \$ | 3,174.79 | 14,120.23 | 1.47\% | 13.24 | 31.53 |
| May-11 | 2011 | Q2 | 14,120.23 | \$ | 126.76 | \$ | 3,174.79 | 17,421.79 | 1.47\% | 17.30 | 48.82 |
| Jun-11 | 2011 | Q2 | 17,421.79 | \$ | 139.51 | \$ | 3,174.79 | 20,736.09 | 1.47\% | 21.34 | 70.17 |
| Jul-11 | 2011 | Q3 | 20,736.09 | \$ | 155.72 | \$ | 3,174.79 | 24,066.61 | 1.47\% | 25.40 | 95.57 |
| Aug-11 | 2011 | Q3 | 24,066.61 | \$ | 146.88 | \$ | 3,174.79 | 27,388.28 | 1.47\% | 29.48 | 125.05 |
| Sep-11 | 2011 | Q3 | 27,388.28 | \$ | 147.92 | \$ | 3,174.79 | 30,710.98 | 1.47\% | 33.55 | 158.60 |
| Oct-11 | 2011 | Q4 | 30,710.98 | \$ | 622.08 | \$ | 3,174.79 | 34,507.86 | 1.47\% | 37.62 | 196.22 |
| Nov-11 | 2011 | Q4 | 34,507.86 | \$ | 150.53 | \$ | 3,174.79 | 37,833.17 | 1.47\% | 42.27 | 238.49 |
| Dec-11 | 2011 | Q4 | 37,833.17 | \$ | 1,001.50 | \$ | 3,174.79 | 42,009.47 | 1.47\% | 46.35 | 284.84 |
| Jan-12 | 2012 | Q1 | 42,009.47 | \$ | 275.60 | \$ | 6,368.18 | 48,653.25 | 1.47\% | 51.46 | 336.30 |
| Feb-12 | 2012 | Q1 | 48,653.25 | \$ | 269.49 | \$ | 6,368.18 | 55,290.92 | 1.47\% | 59.60 | 395.90 |
| Mar-12 | 2012 | Q1 | 55,290.92 | \$ | 157.22 | \$ | 6,368.18 | 61,816.32 | 1.47\% | 67.73 | 463.63 |
| Apr-12 | 2012 | Q2 | 61,816.32 | \$ | 231.84 | \$ | 6,368.18 | 68,416.34 | 1.47\% | 75.72 | 539.36 |
| May-12 | 2012 | Q2 | 68,416.34 | \$ | 231.84 | \$ | 6,368.18 | 75,016.37 | 1.47\% | 83.81 | 623.17 |
| Jun-12 | 2012 | Q2 | 75,016.37 | \$ | 212.20 | \$ | 6,368.18 | 81,596.76 | 1.47\% | 91.90 | 715.06 |
| Jul-12 | 2012 | Q3 | 81,596.76 | \$ | 279.69 | \$ | 6,368.18 | 88,244.63 | 1.47\% | 99.96 | 815.02 |
| Aug-12 | 2012 | Q3 | 88,244.63 | \$ | 156.65 | \$ | 6,368.18 | 94,769.47 | 1.47\% | 108.10 | 923.12 |
| Sep-12 | 2012 | Q3 | 94,769.47 | \$ | 218.86 | \$ | 6,368.18 | 101,356.51 | 1.47\% | 116.09 | 1,039.21 |
| Oct-12 | 2012 | Q4 | 101,356.51 | \$ | 225.93 | \$ | 6,368.18 | 107,950.63 | 1.47\% | 124.16 | 1,163.37 |
| Nov-12 | 2012 | Q4 | 107,950.63 | \$ | 225.93 | \$ | 6,368.18 | 114,544.75 | 1.47\% | 132.24 | 1,295.61 |
| Dec-12 | 2012 | Q4 | 114,544.75 | \$ | 446.49 | \$ | 6,368.18 | 121,359.42 | 1.47\% | 140.32 | 1,435.93 |
| Jan-13 | 2013 | Q1 | 121,359.42 | \$ | 1,072.76 | \$ | 6,498.95 | 128,931.13 | 0.00\% | - | 1,435.93 |
| Feb-13 | 2013 | Q1 | 128,931.13 | \$ | 1,072.76 | \$ | 6,498.95 | 136,502.85 | 0.00\% | - | 1,435.93 |
| Mar-13 | 2013 | Q1 | 136,502.85 | \$ | 1,072.76 | \$ | 6,498.95 | 144,074.56 | 0.00\% | - | 1,435.93 |
| Apr-13 | 2013 | Q2 | 144,074.56 | \$ | 1,072.76 | \$ | 6,498.95 | 151,646.27 | 0.00\% | - | 1,435.93 |
| May-13 | 2013 | Q2 | 151,646.27 | \$ | 1,072.76 | \$ | 6,498.95 | 159,217.99 | 0.00\% | - | 1,435.93 |
| Jun-13 | 2013 | Q2 | 159,217.99 | \$ | 1,072.76 | \$ | 6,498.95 | 166,789.70 | 0.00\% | - | 1,435.93 |
| Jul-13 | 2013 | Q3 | 166,789.70 | \$ | 1,072.76 | \$ | 6,498.95 | 174,361.42 | 0.00\% | - | 1,435.93 |
| Aug-13 | 2013 | Q3 | 174,361.42 | \$ | 1,072.76 | \$ | 6,498.95 | 181,933.13 | 0.00\% | - | 1,435.93 |
| Sep-13 | 2013 | Q3 | 181,933.13 | \$ | 1,072.76 | \$ | 6,498.95 | 189,504.84 | 0.00\% | - | 1,435.93 |




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


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 is a tool desigo, tor oberved 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
obs 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 adderslriders.


| Calculation of Smart Meter Disposition Rider (per metered customer per month) |  |  |  |
| :---: | :---: | :---: | :---: |
| Years for collection or refunding | 0.666666667 |  |  |
| Deferred Incremental Revenue Requirement from 2006 to December 31, 2012 plus Interest on OM\&A and Amortization | \$ | 264,203.37 |  |
| SMFA Revenues collected from 2006 to 2013 test year (inclusive) | \$ | 43,406.03 |  |
| Plus Simple Interest on SMFA Revenues |  |  |  |
| Net Deferred Revenue Requirement | \$ | 220,797.34 |  |
| SMDR May 1, 2013 to December 31, 2013 | \$ | 18.15 | Match |
| Check: Forecasted SMDR Revenues | \$ | 220,849.20 |  |
| Calculation of Smart Meter Incremental Revenue Requirement Rate Rider (per metered customer per month) |  |  |  |
| Incremental Revenue Requirement for 2013 | \$ | 181,321.50 |  |
| SMIRR | \$ | 9.93 | Match |
| Check: Forecasted SMIRR Revenues |  | 181,242.36 |  |



## Smart Meter Model for <br> Electricity Distributors <br> (2013 Filers)

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



Smart Meter Model for Electricity Distributors (2013 Filers)

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

Class-specific SMDRs
Revenue Requirement for 2013

Return on Capital
Depreciation/Amortization
expense
Operating Expenses

Revenue Requirement before Taxes/PILs

Grossed-up Taxes/PLLs
Total Revenue Requirement for
2013


Average number of metered customers by class (2013)
The SMIRR is recovered as an annualized rate until the effective date of the distributor's next rebased rates resulting from a cost of service application

Smart Meter Incremental Revenue Requirement Rate Rider (\$/month per metered customer in the customer class)
Estimated SMIRR Revenues

## TAB 3 <br> SCHEDULE 1.0 <br> APPENDIX D - HOBNI SMART METER CARRYING CHARGES MODEL RELATING TO JANUARY 1, 2013 to APRIL 30, 2013

Summary of Carrying Charges for OM\&A, Depreciation and Funding Adders for Jan to Apr 2013

Carrying Charges From January 2013 to April 2013

| Residential <br> (Incremental) | GS<50 <br> (Incremental) | GS>50 <br> (Incremental) | Total |
| :--- | ---: | ---: | :--- |
| $\mathbf{( 1 3 , 8 9 2 )}$ | $\mathbf{1 , 8 4 5}$ | $\mathbf{4 4 3}$ | $\mathbf{( 1 1 , 6 0 4 )}$ |

Account 1556 - Sub-accounts Operating Expenses, Amortization Expenses, Carrying Charges for Residential \& General Service Less Than 50 kW

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

Account 1556 - Sub-accounts Operating Expenses, Amortization Expenses, Carrying Charges for Residential \& General Service Less Than 50 kW

| Prescribed Interest Rates | Approved Deferral and Variance Accounts | CWIP | Date | Year | Quarter | Opening Balance (Principal) | OM\&A <br> Expenses |  | Amortization / Depreciation Expense |  | Closing Balance (Principal) | (Annual) Interest Rate | Interest (on opening balance) | Cumulative Interest |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 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 | - | \$ | 1,339.39 | \$ | 10,876.24 | 12,215.63 | 0.55\% | - | - |
|  |  |  | Feb-10 | 2010 | Q1 | 12,215.63 | \$ | 1,467.22 | \$ | 12,505.96 | 26,188.80 | 0.55\% | 5.60 | 5.60 |
|  |  |  | Mar-10 | 2010 | Q1 | 26,188.80 | \$ | 1,643.42 | \$ | 5,391.96 | 33,224.19 | 0.55\% | 12.00 | 17.60 |
|  |  |  | Apr-10 | 2010 | Q2 | 33,224.19 | \$ | 3,641.65 | \$ | 9,466.60 | 46,332.43 | 0.55\% | 15.23 | 32.83 |
|  |  |  | May-10 | 2010 | Q2 | 46,332.43 | \$ | 1,560.20 | \$ | 5,836.20 | 53,728.83 | 0.55\% | 21.24 | 54.07 |
|  |  |  | Jun-10 | 2010 | Q2 | 53,728.83 | \$ | 3,124.84 | \$ | 10,876.80 | 67,730.47 | 0.55\% | 24.63 | 78.69 |
|  |  |  | Jul-10 | 2010 | Q3 | 67,730.47 | \$ | 2,507.71 | \$ | 5,142.65 | 75,380.83 | 0.89\% | 50.23 | 128.92 |
|  |  |  | Aug-10 | 2010 | Q3 | 75,380.83 | \$ | 894.96 | \$ | 7,652.38 | 83,928.18 | 0.89\% | 55.91 | 184.83 |
|  |  |  | Sep-10 | 2010 | Q3 | 83,928.18 | \$ | 1,515.16 | \$ | 7,303.24 | 92,746.58 | 0.89\% | 62.25 | 247.08 |
|  |  |  | Oct-10 | 2010 | Q4 | 92,746.58 | \$ | 1,649.41 | \$ | 8,917.88 | 103,313.87 | 1.20\% | 92.75 | 339.83 |
|  |  |  | Nov-10 | 2010 | Q4 | 103,313.87 | \$ | 1,564.53 | \$ | 19,633.60 | 124,512.00 | 1.20\% | 103.31 | 443.14 |
|  |  |  | Dec-10 | 2010 | Q4 | 124,512.00 | \$ | 3,187.71 | \$ | 12,418.44 | 140,118.15 | 1.20\% | 124.51 | 567.65 |
|  |  |  | Jan-11 | 2011 | Q1 | 140,118.15 | \$ | 2,941.64 | \$ | 24,563.79 | 167,623.58 | 1.47\% | 171.64 | 739.30 |
|  |  |  | Feb-11 | 2011 | Q1 | 167,623.58 | \$ | 1,869.92 | \$ | 22,936.44 | 192,429.94 | 1.47\% | 205.34 | 944.63 |
|  |  |  | Mar-11 | 2011 | Q1 | 192,429.94 | \$ | 1,864.02 | \$ | 27,922.49 | 222,216.46 | 1.47\% | 235.73 | 1,180.36 |
|  |  |  | Apr-11 | 2011 | Q2 | 222,216.46 | \$ | 1,629.60 | \$ | 21,394.85 | 245,240.91 | 1.47\% | 272.22 | 1,452.58 |
|  |  |  | May-11 | 2011 | Q2 | 245,240.91 | \$ | 1,510.68 | \$ | 23,805.83 | 270,557.42 | 1.47\% | 300.42 | 1,753.00 |
|  |  |  | Jun-11 | 2011 | Q2 | 270,557.42 | \$ | 1,662.63 | \$ | 21,694.59 | 293,914.63 | 1.47\% | 331.43 | 2,084.43 |
|  |  |  | Jul-11 | 2011 | Q3 | 293,914.63 | \$ | 1,855.79 | \$ | 22,193.09 | 317,963.51 | 1.47\% | 360.05 | 2,444.48 |
|  |  |  | Aug-11 | 2011 | Q3 | 317,963.51 | \$ | 1,750.38 | \$ | 21,352.70 | 341,066.58 | 1.47\% | 389.51 | 2,833.98 |

Account 1556 - Sub-accounts Operating Expenses, Amortization Expenses, Carrying Charges for Residential \& General Service Less Than 50 kW

| Prescribed Interest Rates | Approved <br> Deferral and Variance <br> CWIP <br> Accounts | Date | Year | Quarter | Opening <br> Balance <br> (Principal) | OM\&A Expenses |  | Amortization / Depreciation Expense |  | Closing Balance (Principal) | (Annual) Interest Rate | Interest (on opening balance) | Cumulative Interest |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Sep-11 | 2011 | Q3 | 341,066.58 | \$ | 1,762.77 | \$ | 20,726.55 | 363,555.90 | 1.47\% | 417.81 | 3,251.79 |
|  |  | Oct-11 | 2011 | Q4 | 363,555.90 | \$ | 7,413.57 | \$ | 150,424.36 | 521,393.83 | 1.47\% | 445.36 | 3,697.14 |
|  |  | Nov-11 | 2011 | Q4 | 521,393.83 | \$ | 1,793.87 | \$ | 17,221.66 | 540,409.36 | 1.47\% | 638.71 | 4,335.85 |
|  |  | Dec-11 | 2011 | Q4 | 540,409.36 | \$ | 11,935.26 | \$ | 36,808.25 | 589,152.88 | 1.47\% | 662.00 | 4,997.85 |
|  |  | Jan-12 | 2012 | Q1 | 589,152.88 | \$ | 3,092.82 | \$ | 54,486.82 | 646,732.52 | 1.47\% | 721.71 | 5,719.56 |
|  |  | Feb-12 | 2012 | Q1 | 646,732.52 | \$ | 3,024.19 | \$ | 55,080.67 | 704,837.38 | 1.47\% | 792.25 | 6,511.81 |
|  |  | Mar-12 | 2012 | Q1 | 704,837.38 | \$ | 1,764.31 | \$ | 48,283.26 | 754,884.96 | 1.47\% | 863.43 | 7,375.24 |
|  |  | Apr-12 | 2012 | Q2 | 754,884.96 | \$ | 2,601.72 | \$ | 46,011.85 | 803,498.53 | 1.47\% | 924.73 | 8,299.97 |
|  |  | May-12 | 2012 | Q2 | 803,498.53 | \$ | 2,601.72 | \$ | 47,708.01 | 853,808.26 | 1.47\% | 984.29 | 9,284.26 |
|  |  | Jun-12 | 2012 | Q2 | 853,808.26 | \$ | 2,381.39 | \$ | 42,896.66 | 899,086.30 | 1.47\% | 1,045.92 | 10,330.17 |
|  |  | Jul-12 | 2012 | Q3 | 899,086.30 | \$ | 3,138.76 | \$ | 58,311.88 | 960,536.94 | 1.47\% | 1,101.38 | 11,431.55 |
|  |  | Aug-12 | 2012 | Q3 | 960,536.94 | \$ | 1,757.97 | \$ | 51,099.48 | 1,013,394.38 | 1.47\% | 1,176.66 | 12,608.21 |
|  |  | Sep-12 | 2012 | Q3 | 1,013,394.38 | \$ | 2,456.08 | \$ | 52,006.13 | 1,067,856.59 | 1.47\% | 1,241.41 | 13,849.62 |
|  |  | Oct-12 | 2012 | Q4 | 1,067,856.59 | \$ | 2,535.44 | \$ | 51,309.30 | 1,121,701.33 | 1.47\% | 1,308.12 | 15,157.74 |
|  |  | Nov-12 | 2012 | Q4 | 1,121,701.33 | \$ | 2,535.44 | \$ | 19,927.50 | 1,144,164.27 | 1.47\% | 1,374.08 | 16,531.83 |
|  |  | Dec-12 | 2012 | Q4 | 1,144,164.27 | \$ | 5,010.55 | \$ | 51,309.30 | 1,200,484.11 | 1.47\% | 1,401.60 | 17,933.43 |
|  |  | Jan-13 | 2013 | Q1 | 1,200,484.11 | \$ | 12,038.63 | \$ | 47,234.71 | 1,259,757.45 | 1.47\% | 1,470.59 | 19,404.02 |
|  |  | Feb-13 | 2013 | Q1 | 1,259,757.45 | \$ | 12,038.63 | \$ | 47,234.71 | 1,319,030.79 | 1.47\% | 1,543.20 | 20,947.22 |
|  |  | Mar-13 | 2013 | Q1 | 1,319,030.79 | \$ | 12,038.63 | \$ | 47,234.71 | 1,378,304.12 | 1.47\% | 1,615.81 | 22,563.04 |
|  |  | Apr-13 | 2013 | Q2 | 1,378,304.12 | \$ | 12,038.63 | \$ | 47,234.71 | 1,437,577.46 | 1.47\% | 1,688.42 | 24,251.46 |
|  |  | May-13 | 2013 | Q2 | 1,437,577.46 |  |  |  |  | 1,437,577.46 | 0.00\% | - | 24,251.46 |
|  |  | Jun-13 | 2013 | Q2 | 1,437,577.46 |  |  |  |  | 1,437,577.46 | 0.00\% | - | 24,251.46 |
|  |  | Jul-13 | 2013 | Q3 | 1,437,577.46 |  |  |  |  | 1,437,577.46 | 0.00\% | - | 24,251.46 |
|  |  | Aug-13 | 2013 | Q3 | 1,437,577.46 |  |  |  |  | 1,437,577.46 | 0.00\% | - | 24,251.46 |
|  |  | Sep-13 | 2013 | Q3 | 1,437,577.46 |  |  |  |  | 1,437,577.46 | 0.00\% | - | 24,251.46 |
|  |  | Oct-13 | 2013 | Q4 | 1,437,577.46 |  |  |  |  | 1,437,577.46 | 0.00\% | - | 24,251.46 |
|  |  | Nov-13 | 2013 | Q4 | 1,437,577.46 |  |  |  |  | 1,437,577.46 | 0.00\% | - | 24,251.46 |
|  |  | Dec-13 | 2013 | Q4 | 1,437,577.46 |  |  |  |  | 1,437,577.46 | 0.00\% | - | 24,251.46 |


| Interest Rates | Approved Deferral and Variance Accounts | CWIP | Date | Year | Quarter |  |  | Opening Balance <br> (Principal) | Funding Adder Revenues | Interest Rate |  | Interest | Closing Balance | Annual amounts | Board Approved Smart Meter Funding Adder |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2006 Q1 |  |  | Jan-06 | 2006 | Q1 | 2006 Q1 | \$ | - |  | 0.00\% | \$ | - | \$ |  |  |
| 2006 Q2 | 4.14\% | 4.68\% | Feb-06 | 2006 | Q1 | 2006 Q1 | \$ | - |  | 0.00\% | \$ | - | \$ |  |  |
| 2006 Q3 | 4.59\% | 5.05\% | Mar-06 | 2006 | Q1 | 2006 Q1 | \$ | - |  | 0.00\% | \$ | - | \$ |  |  |
| 2006 Q4 | 4.59\% | 4.72\% | Apr-06 | 2006 | Q2 | 2006 Q2 | \$ | - |  | 4.14\% | \$ | - | \$ |  |  |
| 2007 Q1 | 4.59\% | 4.72\% | May-06 | 2006 | Q2 | 2006 Q2 | \$ | - |  | 4.14\% | \$ | - | \$ |  |  |
| 2007 Q2 | 4.59\% | 4.72\% | Jun-06 | 2006 | Q2 | 2006 Q2 | \$ | - |  | 4.14\% | \$ | - | \$ |  |  |
| 2007 Q3 | 4.59\% | 5.18\% | Jul-06 | 2006 | Q3 | 2006 Q3 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2007 Q4 | 5.14\% | 5.18\% | Aug-06 | 2006 | Q3 | 2006 Q3 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2008 Q1 | 5.14\% | 5.18\% | Sep-06 | 2006 | Q3 | 2006 Q3 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2008 Q2 | 4.08\% | 5.18\% | Oct-06 | 2006 | Q4 | 2006 Q4 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2008 Q3 | 3.35\% | 5.43\% | Nov-06 | 2006 | Q4 | 2006 Q4 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2008 Q4 | 3.35\% | 5.43\% | Dec-06 | 2006 | Q4 | 2006 Q4 | \$ | - |  | 4.59\% | \$ | - | \$ | \$ |  |
| 2009 Q1 | 2.45\% | 6.61\% | Jan-07 | 2007 | Q1 | 2007 Q1 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2009 Q2 | 1.00\% | 6.61\% | Feb-07 | 2007 | Q1 | 2007 Q1 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2009 Q3 | 0.55\% | 5.67\% | Mar-07 | 2007 | Q1 | 2007 Q1 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2009 Q4 | 0.55\% | 4.66\% | Apr-07 | 2007 | Q2 | 2007 Q2 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2010 Q1 | 0.55\% | 4.34\% | May-07 | 2007 | Q2 | 2007 Q2 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2010 Q2 | 0.55\% | 4.34\% | Jun-07 | 2007 | Q2 | 2007 Q2 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2010 Q3 | 0.89\% | 4.66\% | Jul-07 | 2007 | Q3 | 2007 Q3 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2010 Q4 | 1.20\% | 4.01\% | Aug-07 | 2007 | Q3 | 2007 Q3 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2011 Q1 | 1.47\% | 4.29\% | Sep-07 | 2007 | Q3 | 2007 Q3 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2011 Q2 | 1.47\% | 4.29\% | Oct-07 | 2007 | Q4 | 2007 Q4 | \$ | - |  | 5.14\% | \$ | - | \$ |  |  |
| 2011 Q3 | 1.47\% | 4.29\% | Nov-07 | 2007 | Q4 | 2007 Q4 | \$ | - |  | 5.14\% | \$ | - | \$ |  |  |
| 2011 Q4 | 1.47\% | 3.92\% | Dec-07 | 2007 | Q4 | 2007 Q4 | \$ | - |  | 5.14\% | \$ | - | \$ | \$ |  |
| 2012 Q1 | 1.47\% | 3.92\% | Jan-08 | 2008 | Q1 | 2008 Q1 | \$ | - |  | 5.14\% | \$ | - | \$ |  |  |
| 2012 Q2 | 1.47\% | 3.51\% | Feb-08 | 2008 | Q1 | 2008 Q1 | \$ | - |  | 5.14\% | \$ | - | \$ |  |  |
| 2012 Q3 | 1.47\% | 3.51\% | Mar-08 | 2008 | Q1 | 2008 Q1 | \$ | - |  | 5.14\% | \$ | - | \$ |  |  |
| 2012 Q4 | 1.47\% | 3.51\% | Apr-08 | 2008 | Q2 | 2008 Q2 | \$ | - |  | 4.08\% | \$ | - | \$ |  |  |
| 2013 Q1 | 1.47\% | 3.51\% | May-08 | 2008 | Q2 | 2008 Q2 | \$ | - |  | 4.08\% | \$ | - | \$ |  |  |
| 2013 Q2 | 1.47\% | 3.51\% | Jun-08 | 2008 | Q2 | 2008 Q2 | \$ | - |  | 4.08\% | \$ | - | \$ |  |  |
| 2013 Q3 |  |  | Jul-08 | 2008 | Q3 | 2008 Q3 | \$ | - |  | 3.35\% | \$ | - | \$ |  |  |
| 2013 Q4 |  |  | Aug-08 | 2008 | Q3 | 2008 Q3 | \$ | - |  | 3.35\% | \$ | - | \$ |  |  |
|  |  |  | Sep-08 | 2008 | Q3 | 2008 Q3 | \$ | - |  | 3.35\% | \$ | - | \$ |  |  |
|  |  |  | Oct-08 | 2008 | Q4 | 2008 Q4 | \$ | - |  | 3.35\% | \$ | - | \$ |  |  |
|  |  |  | Nov-08 | 2008 | Q4 | 2008 Q4 | \$ | - |  | 3.35\% | \$ | - | \$ |  |  |
|  |  |  | Dec-08 | 2008 | Q4 | 2008 Q4 | \$ | - |  | 3.35\% | \$ | - | \$ | \$ |  |
|  |  |  | Jan-09 | 2009 | Q1 | 2009 Q1 | \$ | - |  | 2.45\% | \$ | - | \$ |  |  |
|  |  |  | Feb-09 | 2009 | Q1 | 2009 Q1 | \$ | - |  | 2.45\% | \$ | - | \$ |  |  |
|  |  |  | Mar-09 | 2009 | Q1 | 2009 Q1 | \$ | - |  | 2.45\% | \$ | - | \$ |  |  |
|  |  |  | Apr-09 | 2009 | Q2 | 2009 Q2 | \$ | - |  | 1.00\% | \$ | - | \$ |  |  |
|  |  |  | May-09 | 2009 | Q2 | 2009 Q2 | \$ | - |  | 1.00\% | \$ | - | \$ |  |  |
|  |  |  | Jun-09 | 2009 | Q2 | 2009 Q2 | \$ | - |  | 1.00\% | \$ | - | \$ |  |  |
|  |  |  | Jul-09 | 2009 | Q3 | 2009 Q3 | \$ | - |  | 0.55\% | \$ | - | \$ |  |  |
|  |  |  | Aug-09 | 2009 | Q3 | 2009 Q3 | \$ | - |  | 0.55\% | \$ | - | \$ |  |  |
|  |  |  | Sep-09 | 2009 | Q3 | 2009 Q3 | \$ | - |  | 0.55\% | \$ | - | \$ |  |  |


| 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 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Oct-09 | 2009 | Q4 | 2009 Q4 | \$ | - |  |  | 0.55\% | \$ | - | \$ | - |  |  |  |
|  |  |  | Nov-09 | 2009 | Q4 | 2009 Q4 | \$ | - |  |  | 0.55\% | \$ | - | \$ | - |  |  |  |
|  |  |  | Dec-09 | 2009 | Q4 | 2009 Q4 | \$ |  |  |  | 0.55\% | \$ | - | \$ | - | \$ |  |  |
|  |  |  | Jan-10 | 2010 | Q1 | 2010 Q1 | \$ | - | \$ | 66,404.04 | 0.55\% | \$ | - | \$ | 66,404.04 |  |  |  |
|  |  |  | Feb-10 | 2010 | Q1 | 2010 Q1 | \$ | 66,404.04 | \$ | 129,468.00 | 0.55\% | \$ | 30.44 | \$ | 195,902.48 |  |  |  |
|  |  |  | Mar-10 | 2010 | Q1 | 2010 Q1 | \$ | 195,872.04 | \$ | 129,758.00 | 0.55\% | \$ | 89.77 | \$ | 325,719.81 |  |  |  |
|  |  |  | Apr-10 | 2010 | Q2 | 2010 Q2 | \$ | 325,630.04 | \$ | 130,339.00 | 0.55\% | \$ | 149.25 | \$ | 456,118.29 |  |  |  |
|  |  |  | May-10 | 2010 | Q2 | 2010 Q2 | \$ | 455,969.04 | \$ | 130,003.00 | 0.55\% | \$ | 208.99 | \$ | 586,181.03 |  |  |  |
|  |  |  | Jun-10 | 2010 | Q2 | 2010 Q2 | \$ | 585,972.04 | \$ | 130,534.00 | 0.55\% | \$ | 268.57 | \$ | 716,774.61 |  |  |  |
|  |  |  | Jul-10 | 2010 | Q3 | 2010 Q3 | \$ | 716,506.04 | \$ | 130,345.00 | 0.89\% | \$ | 531.41 | \$ | 847,382.45 |  |  |  |
|  |  |  | Aug-10 | 2010 | Q3 | 2010 Q3 | \$ | 846,851.04 | \$ | 130,728.00 | 0.89\% | \$ | 628.08 | \$ | 978,207.12 |  |  |  |
|  |  |  | Sep-10 | 2010 | Q3 | 2010 Q3 | \$ | 977,579.04 | \$ | 131,152.00 | 0.89\% | \$ | 725.04 | \$ | 1,109,456.08 |  |  |  |
|  |  |  | Oct-10 | 2010 | Q4 | 2010 Q4 | \$ | 1,108,731.04 | \$ | 131,585.00 | 1.20\% | \$ | 1,108.73 | \$ | 1,241,424.77 |  |  |  |
|  |  |  | Nov-10 | 2010 | Q4 | 2010 Q4 | \$ | 1,240,316.04 | \$ | 131,895.00 | 1.20\% | \$ | 1,240.32 | \$ | 1,373,451.36 |  |  |  |
|  |  |  | Dec-10 | 2010 | Q4 | 2010 Q4 | \$ | 1,372,211.04 | \$ | 132,191.00 | 1.20\% | \$ | 1,372.21 | \$ | 1,505,774.25 | \$ | 1,510,754.85 |  |
|  |  |  | Jan-11 | 2011 | Q1 | 2011 Q1 | \$ | 1,504,402.04 | \$ | 132,738.00 | 1.47\% | \$ | 1,842.89 | \$ | 1,638,982.93 |  |  |  |
|  |  |  | Feb-11 | 2011 | Q1 | 2011 Q1 | \$ | 1,637,140.04 | \$ | 132,818.00 | 1.47\% | \$ | 2,005.50 | \$ | 1,771,963.54 |  |  |  |
|  |  |  | Mar-11 | 2011 | Q1 | 2011 Q1 | \$ | 1,769,958.04 | \$ | 133,113.00 | 1.47\% | \$ | 2,168.20 | \$ | 1,905,239.24 |  |  |  |
|  |  |  | Apr-11 | 2011 | Q2 | 2011 Q2 | \$ | 1,903,071.04 | \$ | 133,304.00 | 1.47\% | \$ | 2,331.26 | \$ | 2,038,706.30 |  |  |  |
|  |  |  | May-11 | 2011 | Q2 | 2011 Q2 | \$ | 2,036,375.04 | \$ | 167,462.00 | 1.47\% | \$ | 2,494.56 | \$ | 2,206,331.60 |  |  |  |
|  |  |  | Jun-11 | 2011 | Q2 | 2011 Q2 | \$ | 2,203,837.04 | \$ | 203,986.00 | 1.47\% | \$ | 2,699.70 | \$ | 2,410,522.74 |  |  |  |
|  |  |  | Jul-11 | 2011 | Q3 | 2011 Q3 | \$ | 2,407,823.04 | \$ | 203,950.00 | 1.47\% | \$ | 2,949.58 | \$ | 2,614,722.62 |  |  |  |
|  |  |  | Aug-11 | 2011 | Q3 | 2011 Q3 | \$ | 2,611,773.04 | \$ | 204,421.00 | 1.47\% | \$ | 3,199.42 | \$ | 2,819,393.46 |  |  |  |
|  |  |  | Sep-11 | 2011 | Q3 | 2011 Q3 | \$ | 2,816,194.04 | \$ | 205,162.00 | 1.47\% | \$ | 3,449.84 | \$ | 3,024,805.88 |  |  |  |
|  |  |  | Oct-11 | 2011 | Q4 | 2011 Q4 | \$ | 3,021,356.04 | \$ | 205,599.00 | 1.47\% | \$ | 3,701.16 | \$ | 3,230,656.20 |  |  |  |
|  |  |  | Nov-11 | 2011 | Q4 | 2011 Q4 | \$ | 3,226,955.04 | \$ | 206,291.00 | 1.47\% | \$ | 3,953.02 | \$ | 3,437,199.06 |  |  |  |
|  |  |  | Dec-11 | 2011 | Q4 | 2011 Q4 | \$ | 3,433,246.04 | \$ | 206,702.00 | 1.47\% | \$ | 4,205.73 | \$ | 3,644,153.77 | \$ | 2,170,546.86 |  |
|  |  |  | Jan-12 | 2012 | Q1 | 2012 Q1 | \$ | 3,639,948.04 | \$ | 107,938.00 | 1.47\% | \$ | 4,458.94 | \$ | 3,752,344.98 |  |  |  |
|  |  |  | Feb-12 | 2012 | Q1 | 2012 Q1 | \$ | 3,747,886.04 | \$ | 66.00 | 1.47\% | \$ | 4,591.16 | \$ | 3,752,543.20 |  |  |  |
|  |  |  | Mar-12 | 2012 | Q1 | 2012 Q1 | \$ | 3,747,952.04 | -\$ | 15.00 | 1.47\% | \$ | 4,591.24 | \$ | 3,752,528.28 |  |  |  |
|  |  |  | Apr-12 | 2012 | Q2 | 2012 Q2 | \$ | 3,747,937.04 | \$ | 19.00 | 1.47\% | \$ | 4,591.22 | \$ | 3,752,547.26 |  |  |  |
|  |  |  | May-12 | 2012 | Q2 | 2012 Q2 | \$ | 3,747,956.04 | \$ | 2.00 | 1.47\% | \$ | 4,591.25 | \$ | 3,752,549.29 |  |  |  |
|  |  |  | Jun-12 | 2012 | Q2 | 2012 Q2 | \$ | 3,747,958.04 | -\$ | 10.00 | 1.47\% | \$ | 4,591.25 | \$ | 3,752,539.29 |  |  |  |
|  |  |  | Jul-12 | 2012 | Q3 | 2012 Q3 | \$ | 3,747,948.04 | \$ | 10.00 | 1.47\% | \$ | 4,591.24 | \$ | 3,752,549.28 |  |  |  |
|  |  |  | Aug-12 | 2012 | Q3 | 2012 Q3 | \$ | 3,747,958.04 | \$ | - | 1.47\% | \$ | 4,591.25 | \$ | 3,752,549.29 |  |  |  |
|  |  |  | Sep-12 | 2012 | Q3 | 2012 Q3 | \$ | 3,747,958.04 | \$ | - | 1.47\% | \$ | 4,591.25 | \$ | 3,752,549.29 |  |  |  |
|  |  |  | Oct-12 | 2012 | Q4 | 2012 Q4 | \$ | 3,747,958.04 |  |  | 1.47\% | \$ | 4,591.25 | \$ | 3,752,549.29 |  |  |  |
|  |  |  | Nov-12 | 2012 | Q4 | 2012 Q4 | \$ | 3,747,958.04 |  |  | 1.47\% | \$ | 4,591.25 | \$ | 3,752,549.29 |  |  |  |
|  |  |  | Dec-12 | 2012 | Q4 | 2012 Q4 | \$ | 3,747,958.04 |  |  | 1.47\% | \$ | 4,591.25 | \$ | 3,752,549.29 | \$ | 162,972.55 |  |
|  |  |  | Jan-13 | 2013 | Q1 | 2013 Q1 | \$ | 3,747,958.04 |  |  | 1.47\% | \$ | 4,591.25 | \$ | 3,752,549.29 |  |  |  |
|  |  |  | Feb-13 | 2013 | Q1 | 2013 Q1 | \$ | 3,747,958.04 |  |  | 1.47\% | \$ | 4,591.25 | \$ | 3,752,549.29 |  |  |  |
|  |  |  | Mar-13 | 2013 | Q1 | 2013 Q1 | \$ | 3,747,958.04 |  |  | 1.47\% | \$ | 4,591.25 | \$ | 3,752,549.29 |  |  |  |
|  |  |  | Apr-13 | 2013 | Q2 | 2013 Q2 | \$ | 3,747,958.04 |  |  | 1.47\% | \$ | 4,591.25 | \$ | 3,752,549.29 |  |  |  |
|  |  |  | May-13 | 2013 | Q2 | 2013 Q2 | \$ | 3,747,958.04 |  |  | 0.00\% | \$ | - | \$ | 3,747,958.04 |  |  |  |
|  |  |  | Jun-13 | 2013 | Q2 | 2013 Q2 | \$ | 3,747,958.04 |  |  | 0.00\% | \$ | - | \$ | 3,747,958.04 |  |  |  |

Account 1555 - Sub-account Funding Adder Revenues for Residential \& General Service Less Than 50 kW


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


| Prescribed Interest Rates | Deferral and Variance Accounts | CWIP | Date | Year | Quarter | Opening Balance (Principal) | OM\&A Expenses |  | Amortization / <br> Depreciation Expense |  | Closing Balance (Principal) | (Annual) Interest Rate | Interest (on opening balance) | Cumulative Interest |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 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 | - | \$ | 2.84 | \$ | 56.09 | 58.93 | 0.55\% | - | - |
|  |  |  | Feb-10 | 2010 | Q1 | 58.93 | \$ | 3.11 | \$ | 56.09 | 118.13 | 0.55\% | 0.03 | 0.03 |
|  |  |  | Mar-10 | 2010 | Q1 | 118.13 | \$ | 3.49 | \$ | 56.09 | 177.70 | 0.55\% | 0.05 | 0.08 |
|  |  |  | Apr-10 | 2010 | Q2 | 177.70 | \$ | 7.73 | \$ | 56.09 | 241.52 | 0.55\% | 0.08 | 0.16 |
|  |  |  | May-10 | 2010 | Q2 | 241.52 | \$ | 3.31 | \$ | 56.09 | 300.91 | 0.55\% | 0.11 | 0.27 |
|  |  |  | Jun-10 | 2010 | Q2 | 300.91 | \$ | 6.63 | \$ | 56.09 | 363.63 | 0.55\% | 0.14 | 0.41 |
|  |  |  | Jul-10 | 2010 | Q3 | 363.63 | \$ | 5.32 | \$ | 56.09 | 425.04 | 0.89\% | 0.27 | 0.68 |
|  |  |  | Aug-10 | 2010 | Q3 | 425.04 | \$ | 1.90 | \$ | 56.09 | 483.02 | 0.89\% | 0.32 | 1.00 |
|  |  |  | Sep-10 | 2010 | Q3 | 483.02 | \$ | 3.22 | \$ | 56.09 | 542.32 | 0.89\% | 0.36 | 1.35 |
|  |  |  | Oct-10 | 2010 | Q4 | 542.32 | \$ | 3.50 | \$ | 56.09 | 601.91 | 1.20\% | 0.54 | 1.90 |
|  |  |  | Nov-10 | 2010 | Q4 | 601.91 | \$ | 3.32 | \$ | 56.09 | 661.32 | 1.20\% | 0.60 | 2.50 |
|  |  |  | Dec-10 | 2010 | Q4 | 661.32 | \$ | 6.77 | \$ | 56.09 | 724.17 | 1.20\% | 0.66 | 3.16 |
|  |  |  | Jan-11 | 2011 | Q1 | 724.17 | \$ | 246.84 | \$ | 3,174.79 | 4,145.80 | 1.47\% | 0.89 | 4.05 |
|  |  |  | Feb-11 | 2011 | Q1 | 4,145.80 | \$ | 156.91 | \$ | 3,174.79 | 7,477.50 | 1.47\% | 5.08 | 9.13 |
|  |  |  | Mar-11 | 2011 | Q1 | 7,477.50 | \$ | 156.41 | \$ | 3,174.79 | 10,808.70 | 1.47\% | 9.16 | 18.29 |
|  |  |  | Apr-11 | 2011 | Q2 | 10,808.70 | \$ | 136.74 | \$ | 3,174.79 | 14,120.23 | 1.47\% | 13.24 | 31.53 |
|  |  |  | May-11 | 2011 | Q2 | 14,120.23 | \$ | 126.76 | \$ | 3,174.79 | 17,421.79 | 1.47\% | 17.30 | 48.82 |
|  |  |  | Jun-11 | 2011 | Q2 | 17,421.79 | \$ | 139.51 | \$ | 3,174.79 | 20,736.09 | 1.47\% | 21.34 | 70.17 |
|  |  |  | Jul-11 | 2011 | Q3 | 20,736.09 | \$ | 155.72 | \$ | 3,174.79 | 24,066.61 | 1.47\% | 25.40 | 95.57 |
|  |  |  | Aug-11 | 2011 | Q3 | 24,066.61 | \$ | 146.88 | \$ | 3,174.79 | 27,388.28 | 1.47\% | 29.48 | 125.05 |
|  |  |  | Sep-11 | 2011 | Q3 | 27,388.28 | \$ | 147.92 | \$ | 3,174.79 | 30,710.98 | 1.47\% | 33.55 | 158.60 |
|  |  |  | Oct-11 | 2011 | Q4 | 30,710.98 | \$ | 622.08 | \$ | 3,174.79 | 34,507.86 | 1.47\% | 37.62 | 196.22 |
|  |  |  | Nov-11 | 2011 | Q4 | 34,507.86 | \$ | 150.53 | \$ | 3,174.79 | 37,833.17 | 1.47\% | 42.27 | 238.49 |
|  |  |  | Dec-11 | 2011 | Q4 | 37,833.17 | \$ | 1,001.50 | \$ | 3,174.79 | 42,009.47 | 1.47\% | 46.35 | 284.84 |
|  |  |  | Jan-12 | 2012 | Q1 | 42,009.47 | \$ | 275.60 | \$ | 6,368.18 | 48,653.25 | 1.47\% | 51.46 | 336.30 |
|  |  |  | Feb-12 | 2012 | Q1 | 48,653.25 | \$ | 269.49 | \$ | 6,368.18 | 55,290.92 | 1.47\% | 59.60 | 395.90 |



| Interest Rates | Approved Deferral and Variance Accounts | CWIP | Date | Year | Quarter |  |  | Opening Balance (Principal) | Funding Adder Revenues | Interest Rate |  | Interest | Closing Balance | Annual amounts | Board Approved Smart Meter Funding Adder |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2006 Q1 |  |  | Jan-06 | 2006 | Q1 | 2006 Q1 | \$ | - |  | 0.00\% | \$ | - | \$ |  |  |
| 2006 Q2 | 4.14\% | 4.68\% | Feb-06 | 2006 | Q1 | 2006 Q1 | \$ | - |  | 0.00\% | \$ | - | \$ |  |  |
| 2006 Q3 | 4.59\% | 5.05\% | Mar-06 | 2006 | Q1 | 2006 Q1 | \$ | - |  | 0.00\% | \$ | - | \$ |  |  |
| 2006 Q4 | 4.59\% | 4.72\% | Apr-06 | 2006 | Q2 | 2006 Q2 | \$ | - |  | 4.14\% | \$ | - | \$ |  |  |
| 2007 Q1 | 4.59\% | 4.72\% | May-06 | 2006 | Q2 | 2006 Q2 | \$ | - |  | 4.14\% | \$ | - | \$ |  |  |
| 2007 Q2 | 4.59\% | 4.72\% | Jun-06 | 2006 | Q2 | 2006 Q2 | \$ | - |  | 4.14\% | \$ | - | \$ |  |  |
| 2007 Q3 | 4.59\% | 5.18\% | Jul-06 | 2006 | Q3 | 2006 Q3 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2007 Q4 | 5.14\% | 5.18\% | Aug-06 | 2006 | Q3 | 2006 Q3 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2008 Q1 | 5.14\% | 5.18\% | Sep-06 | 2006 | Q3 | 2006 Q3 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2008 Q2 | 4.08\% | 5.18\% | Oct-06 | 2006 | Q4 | 2006 Q4 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2008 Q3 | 3.35\% | 5.43\% | Nov-06 | 2006 | Q4 | 2006 Q4 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2008 Q4 | 3.35\% | 5.43\% | Dec-06 | 2006 | Q4 | 2006 Q4 | \$ | - |  | 4.59\% | \$ | - | \$ | \$ |  |
| 2009 Q1 | 2.45\% | 6.61\% | Jan-07 | 2007 | Q1 | 2007 Q1 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2009 Q2 | 1.00\% | 6.61\% | Feb-07 | 2007 | Q1 | 2007 Q1 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2009 Q3 | 0.55\% | 5.67\% | Mar-07 | 2007 | Q1 | 2007 Q1 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2009 Q4 | 0.55\% | 4.66\% | Apr-07 | 2007 | Q2 | 2007 Q2 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2010 Q1 | 0.55\% | 4.34\% | May-07 | 2007 | Q2 | 2007 Q2 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2010 Q2 | 0.55\% | 4.34\% | Jun-07 | 2007 | Q2 | 2007 Q2 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2010 Q3 | 0.89\% | 4.66\% | Jul-07 | 2007 | Q3 | 2007 Q3 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2010 Q4 | 1.20\% | 4.01\% | Aug-07 | 2007 | Q3 | 2007 Q3 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2011 Q1 | 1.47\% | 4.29\% | Sep-07 | 2007 | Q3 | 2007 Q3 | \$ | - |  | 4.59\% | \$ | - | \$ |  |  |
| 2011 Q2 | 1.47\% | 4.29\% | Oct-07 | 2007 | Q4 | 2007 Q4 | \$ | - |  | 5.14\% | \$ | - | \$ |  |  |
| 2011 Q3 | 1.47\% | 4.29\% | Nov-07 | 2007 | Q4 | 2007 Q4 | \$ | - |  | 5.14\% | \$ | - | \$ |  |  |
| 2011 Q4 | 1.47\% | 3.92\% | Dec-07 | 2007 | Q4 | 2007 Q4 | \$ | - |  | 5.14\% | \$ | - | \$ | \$ |  |
| 2012 Q1 | 1.47\% | 3.92\% | Jan-08 | 2008 | Q1 | 2008 Q1 | \$ | - |  | 5.14\% | \$ | - | \$ |  |  |
| 2012 Q2 | 1.47\% | 3.51\% | Feb-08 | 2008 | Q1 | 2008 Q1 | \$ | - |  | 5.14\% | \$ | - | \$ |  |  |
| 2012 Q3 | 1.47\% | 3.51\% | Mar-08 | 2008 | Q1 | 2008 Q1 | \$ | - |  | 5.14\% | \$ | - | \$ |  |  |
| 2012 Q4 | 1.47\% | 3.51\% | Apr-08 | 2008 | Q2 | 2008 Q2 | \$ | - |  | 4.08\% | \$ | - | \$ |  |  |
| 2013 Q1 | 1.47\% | 3.51\% | May-08 | 2008 | Q2 | 2008 Q2 | \$ | - |  | 4.08\% | \$ | - | \$ |  |  |
| 2013 Q2 | 1.47\% | 3.51\% | Jun-08 | 2008 | Q2 | 2008 Q2 | \$ | - |  | 4.08\% | \$ | - | \$ |  |  |
| 2013 Q3 |  |  | Jul-08 | 2008 | Q3 | 2008 Q3 | \$ | - |  | 3.35\% | \$ | - | \$ |  |  |
| 2013 Q4 |  |  | Aug-08 | 2008 | Q3 | 2008 Q3 | \$ | - |  | 3.35\% | \$ | - | \$ |  |  |
|  |  |  | Sep-08 | 2008 | Q3 | 2008 Q3 | \$ | - |  | 3.35\% | \$ | - | \$ |  |  |
|  |  |  | Oct-08 | 2008 | Q4 | 2008 Q4 | \$ | - |  | 3.35\% | \$ | - | \$ |  |  |
|  |  |  | Nov-08 | 2008 | Q4 | 2008 Q4 | \$ | - |  | 3.35\% | \$ | - | \$ |  |  |
|  |  |  | Dec-08 | 2008 | Q4 | 2008 Q4 | \$ | - |  | 3.35\% | \$ | - | \$ | \$ |  |
|  |  |  | Jan-09 | 2009 | Q1 | 2009 Q1 | \$ | - |  | 2.45\% | \$ | - | \$ |  |  |
|  |  |  | Feb-09 | 2009 | Q1 | 2009 Q1 | \$ | - |  | 2.45\% | \$ | - | \$ |  |  |
|  |  |  | Mar-09 | 2009 | Q1 | 2009 Q1 | \$ | - |  | 2.45\% | \$ | - | \$ |  |  |
|  |  |  | Apr-09 | 2009 | Q2 | 2009 Q2 | \$ | - |  | 1.00\% | \$ | - | \$ |  |  |
|  |  |  | May-09 | 2009 | Q2 | 2009 Q2 | \$ | - |  | 1.00\% | \$ | - | \$ |  |  |
|  |  |  | Jun-09 | 2009 | Q2 | 2009 Q2 | \$ | - |  | 1.00\% | \$ | - | \$ |  |  |
|  |  |  | Jul-09 | 2009 | Q3 | 2009 Q3 | \$ | - |  | 0.55\% | \$ | - | \$ |  |  |
|  |  |  | Aug-09 | 2009 | Q3 | 2009 Q3 | \$ | - |  | 0.55\% | \$ | - | \$ |  |  |
|  |  |  | Sep-09 | 2009 | Q3 | 2009 Q3 | \$ | - |  | 0.55\% | \$ | - | \$ - |  |  |


| Interest Rates | Approved Deferral and Variance Accounts | CWIP | Date | Year | Quarter |  |  | Opening Balance (Principal) |  | Adder nues | Interest Rate | Interest |  | Closing Balance |  | Annual amounts |  | Board Approved Smart Meter Funding Adder |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Oct-09 | 2009 | Q4 | 2009 Q4 | \$ | \$ - |  |  | 0.55\% | \$ | - | \$ | \$ |  |  |  |
|  |  |  | Nov-09 | 2009 | Q4 | 2009 Q4 | \$ | \$ - |  |  | 0.55\% | \$ | - |  | \$ |  |  |  |
|  |  |  | Dec-09 | 2009 | Q4 | 2009 Q4 | \$ | \$ - |  |  | 0.55\% | \$ | - | \$ | \$ | \$ | - |  |
|  |  |  | Jan-10 | 2010 | Q1 | 2010 Q1 | \$ | \$ - | \$ | 1,289.25 | 0.55\% | \$ | - |  | \$ 1,289.25 |  |  |  |
|  |  |  | Feb-10 | 2010 | Q1 | 2010 Q1 | \$ | 1,289.25 | \$ | 1,496.00 | 0.55\% | \$ | 0.59 |  | \$ 2,785.84 |  |  |  |
|  |  |  | Mar-10 | 2010 | Q1 | 2010 Q1 | \$ | 2,785.25 | \$ | 1,510.00 | 0.55\% | \$ | 1.28 |  | \$ 4,296.53 |  |  |  |
|  |  |  | Apr-10 | 2010 | Q2 | 2010 Q2 | \$ | 4,295.25 | \$ | 1,504.00 | 0.55\% | \$ | 1.97 |  | \$ 5,801.22 |  |  |  |
|  |  |  | May-10 | 2010 | Q2 | 2010 Q2 | \$ | 5,799.25 | \$ | 1,501.00 | 0.55\% | \$ | 2.66 |  | \$ 7,302.91 |  |  |  |
|  |  |  | Jun-10 | 2010 | Q2 | 2010 Q2 | \$ | 7,300.25 | \$ | 1,500.00 | 0.55\% | \$ | 3.35 | \$ | \$ 8,803.60 |  |  |  |
|  |  |  | Jul-10 | 2010 | Q3 | 2010 Q3 | \$ | 8,800.25 | \$ | 1,500.00 | 0.89\% | \$ | 6.53 | \$ | \$ 10,306.78 |  |  |  |
|  |  |  | Aug-10 | 2010 | Q3 | 2010 Q3 | \$ | 10,300.25 | \$ | 1,504.00 | 0.89\% | \$ | 7.64 | \$ | \$ 11,811.89 |  |  |  |
|  |  |  | Sep-10 | 2010 | Q3 | 2010 Q3 | \$ | 11,804.25 | \$ | 1,508.00 | 0.89\% | \$ | 8.75 |  | \$ 13,321.00 |  |  |  |
|  |  |  | Oct-10 | 2010 | Q4 | 2010 Q4 | \$ | 13,312.25 | \$ | 1,511.00 | 1.20\% | \$ | 13.31 |  | \$ 14,836.56 |  |  |  |
|  |  |  | Nov-10 | 2010 | Q4 | 2010 Q4 | \$ | 14,823.25 | \$ | 1,510.00 | 1.20\% | \$ | 14.82 |  | \$ 16,348.07 |  |  |  |
|  |  |  | Dec-10 | 2010 | Q4 | 2010 Q4 | \$ | 16,333.25 | \$ | 1,507.00 | 1.20\% | \$ | 16.33 |  | \$ 17,856.58 | \$ | 17,917.48 |  |
|  |  |  | Jan-11 | 2011 | Q1 | 2011 Q1 | \$ | 17,840.25 | \$ | 1,508.00 | 1.47\% | \$ | 21.85 |  | \$ 19,370.10 |  |  |  |
|  |  |  | Feb-11 | 2011 | Q1 | 2011 Q1 | \$ | 19,348.25 | \$ | 1,518.00 | 1.47\% | \$ | 23.70 | \$ | \$ 20,889.95 |  |  |  |
|  |  |  | Mar-11 | 2011 | Q1 | 2011 Q1 | \$ | 20,866.25 | \$ | 1,507.00 | 1.47\% | \$ | 25.56 |  | \$ 22,398.81 |  |  |  |
|  |  |  | Apr-11 | 2011 | Q2 | 2011 Q2 | \$ | 22,373.25 | \$ | 1,511.00 | 1.47\% | \$ | 27.41 | \$ | \$ 23,911.66 |  |  |  |
|  |  |  | May-11 | 2011 | Q2 | 2011 Q2 | \$ | 23,884.25 | \$ | 2,195.00 | 1.47\% | \$ | 29.26 | \$ | \$ 26,108.51 |  |  |  |
|  |  |  | Jun-11 | 2011 | Q2 | 2011 Q2 | \$ | 26,079.25 | \$ | 2,308.00 | 1.47\% | \$ | 31.95 | \$ | \$ 28,419.20 |  |  |  |
|  |  |  | Jul-11 | 2011 | Q3 | 2011 Q3 | \$ | 28,387.25 | \$ | 2,284.00 | 1.47\% | \$ | 34.77 | \$ | \$ 30,706.02 |  |  |  |
|  |  |  | Aug-11 | 2011 | Q3 | 2011 Q3 | \$ | 30,671.25 | \$ | 2,288.00 | 1.47\% | \$ | 37.57 | \$ | \$ 32,996.82 |  |  |  |
|  |  |  | Sep-11 | 2011 | Q3 | 2011 Q3 | \$ | 32,959.25 | \$ | 2,259.00 | 1.47\% | \$ | 40.38 | \$ | \$ 35,258.63 |  |  |  |
|  |  |  | Oct-11 | 2011 | Q4 | 2011 Q4 | \$ | 35,218.25 | \$ | 2,264.00 | 1.47\% | \$ | 43.14 | \$ | \$ 37,525.39 |  |  |  |
|  |  |  | Nov-11 | 2011 | Q4 | 2011 Q4 | \$ | 37,482.25 | \$ | 2,255.00 | 1.47\% | \$ | 45.92 | \$ | \$ 39,783.17 |  |  |  |
|  |  |  | Dec-11 | 2011 | Q4 | 2011 Q4 | \$ | 39,737.25 | \$ | 2,264.00 | 1.47\% | \$ | 48.68 | \$ | \$ 42,049.93 | \$ | 24,571.19 |  |
|  |  |  | Jan-12 | 2012 | Q1 | 2012 Q1 | \$ | 42,001.25 | \$ | 293.00 | 1.47\% | \$ | 51.45 | \$ | \$ 42,345.70 |  |  |  |
|  |  |  | Feb-12 | 2012 | Q1 | 2012 Q1 | \$ | 42,294.25 | \$ | - | 1.47\% | \$ | 51.81 | \$ | \$ 42,346.06 |  |  |  |
|  |  |  | Mar-12 | 2012 | Q1 | 2012 Q1 | \$ | 42,294.25 | \$ | 3.00 | 1.47\% | \$ | 51.81 |  | \$ 42,349.06 |  |  |  |
|  |  |  | Apr-12 | 2012 | Q2 | 2012 Q2 | \$ | 42,297.25 | \$ | - | 1.47\% | \$ | 51.81 | \$ | \$ 42,349.06 |  |  |  |
|  |  |  | May-12 | 2012 | Q2 | 2012 Q2 | \$ | 42,297.25 | \$ | - | 1.47\% | \$ | 51.81 | \$ | \$ 42,349.06 |  |  |  |
|  |  |  | Jun-12 | 2012 | Q2 | 2012 Q2 | \$ | 42,297.25 | \$ | - | 1.47\% | \$ | 51.81 | \$ | \$ 42,349.06 |  |  |  |
|  |  |  | Jul-12 | 2012 | Q3 | 2012 Q3 | \$ | 42,297.25 | \$ | - | 1.47\% | \$ | 51.81 | \$ | \$ 42,349.06 |  |  |  |
|  |  |  | Aug-12 | 2012 | Q3 | 2012 Q3 | \$ | 42,297.25 | \$ | - | 1.47\% | \$ | 51.81 | \$ | \$ 42,349.06 |  |  |  |
|  |  |  | Sep-12 | 2012 | Q3 | 2012 Q3 | \$ | 42,297.25 | \$ | - | 1.47\% | \$ | 51.81 | \$ | \$ 42,349.06 |  |  |  |
|  |  |  | Oct-12 | 2012 | Q4 | 2012 Q4 | \$ | 42,297.25 | \$ | - | 1.47\% | \$ | 51.81 | \$ | \$ 42,349.06 |  |  |  |
|  |  |  | Nov-12 | 2012 | Q4 | 2012 Q4 | \$ | 42,297.25 | \$ | - | 1.47\% | \$ | 51.81 | \$ | \$ 42,349.06 |  |  |  |
|  |  |  | Dec-12 | 2012 | Q4 | 2012 Q4 | \$ | 42,297.25 | \$ | - | 1.47\% | \$ | 51.81 | \$ | \$ 42,349.06 | \$ | 917.36 |  |
|  |  |  | Jan-13 | 2013 | Q1 | 2013 Q1 | \$ | 42,297.25 |  |  | 1.47\% | \$ | 51.81 | \$ | \$ 42,349.06 |  |  |  |
|  |  |  | Feb-13 | 2013 | Q1 | 2013 Q1 | \$ | 42,297.25 |  |  | 1.47\% | \$ | 51.81 | \$ | \$ 42,349.06 |  |  |  |
|  |  |  | Mar-13 | 2013 | Q1 | 2013 Q1 | \$ | 42,297.25 |  |  | 1.47\% | \$ | 51.81 | \$ | \$ 42,349.06 |  |  |  |
|  |  |  | Apr-13 | 2013 | Q2 | 2013 Q2 | \$ | 42,297.25 |  |  | 1.47\% | \$ | 51.81 | \$ | \$ 42,349.06 |  |  |  |
|  |  |  | May-13 | 2013 | Q2 | 2013 Q2 | \$ | 42,297.25 |  |  | 0.00\% | \$ | - |  | \$ 42,297.25 |  |  |  |
|  |  |  | Jun-13 | 2013 | Q2 | 2013 Q2 | \$ | 42,297.25 |  |  | 0.00\% | \$ | - | \$ | \$ 42,297.25 |  |  |  |

## Account 1555 - Sub-account Funding Adder Revenues - General Service Greater Than 50 kW



## TAB 3 SCHEDULE 1.0 APPENDIX E - UPDATED TABLES AND BILL IMPACT ANALYSIS

Table A: Smart Meter Model Mapping for Smart Meter Disposition Rate Rider by Customer Class

| Description | Residential |  |  |  | General Service Less Than 50 kW |  |  |  | General Service Greater Than 50 kW |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | HOBNI Stub Year Model | OEB Incremental Model | HOBNI Incremental Model | Total | HOBNI Stub Year Model | OEB Incremental Model | HOBNI Incremental Model | Total | OEB Incremental Model | HOBNI Incremental Model | Total |  |
| Revenue Requirement: |  |  |  |  |  |  |  |  |  |  |  |  |
| 2010 Rate Year Entitlement (2009 Capital) | 2,801,842.53 |  |  | 2,801,843 | 296,832.66 |  |  | 296,833 |  |  | - | 3,098,675 |
| 2010 Rate Year Entitlement |  | 145,069 |  | 145,069 |  | 145,412 |  | 145,412 | 1,595 |  | 1,595 | 292,077 |
| 2011 Rate Year Entitlement |  | 315,141 |  | 315,141 |  | 319,963 |  | 319,963 | 89,058 |  | 89,058 | 724,162 |
| 2012 Rate Year Entitlement |  | 462,200 |  | 462,200 |  | 472,045 |  | 472,045 | 172,114 |  | 172,114 | 1,106,359 |
| 2013 Rate Year Entitlement (January to April) * |  | 214,968 |  | 214,968 |  | 211,963 |  | 211,963 | 60,440 |  | 60,440 | 487,372 |
| Total Revenue Entitlement | 2,801,843 | 1,137,378 | - | 3,939,220 | 296,833 | 1,149,384 | - | 1,446,217 | 323,208 | - | 323,208 | 5,708,645 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Smart Rate Rider Billed: |  |  |  |  |  |  |  |  |  |  |  |  |
| Amount collected in 2010 |  | (1,414,720) |  | $(1,414,720)$ |  | $(89,682)$ |  | $(89,682)$ | $(17,840)$ |  | $(17,840)$ | $(1,522,242)$ |
| Amount collected in 2011 |  | $(2,008,239)$ |  | $(2,008,239)$ |  | $(127,307)$ |  | $(127,307)$ | $(24,161)$ |  | $(24,161)$ | $(2,159,707)$ |
| Amount collected in 2012 |  | $(101,571)$ |  | $(101,571)$ |  | $(6,439)$ |  | $(6,439)$ | (296) |  | (296) | $(108,306)$ |
| Total Collected | - | $(3,524,531)$ | - | $(3,524,531)$ | - | (223,427) | - | $(223,427)$ | $(42,297)$ | - | $(42,297)$ | (3,790,255) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Carrying Charges From January 2010 to December 2010 | 6,278 | $(5,686)$ |  | 592 | 612 | (99) |  | 513 | (74) |  | (74) | 1,031 |
| Carrying Charges From January 2011 to December 2011 | 21,219 | $(30,702)$ |  | $(9,484)$ | 2,068 | 132 |  | 2,200 | (129) |  | (129) | $(7,412)$ |
| Carrying Charges From January 2012 to December 2012 | 21,219 | $(45,261)$ |  | $(24,042)$ | 2,068 | 3,234 |  | 5,302 | 530 |  | 530 | $(18,210)$ |
| Carrying Charges From January 2013 to April 2013 | 7,073 |  | $(13,892)$ | $(6,819)$ | 689 |  | 1,845 | 2,535 |  | 443 | 443 | $(3,842)$ |
| Total Carrying Charges | 55,789 | (81,650) | $(13,892)$ | $(39,753)$ | 5,437 | 3,267 | 1,845 | 10,550 | 327 | 443 | 770 | $(28,433)$ |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Smart Meter Costs for Recovery | 2,857,632 | $(2,468,803)$ | (13,892) | 374,936 | 302,270 | 929,224 | 1,845 | 1,233,339 | 281,238 | 443 | 281,681 | 1,889,956 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Forecasted Number of Customers |  |  |  | 132,507 |  |  |  | 8,600 |  |  | 1,521 |  |
| Number of Months |  |  |  | 8 |  |  |  | 8 |  |  | 8 |  |
| Disposition Rate Rider |  |  |  | 0.35 |  |  |  | 17.93 |  |  | 23.15 |  |

* The January to April 2013 Revenue Requirement amounts were determined as $1 / 3$ of the 2013 total Revenue Requirements calculated by the OEB Smart Meter Models.

Table B: Bill Impact Summary

| Rate Class | Variable Metric | kWh Quantity |  | Distribution \$ Change |  | Distribution \% Change | Delivery \$ Change |  | Delivery \% Change | Total Bill \$ Change |  | Total Bill \% Change |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Residential | kWh | 250 |  | \$ | 0.94 | 7.00\% | \$ | 0.94 | 5.59\% | \$ | 0.96 | 2.29\% |
| Residential | kWh | 800 |  | \$ | 1.05 | 4.93\% | \$ | 1.05 | 3.27\% | \$ | 1.07 | 0.96\% |
| Residential | kWh | 1,500 |  | \$ | 1.19 | 3.80\% | \$ | 1.19 | 2.31\% | \$ | 1.21 | 0.61\% |
| General Service Less Than 50 kW | kWh | 2,000 |  | \$ | 24.72 | 50.48\% | \$ | 24.72 | 34.06\% | \$ | 25.14 | 9.36\% |
| General Service Less Than 50 kW | kWh | 5,000 |  | \$ | 25.32 | 26.44\% | \$ | 25.32 | 16.36\% | \$ | 25.75 | 4.00\% |
| General Service Less Than 50 kW | kWh | 10,000 |  | \$ | 26.32 | 15.15\% | \$ | 26.32 | 9.02\% | \$ | 26.77 | 2.11\% |
| General Service 50 to 699 kW | kW | 36,500 | 100 | \$ | 37.59 | 10.68\% | \$ | 36.65 | 4.61\% | \$ | 37.28 | 0.90\% |
| General Service 50 to 699 kW | kW | 91,250 | 250 | \$ | 42.27 | 5.89\% | \$ | 39.92 | 2.19\% | \$ | 40.60 | 0.40\% |
| General Service 50 to 699 kW | kW | 182,500 | 500 | \$ | 50.07 | 3.77\% | \$ | 45.37 | 1.28\% | \$ | 46.15 | 0.23\% |

Residential Bill Impact - 250 kWh

|  | CURRENT ESTIMATED BILL |  |  | PROPOSED ESTIMATED BILL |  |  | Change (\$) | Change (\%) | $\begin{gathered} \hline \text { \% of Total } \\ \text { RPP Bill } \\ \hline \end{gathered}$ | \% of Total TOU Bill |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Volume | Current Rate <br> (\$) | Current Charge (\$) | Volume | Proposed Rate (\$) | Proposed Charge (\$) |  |  |  |  |
| Energy First Tier (kWh) | 258.73 | 0.0740 | 19.15 | 258.73 | 0.0740 | 19.15 | 0.00 | 0.00\% | 46.48\% |  |
| Energy Second Tier (kWh) | 0.00 | 0.0870 | 0.00 | 0.00 | 0.0870 | 0.00 | 0.00 | 0.00\% | 0.00\% |  |
|  |  |  |  |  |  |  |  |  |  |  |
| TOU - Off Peak | 165.58 | 0.0630 | 10.43 | 165.58 | 0.0630 | 10.43 | 0.00 | 0.00\% |  | 24.48\% |
| TOU - Mid Peak | 46.57 | 0.0990 | 4.61 | 46.57 | 0.0990 | 4.61 | 0.00 | 0.00\% |  | 10.82\% |
| TOU - On Peak | 46.57 | 0.1180 | 5.50 | 46.57 | 0.1180 | 5.50 | 0.00 | 0.00\% |  | 12.90\% |
|  |  |  |  |  |  |  |  |  |  |  |
| Service Charge | 1 | 9.83 | 9.83 | 1 | 9.96 | 9.96 | 0.13 | 1.32\% | 24.18\% | 23.38\% |
| Service Charge Rate Rider(s) | 1 | 0.0200 | 0.02 | 1 | 0.7793 | 0.78 | 0.76 | 3796.36\% | 1.89\% | 1.83\% |
| Distribution Volumetric Rate | 250 | 0.0143 | 3.58 | 250 | 0.0145 | 3.63 | 0.05 | 1.40\% | 8.80\% | 8.51\% |
| Low Voltage Volumetric Rate | 250 |  | 0.00 | 250 |  | 0.00 | 0.00 | 0.00\% | 0.00\% | 0.00\% |
| Distribution Volumetric Rate Rider(s) | 250 | 0.0000 | 0.00 | 250 | 0.0000 | 0.00 | 0.00 | 0.00\% | 0.00\% | 0.00\% |
| Total: Distribution |  |  | 13.43 |  |  | 14.36 | 0.94 | 7.00\% | 34.87\% | 33.71\% |
| Retail Transmission Rate - Network Service Rate | 258.73 | 0.00750 | 1.94 | 258.73 | 0.00750 | 1.94 | 0.00 | 0.00\% | 4.71\% | 4.55\% |
| Retail Transmission Rate - Line and Transformation Connection Service Rate | 258.73 | 0.00550 | 1.42 | 258.73 | 0.00550 | 1.42 | 0.00 | 0.00\% | 3.45\% | 3.34\% |
| Total: Retail Transmission |  |  | 3.36 |  |  | 3.36 | 0.00 | 0.00\% | 8.17\% | 7.89\% |
| Sub-Total: Delivery (Distribution and Retail Transmission) |  |  | 16.79 |  |  | 17.73 | 0.94 | 5.59\% | 43.04\% | 41.61\% |
| Wholesale Market Service Rate | 258.73 | 0.0052 | 1.35 | 258.73 | 0.0052 | 1.35 | 0.00 | 0.00\% | 3.27\% | 3.16\% |
| Rural Rate Protection Charge | 258.73 | 0.0011 | 0.28 | 258.73 | 0.0011 | 0.28 | 0.00 | 0.00\% | 0.69\% | 0.67\% |
| Standard Supply Service - Administration Charge (if applicable) | 1 | 0.25 | 0.25 | 1 | 0.25 | 0.25 | 0.00 | 0.00\% | 0.61\% | 0.59\% |
| Sub-Total: Regulatory |  |  | 1.88 |  |  | 1.88 | 0.00 | 0.00\% | 4.56\% | 4.41\% |
| Debt Retirement Charge (DRC) | 250.00 | 0.00700 | 1.75 | 250.00 | 0.00700 | 1.75 | 0.00 | 0.00\% | 4.25\% | 4.11\% |
|  |  |  |  |  |  |  |  |  |  |  |
| Total Bill on RPP (before taxes) |  |  | 39.56 |  |  | 40.50 | 0.94 | 2.37\% | 98.33\% |  |
| HST |  | 13\% | 5.14 |  | 13\% | 5.27 | 0.12 | 2.37\% | 12.78\% |  |
| Total Bill (including HST) |  |  | 44.71 |  |  | 45.77 | 1.06 | 2.37\% | 111.11\% |  |
| Ontario Clean Energy Benefit (OCEB) |  | (10\%) | (4.47) |  | (10\%) | (4.58) | (0.11) | 2.37\% | -11.11\% |  |
| Total Bill on RPP (including OCEB) |  |  | 40.24 |  |  | 41.19 | 0.96 | 2.37\% | 100.00\% |  |
|  |  |  |  |  |  |  |  |  |  |  |
| Total Bill on TOU (before taxes) |  |  | 40.96 |  |  | 41.90 | 0.94 | 2.29\% |  | 98.33\% |
| HST |  | 13\% | 5.32 |  | 13\% | 5.45 | 0.12 | 2.29\% |  | 12.78\% |
| Total Bill (including HST) |  |  | 46.28 |  |  | 47.34 | 1.06 | 2.29\% |  | 111.11\% |
| Ontario Clean Energy Benefit (OCEB) |  | (10\%) | (4.63) |  | (10\%) | (4.73) | (0.11) | 2.29\% |  | -11.11\% |
| Total Bill on TOU (including OCEB) |  |  | 41.65 |  |  | 42.61 | 0.96 | 2.29\% |  | 100.00\% |

## Residential Bill Impact - 800 kWh

|  | CURRENT ESTIMATED BILL |  |  | PROPOSED ESTIMATED BILL |  |  | Change (\$) | Change (\%) | \% of Total RPP Bill | \% of Total TOU Bill |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Volume | Current Rate <br> (\$) | Current Charge (\$) | Volume | Proposed Rate (\$) | Proposed Charge (\$) |  |  |  |  |
| Energy First Tier (kWh) | 827.92 | 0.0740 | 61.27 | 827.92 | 0.0740 | 61.27 | 0.00 | 0.00\% | 66.59\% |  |
| Energy Second Tier (kWh) | -172.08 | 0.0870 | -14.97 | -172.08 | 0.0870 | -14.97 | 0.00 | 0.00\% | (16.27\%) |  |
| TOU - Off Peak | 529.87 | 0.0630 | 33.38 | 529.87 | 0.0630 | 33.38 | 0.00 | 0.00\% |  | 29.87\% |
| TOU - Mid Peak | 149.03 | 0.0990 | 14.75 | 149.03 | 0.0990 | 14.75 | 0.00 | 0.00\% |  | 13.20\% |
| TOU - On Peak | 149.03 | 0.1180 | 17.59 | 149.03 | 0.1180 | 17.59 | 0.00 | 0.00\% |  | 15.74\% |
| Service Charge | 1 | 9.83 | 9.83 | 1 | 9.96 | 9.96 | 0.13 | 1.32\% | 10.83\% | 8.91\% |
| Service Charge Rate Rider(s) | 1 | 0.0200 | 0.02 | 1 | 0.7793 | 0.78 | 0.76 | 3796.36\% | 0.85\% | 0.70\% |
| Distribution Volumetric Rate | 800 | 0.0143 | 11.44 | 800 | 0.0145 | 11.60 | 0.16 | 1.40\% | 12.61\% | 10.38\% |
| Low Voltage Volumetric Rate | 800 |  | 0.00 | 800 |  | 0.00 | 0.00 | 0.00\% | 0.00\% | 0.00\% |
| Distribution Volumetric Rate Rider(s) | 800 | 0.0000 | 0.00 | 800 | 0.0000 | 0.00 | 0.00 | 0.00\% | 0.00\% | 0.00\% |
| Total: Distribution |  |  | 21.29 |  |  | 22.34 | 1.05 | 4.93\% | 24.28\% | 19.99\% |
| Retail Transmission Rate - Network Service Rate | 827.92 | 0.00750 | 6.21 | 827.92 | 0.00750 | 6.21 | 0.00 | 0.00\% | 6.75\% | 5.56\% |
| Retail Transmission Rate - Line and Transformation Connection Service Rate | 827.92 | 0.00550 | 4.55 | 827.92 | 0.00550 | 4.55 | 0.00 | 0.00\% | 4.95\% | 4.07\% |
| Total: Retail Transmission |  |  | 10.76 |  |  | 10.76 | 0.00 | 0.00\% | 11.70\% | 9.63\% |
| Sub-Total: Delivery (Distribution and Retail Transmission) |  |  | 32.05 |  |  | 33.10 | 1.05 | 3.27\% | 35.98\% | 29.62\% |
| Wholesale Market Service Rate | 827.92 | 0.0052 | 4.31 | 827.92 | 0.0052 | 4.31 | 0.00 | 0.00\% | 4.68\% | 3.85\% |
| Rural Rate Protection Charge | 827.92 | 0.0011 | 0.91 | 827.92 | 0.0011 | 0.91 | 0.00 | 0.00\% | 0.99\% | 0.81\% |
| Standard Supply Service - Administration Charge (if applicable) | 1 | 0.25 | 0.25 | 1 | 0.25 | 0.25 | 0.00 | 0.00\% | 0.27\% | 0.22\% |
| Sub-Total: Regulatory |  |  | 5.47 |  |  | 5.47 | 0.00 | 0.00\% | 5.94\% | 4.89\% |
| Debt Retirement Charge (DRC) | 800.00 | 0.00700 | 5.60 | 800.00 | 0.00700 | 5.60 | 0.00 | 0.00\% | 6.09\% | 5.01\% |
|  |  |  |  |  |  |  |  |  |  |  |
| Total Bill on RPP (before taxes) |  |  | 89.41 |  |  | 90.46 | 1.05 | 1.17\% | 98.33\% |  |
| HST |  | 13\% | 11.62 |  | 13\% | 11.76 | 0.14 | 1.17\% | 12.78\% |  |
| Total Bill (including HST) |  |  | 101.04 |  |  | 102.22 | 1.19 | 1.17\% | 111.11\% |  |
| Ontario Clean Energy Benefit (OCEB) |  | (10\%) | (10.10) |  | (10\%) | (10.22) | (0.12) | 1.17\% | -11.11\% |  |
| Total Bill on RPP (including OCEB) |  |  | 90.93 |  |  | 92.00 | 1.07 | 1.17\% | 100.00\% |  |
|  |  |  |  |  |  |  |  |  |  |  |
| Total Bill on TOU (before taxes) |  |  | 108.84 |  |  | 109.89 | 1.05 | 0.96\% |  | 98.33\% |
| HST |  | 13\% | 14.15 |  | 13\% | 14.29 | 0.14 | 0.96\% |  | 12.78\% |
| Total Bill (including HST) |  |  | 122.99 |  |  | 124.17 | 1.19 | 0.96\% |  | 111.11\% |
| Ontario Clean Energy Benefit (OCEB) |  | (10\%) | (12.30) |  | (10\%) | (12.42) | (0.12) | 0.96\% |  | -11.11\% |
| Total Bill on TOU (including OCEB) |  |  | 110.69 |  |  | 111.76 | 1.07 | 0.96\% |  | 100.00\% |

Residential Bill Impact - 1,500 kWh

|  |  |  |  |  |  |  | Change (\$) | Change (\%) | \% of Total RPP Bill | \% of Total TOU Bill |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | CURRENT ESTIMATED BILL |  |  | PROPOSED ESTIMATED BILL |  |  |  |  |  |  |
|  | Volume | Current Rate <br> (\$) | Current Charge (\$) | Volume | Proposed <br> Rate (\$) | Proposed Charge (\$) |  |  |  |  |
| Energy First Tier (kWh) | 1,000.00 | 0.0740 | 74.00 | 1,000.00 | 0.0740 | 74.00 | 0.00 | 0.00\% | 37.27\% |  |
| Energy Second Tier (kWh) | 552.35 | 0.0870 | 48.05 | 552.35 | 0.0870 | 48.05 | 0.00 | 0.00\% | 24.20\% |  |
|  |  |  |  |  |  |  |  |  |  |  |
| TOU - Off Peak | 993.50 | 0.0630 | 62.59 | 993.50 | 0.0630 | 62.59 | 0.00 | 0.00\% |  | 31.33\% |
| TOU - Mid Peak | 279.42 | 0.0990 | 27.66 | 279.42 | 0.0990 | 27.66 | 0.00 | 0.00\% |  | 13.85\% |
| TOU - On Peak | 279.42 | 0.1180 | 32.97 | 279.42 | 0.1180 | 32.97 | 0.00 | 0.00\% |  | 16.51\% |
|  |  |  |  |  |  |  |  |  |  |  |
| Service Charge | 1 | 9.83 | 9.83 | 1 | 9.96 | 9.96 | 0.13 | 1.32\% | 5.02\% | 4.99\% |
| Service Charge Rate Rider(s) | 1 | 0.0200 | 0.02 | 1 | 0.7793 | 0.78 | 0.76 | 3796.36\% | 0.39\% | 0.39\% |
| Distribution Volumetric Rate | 1,500 | 0.0143 | 21.45 | 1,500 | 0.0145 | 21.75 | 0.30 | 1.40\% | 10.95\% | 10.89\% |
| Low Voltage Volumetric Rate | 1,500 |  | 0.00 | 1,500 |  | 0.00 | 0.00 | 0.00\% | 0.00\% | 0.00\% |
| Distribution Volumetric Rate Rider(s) | 1,500 | 0.0000 | 0.00 | 1,500 | 0.0000 | 0.00 | 0.00 | 0.00\% | 0.00\% | 0.00\% |
| Total: Distribution |  |  | 31.30 |  |  | 32.49 | 1.19 | 3.80\% | 16.36\% | 16.26\% |
| Retail Transmission Rate - Network Service Rate | 1,552.35 | 0.00750 | 11.64 | 1,552.35 | 0.00750 | 11.64 | 0.00 | 0.00\% | 5.86\% | 5.83\% |
| Retail Transmission Rate - Line and Transformation Connection Service Rate | 1,552.35 | 0.00550 | 8.54 | 1,552.35 | 0.00550 | 8.54 | 0.00 | 0.00\% | 4.30\% | 4.27\% |
| Total: Retail Transmission |  |  | 20.18 |  |  | 20.18 | 0.00 | 0.00\% | 10.16\% | 10.10\% |
| Sub-Total: Delivery (Distribution and Retail Transmission) |  |  | 51.48 |  |  | 52.67 | 1.19 | 2.31\% | 26.52\% | 26.37\% |
| Wholesale Market Service Rate | 1,552.35 | 0.0052 | 8.07 | 1,552.35 | 0.0052 | 8.07 | 0.00 | 0.00\% | 4.07\% | 4.04\% |
| Rural Rate Protection Charge | 1,552.35 | 0.0011 | 1.71 | 1,552.35 | 0.0011 | 1.71 | 0.00 | 0.00\% | 0.86\% | 0.85\% |
| Standard Supply Service - Administration Charge (if applicable) | 1 | 0.25 | 0.25 | 1 | 0.25 | 0.25 | 0.00 | 0.00\% | 0.13\% | 0.13\% |
| Sub-Total: Regulatory |  |  | 10.03 |  |  | 10.03 | 0.00 | 0.00\% | 5.05\% | 5.02\% |
| Debt Retirement Charge (DRC) | 1,500.00 | 0.00700 | 10.50 | 1,500.00 | 0.00700 | 10.50 | 0.00 | 0.00\% | 5.29\% | 5.26\% |
|  |  |  |  |  |  |  |  |  |  |  |
| Total Bill on RPP (before taxes) |  |  | 194.06 |  |  | 195.25 | 1.19 | 0.61\% | 98.33\% |  |
| HST |  | 13\% | 25.23 |  | 13\% | 25.38 | 0.15 | 0.61\% | 12.78\% |  |
| Total Bill (including HST) |  |  | 219.29 |  |  | 220.64 | 1.34 | 0.61\% | 111.11\% |  |
| Ontario Clean Energy Benefit (OCEB) |  | (10\%) | (21.93) |  | (10\%) | (22.06) | (0.13) | 0.61\% | -11.11\% |  |
| Total Bill on RPP (including OCEB) |  |  | 197.36 |  |  | 198.57 | 1.21 | 0.61\% | 100.00\% |  |
|  |  |  |  |  |  |  |  |  |  |  |
| Total Bill on TOU (before taxes) |  |  | 195.24 |  |  | 196.43 | 1.19 | 0.61\% |  | 98.33\% |
| HST |  | 13\% | 25.38 |  | 13\% | 25.54 | 0.15 | 0.61\% |  | 12.78\% |
| Total Bill (including HST) |  |  | 220.62 |  |  | 221.96 | 1.34 | 0.61\% |  | 111.11\% |
| Ontario Clean Energy Benefit (OCEB) |  | (10\%) | (22.06) |  | (10\%) | (22.20) | (0.13) | 0.61\% |  | -11.11\% |
| Total Bill on TOU (including OCEB) |  |  | 198.55 |  |  | 199.76 | 1.21 | 0.61\% |  | 100.00\% |


|  | General Service Less Than 50 kW Bill Impact - 2,000 kWh |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | CURRENT ESTIMATED BILL |  |  | PROPOSED ESTIMATED BILL |  |  |  | Change (\%) | \% of Total RPP Bill | \% of Total TOU Bill |
|  | Volume | Current Rate <br> (\$) | Current Charge (\$) | Volume | $\begin{gathered} \hline \text { Proposed } \\ \text { Rate (\$) } \\ \hline \end{gathered}$ | Proposed Charge (\$) | Change (\$) |  |  |  |
| Energy First Tier (kWh) | 750.00 | 0.0740 | 55.50 | 750.00 | 0.0740 | 55.50 | 0.00 | 0.00\% | 18.51\% |  |
| Energy Second Tier (kWh) | 1,319.80 | 0.0870 | 114.82 | 1,319.80 | 0.0870 | 114.82 | 0.00 | 0.00\% | 38.29\% |  |
|  |  |  |  |  |  |  |  |  |  |  |
| TOU - Off Peak | 1,324.67 | 0.0630 | 83.45 | 1,324.67 | 0.0630 | 83.45 | 0.00 | 0.00\% |  | 28.41\% |
| TOU - Mid Peak | 372.56 | 0.0990 | 36.88 | 372.56 | 0.0990 | 36.88 | 0.00 | 0.00\% |  | 12.55\% |
| TOU - On Peak | 372.56 | 0.1180 | 43.96 | 372.56 | 0.1180 | 43.96 | 0.00 | 0.00\% |  | 14.96\% |
|  |  |  |  |  |  |  |  |  |  |  |
| Service Charge | 1 | 17.75 | 17.75 | 1 | 17.98 | 17.98 | 0.23 | 1.30\% | 6.00\% | 6.12\% |
| Service Charge Rate Rider(s) | 1 | 0.0200 | 0.02 | 1 | 24.1082 | 24.11 | 24.09 | 120440.85\% | 8.04\% | 8.21\% |
| Distribution Volumetric Rate | 2,000 | 0.0156 | 31.20 | 2,000 | 0.0158 | 31.60 | 0.40 | 1.28\% | 10.54\% | 10.76\% |
| Low Voltage Volumetric Rate | 2,000 |  | 0.00 | 2,000 |  | 0.00 | 0.00 | 0.00\% | 0.00\% | 0.00\% |
| Distribution Volumetric Rate Rider(s) | 2,000 | 0.0000 | 0.00 | 2,000 | 0.0000 | 0.00 | 0.00 | 0.00\% | 0.00\% | 0.00\% |
| Total: Distribution |  |  | 48.97 |  |  | 73.69 | 24.72 | 50.48\% | 24.57\% | 25.08\% |
| Retail Transmission Rate - Network Service Rate | 2,069.80 | 0.00670 | 13.87 | 2,069.80 | 0.00670 | 13.87 | 0.00 | 0.00\% | 4.62\% | 4.72\% |
| Retail Transmission Rate - Line and Transformation Connection Service Rate | 2,069.80 | 0.00470 | 9.73 | 2,069.80 | 0.00470 | 9.73 | 0.00 | 0.00\% | 3.24\% | 3.31\% |
| Total: Retail Transmission |  |  | 23.60 |  |  | 23.60 | 0.00 | 0.00\% | 7.87\% | 8.03\% |
| Sub-Total: Delivery (Distribution and Retail Transmission) |  |  | 72.57 |  |  | 97.28 | 24.72 | 34.06\% | 32.44\% | 33.11\% |
| Wholesale Market Service Rate | 2,069.80 | 0.0052 | 10.76 | 2,069.80 | 0.0052 | 10.76 | 0.00 | 0.00\% | 3.59\% | 3.66\% |
| Rural Rate Protection Charge | 2,069.80 | 0.0011 | 2.28 | 2,069.80 | 0.0011 | 2.28 | 0.00 | 0.00\% | 0.76\% | 0.77\% |
| Standard Supply Service - Administration Charge (if applicable) | 1 | 0.25 | 0.25 | 1 | 0.25 | 0.25 | 0.00 | 0.00\% | 0.08\% | 0.09\% |
| Sub-Total: Regulatory |  |  | 13.29 |  |  | 13.29 | 0.00 | 0.00\% | 4.43\% | 4.52\% |
| Debt Retirement Charge (DRC) | 2,000.00 | 0.00700 | 14.00 | 2,000.00 | 0.00700 | 14.00 | 0.00 | 0.00\% | 4.67\% | 4.77\% |
|  |  |  |  |  |  |  |  |  |  |  |
| Total Bill on RPP (before taxes) |  |  | 270.18 |  |  | 294.90 | 24.72 | 9.15\% | 98.33\% |  |
| HST |  | 13\% | 35.12 |  | 13\% | 38.34 | 3.21 | 9.15\% | 12.78\% |  |
| Total Bill (including HST) |  |  | 305.30 |  |  | 333.23 | 27.93 | 9.15\% | 111.11\% |  |
| Ontario Clean Energy Benefit (OCEB) |  | (10\%) | (30.53) |  | (10\%) | (33.32) | (2.79) | 9.15\% | -11.11\% |  |
| Total Bill on RPP (including OCEB) |  |  | 274.77 |  |  | 299.91 | 25.14 | 9.15\% | 100.00\% |  |
|  |  |  |  |  |  |  |  |  |  |  |
| Total Bill on TOU (before taxes) |  |  | 264.16 |  |  | 288.87 | 24.72 | 9.36\% |  | 98.33\% |
| HST |  | 13\% | 34.34 |  | 13\% | 37.55 | 3.21 | 9.36\% |  | 12.78\% |
| Total Bill (including HST) |  |  | 298.50 |  |  | 326.43 | 27.93 | 9.36\% |  | 111.11\% |
| Ontario Clean Energy Benefit (OCEB) |  | (10\%) | (29.85) |  | (10\%) | (32.64) | (2.79) | 9.36\% |  | -11.11\% |
| Total Bill on TOU (including OCEB) |  |  | 268.65 |  |  | 293.79 | 25.14 | 9.36\% |  | 100.00\% |


|  | General Service Less Than 50 kW Bill Impact - 5,000 kWh |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | CURRENT ESTIMATED BILL |  |  | PROPOSED ESTIMATED BILL |  |  |  |  | \% of Total RPP Bill | \% of Total TOU Bill |
|  | Volume | Current Rate <br> (\$) | Current Charge (\$) | Volume | $\begin{gathered} \hline \text { Proposed } \\ \text { Rate (\$) } \\ \hline \end{gathered}$ | Proposed Charge (\$) | Change (\$) | Change (\%) |  |  |
| Energy First Tier (kWh) | 750.00 | 0.0740 | 55.50 | 750.00 | 0.0740 | 55.50 | 0.00 | 0.00\% | 7.93\% |  |
| Energy Second Tier (kWh) | 4,424.50 | 0.0870 | 384.93 | 4,424.50 | 0.0870 | 384.93 | 0.00 | 0.00\% | 54.99\% |  |
|  |  |  |  |  |  |  |  |  |  |  |
| TOU - Off Peak | 3,311.68 | 0.0630 | 208.64 | 3,311.68 | 0.0630 | 208.64 | 0.00 | 0.00\% |  | 31.15\% |
| TOU - Mid Peak | 931.41 | 0.0990 | 92.21 | 931.41 | 0.0990 | 92.21 | 0.00 | 0.00\% |  | 13.77\% |
| TOU - On Peak | 931.41 | 0.1180 | 109.91 | 931.41 | 0.1180 | 109.91 | 0.00 | 0.00\% |  | 16.41\% |
|  |  |  |  |  |  |  |  |  |  |  |
| Service Charge | 1 | 17.75 | 17.75 | 1 | 17.98 | 17.98 | 0.23 | 1.30\% | 2.57\% | 2.68\% |
| Service Charge Rate Rider(s) | 1 | 0.0200 | 0.02 | 1 | 24.1082 | 24.11 | 24.09 | 120440.85\% | 3.44\% | 3.60\% |
| Distribution Volumetric Rate | 5,000 | 0.0156 | 78.00 | 5,000 | 0.0158 | 79.00 | 1.00 | 1.28\% | 11.28\% | 11.79\% |
| Low Voltage Volumetric Rate | 5,000 |  | 0.00 | 5,000 |  | 0.00 | 0.00 | 0.00\% | 0.00\% | 0.00\% |
| Distribution Volumetric Rate Rider(s) | 5,000 | 0.0000 | 0.00 | 5,000 | 0.0000 | 0.00 | 0.00 | 0.00\% | 0.00\% | 0.00\% |
| Total: Distribution |  |  | 95.77 |  |  | 121.09 | 25.32 | 26.44\% | 17.30\% | 18.08\% |
| Retail Transmission Rate - Network Service Rate | 5,174.50 | 0.00670 | 34.67 | 5,174.50 | 0.00670 | 34.67 | 0.00 | 0.00\% | 4.95\% | 5.18\% |
| Retail Transmission Rate - Line and Transformation Connection Service Rate | 5,174.50 | 0.00470 | 24.32 | 5,174.50 | 0.00470 | 24.32 | 0.00 | 0.00\% | 3.47\% | 3.63\% |
| Total: Retail Transmission |  |  | 58.99 |  |  | 58.99 | 0.00 | 0.00\% | 8.43\% | 8.81\% |
| Sub-Total: Delivery (Distribution and Retail Transmission) |  |  | 154.76 |  |  | 180.08 | 25.32 | 16.36\% | 25.72\% | 26.88\% |
| Wholesale Market Service Rate | 5,174.50 | 0.0052 | 26.91 | 5,174.50 | 0.0052 | 26.91 | 0.00 | 0.00\% | 3.84\% | 4.02\% |
| Rural Rate Protection Charge | 5,174.50 | 0.0011 | 5.69 | 5,174.50 | 0.0011 | 5.69 | 0.00 | 0.00\% | 0.81\% | 0.85\% |
| Standard Supply Service - Administration Charge (if applicable) | 1 | 0.25 | 0.25 | 1 | 0.25 | 0.25 | 0.00 | 0.00\% | 0.04\% | 0.04\% |
| Sub-Total: Regulatory |  |  | 32.85 |  |  | 32.85 | 0.00 | 0.00\% | 4.69\% | 4.90\% |
| Debt Retirement Charge (DRC) | 5,000.00 | 0.00700 | 35.00 | 5,000.00 | 0.00700 | 35.00 | 0.00 | 0.00\% | 5.00\% | 5.22\% |
|  |  |  |  |  |  |  |  |  |  |  |
| Total Bill on RPP (before taxes) |  |  | 663.04 |  |  | 688.36 | 25.32 | 3.82\% | 98.33\% |  |
| HST |  | 13\% | 86.20 |  | 13\% | 89.49 | 3.29 | 3.82\% | 12.78\% |  |
| Total Bill (including HST) |  |  | 749.24 |  |  | 777.84 | 28.61 | 3.82\% | 111.11\% |  |
| Ontario Clean Energy Benefit (OCEB) |  | (10\%) | (74.92) |  | (10\%) | (77.78) | (2.86) | 3.82\% | -11.11\% |  |
| Total Bill on RPP (including OCEB) |  |  | 674.31 |  |  | 700.06 | 25.75 | 3.82\% | 100.00\% |  |
|  |  |  |  |  |  |  |  |  |  |  |
| Total Bill on TOU (before taxes) |  |  | 633.36 |  |  | 658.68 | 25.32 | 4.00\% |  | 98.33\% |
| HST |  | 13\% | 82.34 |  | 13\% | 85.63 | 3.29 | 4.00\% |  | 12.78\% |
| Total Bill (including HST) |  |  | 715.70 |  |  | 744.31 | 28.61 | 4.00\% |  | 111.11\% |
| Ontario Clean Energy Benefit (OCEB) |  | (10\%) | (71.57) |  | (10\%) | (74.43) | (2.86) | 4.00\% |  | -11.11\% |
| Total Bill on TOU (including OCEB) |  |  | 644.13 |  |  | 669.88 | 25.75 | 4.00\% |  | 100.00\% |

General Service Less Than 50 kW Bill Impact - 10,000

|  | General Service Less Than 50 kW Bill Impact - 10,000 |  |  |  |  |  | Change (\$) | Change (\%) | \% of Total RPP Bill | $\begin{gathered} \hline \% \text { of Total } \\ \text { TOU Bill } \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | CURRENT ESTIMATED BILL |  |  | PROPOSED ESTIMATED BILL |  |  |  |  |  |  |
|  | Volume | Current Rate <br> (\$) | Current Charge (\$) | Volume | Proposed Rate (\$) | Proposed Charge (\$) |  |  |  |  |
| Energy First Tier (kWh) | 750.00 | 0.0740 | 55.50 | 750.00 | 0.0740 | 55.50 | 0.00 | 0.00\% | 4.06\% |  |
| Energy Second Tier (kWh) | 9,599.00 | 0.0870 | 835.11 | 9,599.00 | 0.0870 | 835.11 | 0.00 | 0.00\% | 61.09\% |  |
|  |  |  |  |  |  |  |  |  |  |  |
| TOU - Off Peak | 6,623.36 | 0.0630 | 417.27 | 6,623.36 | 0.0630 | 417.27 | 0.00 | 0.00\% |  | 32.18\% |
| TOU - Mid Peak | 1,862.82 | 0.0990 | 184.42 | 1,862.82 | 0.0990 | 184.42 | 0.00 | 0.00\% |  | 14.22\% |
| TOU - On Peak | 1,862.82 | 0.1180 | 219.81 | 1,862.82 | 0.1180 | 219.81 | 0.00 | 0.00\% |  | 16.95\% |
|  |  |  |  |  |  |  |  |  |  |  |
| Service Charge | 1 | 17.75 | 17.75 | 1 | 17.98 | 17.98 | 0.23 | 1.30\% | 1.32\% | 1.39\% |
| Service Charge Rate Rider(s) | 1 | 0.0200 | 0.02 | 1 | 24.1082 | 24.11 | 24.09 | 120440.85\% | 1.76\% | 1.86\% |
| Distribution Volumetric Rate | 10,000 | 0.0156 | 156.00 | 10,000 | 0.0158 | 158.00 | 2.00 | 1.28\% | 11.56\% | 12.18\% |
| Low Voltage Volumetric Rate | 10,000 |  | 0.00 | 10,000 |  | 0.00 | 0.00 | 0.00\% | 0.00\% | 0.00\% |
| Distribution Volumetric Rate Rider(s) | 10,000 | 0.0000 | 0.00 | 10,000 | 0.0000 | 0.00 | 0.00 | 0.00\% | 0.00\% | 0.00\% |
| Total: Distribution |  |  | 173.77 |  |  | 200.09 | 26.32 | 15.15\% | 14.64\% | 15.43\% |
| Retail Transmission Rate - Network Service Rate | 10,349.00 | 0.00670 | 69.34 | 10,349.00 | 0.00670 | 69.34 | 0.00 | 0.00\% | 5.07\% | 5.35\% |
| Retail Transmission Rate - Line and Transformation Connection Service Rate | 10,349.00 | 0.00470 | 48.64 | 10,349.00 | 0.00470 | 48.64 | 0.00 | 0.00\% | 3.56\% | 3.75\% |
| Total: Retail Transmission |  |  | 117.98 |  |  | 117.98 | 0.00 | 0.00\% | 8.63\% | 9.10\% |
| Sub-Total: Delivery (Distribution and Retail Transmission) |  |  | 291.75 |  |  | 318.07 | 26.32 | 9.02\% | 23.27\% | 24.53\% |
| Wholesale Market Service Rate | 10,349.00 | 0.0052 | 53.81 | 10,349.00 | 0.0052 | 53.81 | 0.00 | 0.00\% | 3.94\% | 4.15\% |
| Rural Rate Protection Charge | 10,349.00 | 0.0011 | 11.38 | 10,349.00 | 0.0011 | 11.38 | 0.00 | 0.00\% | 0.83\% | 0.88\% |
| Standard Supply Service - Administration Charge (if applicable) | 1 | 0.25 | 0.25 | 1 | 0.25 | 0.25 | 0.00 | 0.00\% | 0.02\% | 0.02\% |
| Sub-Total: Regulatory |  |  | 65.45 |  |  | 65.45 | 0.00 | 0.00\% | 4.79\% | 5.05\% |
| Debt Retirement Charge (DRC) | 10,000.00 | 0.00700 | 70.00 | 10,000.00 | 0.00700 | 70.00 | 0.00 | 0.00\% | 5.12\% | 5.40\% |
|  |  |  |  |  |  |  |  |  |  |  |
| Total Bill on RPP (before taxes) |  |  | 1,317.81 |  |  | 1,344.13 | 26.32 | 2.00\% | 98.33\% |  |
| HST |  | 13\% | 171.32 |  | 13\% | 174.74 | 3.42 | 2.00\% | 12.78\% |  |
| Total Bill (including HST) |  |  | 1,489.13 |  |  | 1,518.87 | 29.74 | 2.00\% | 111.11\% |  |
| Ontario Clean Energy Benefit (OCEB) |  | (10\%) | (148.91) |  | (10\%) | (151.89) | (2.97) | 2.00\% | -11.11\% |  |
| Total Bill on RPP (including OCEB) |  |  | 1,340.21 |  |  | 1,366.98 | 26.77 | 2.00\% | 100.00\% |  |
|  |  |  |  |  |  |  |  |  |  |  |
| Total Bill on TOU (before taxes) |  |  | 1,248.70 |  |  | 1,275.02 | 26.32 | 2.11\% |  | 98.33\% |
| HST |  | 13\% | 162.33 |  | 13\% | 165.75 | 3.42 | 2.11\% |  | 12.78\% |
| Total Bill (including HST) |  |  | 1,411.03 |  |  | 1,440.77 | 29.74 | 2.11\% |  | 111.11\% |
| Ontario Clean Energy Benefit (OCEB) |  | (10\%) | (141.10) |  | (10\%) | (144.08) | (2.97) | 2.11\% |  | -11.11\% |
| Total Bill on TOU (including OCEB) |  |  | 1,269.93 |  |  | 1,296.69 | 26.77 | 2.11\% |  | 100.00\% |



|  | General Service Greater Than 50 kW Bill Impact - 91,250 kWh, 250 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | CURRENT ESTIMATED BILL |  |  | PROPOSED ESTIMATED BILL |  |  | Change (\$) | Change (\%) | \% of Total RPP Bill | \% of Total TOU Bill |
|  | Volume | Current Rate <br> (\$) | Current Charge (\$) | Volume | Proposed Rate (\$) | Proposed Charge (\$) |  |  |  |  |
| Energy First Tier (kWh) | 94,434.63 | 0.0740 | 6,988.16 | 94,434.63 | 0.0740 | 6,988.16 | 0.00 | 0.00\% | 68.11\% |  |
| Energy Second Tier (kWh) | 0.00 | 0.0870 | 0.00 | 0.00 | 0.0870 | 0.00 | 0.00 | 0.00\% | 0.00\% |  |
|  |  |  |  |  |  |  |  |  |  |  |
| TOU - Off Peak | 60,438.16 | 0.0630 | 3,807.60 | 60,438.16 | 0.0630 | 3,807.60 | 0.00 | 0.00\% |  | 35.33\% |
| TOU - Mid Peak | 16,998.23 | 0.0990 | 1,682.83 | 16,998.23 | 0.0990 | 1,682.83 | 0.00 | 0.00\% |  | 15.61\% |
| TOU - On Peak | 16,998.23 | 0.1180 | 2,005.79 | 16,998.23 | 0.1180 | 2,005.79 | 0.00 | 0.00\% |  | 18.61\% |
|  |  |  |  |  |  |  |  |  |  |  |
| Service Charge | 1 | 108.32 | 108.32 | 1 | 109.71 | 109.71 | 1.39 | 1.28\% | 1.07\% | 1.02\% |
| Service Charge Rate Rider(s) | 1 | 0.0200 | 0.02 | 1 | 33.1037 | 33.10 | 33.08 | 165418.27\% | 0.32\% | 0.31\% |
| Distribution Volumetric Rate | 250 | 2.4381 | 609.53 | 250 | 2.4693 | 617.33 | 7.80 | 1.28\% | 6.02\% | 5.73\% |
| Low Voltage Volumetric Rate | 250 |  | 0.00 | 250 |  | 0.00 | 0.00 | 0.00\% | 0.00\% | 0.00\% |
| Distribution Volumetric Rate Rider(s) | 250 | 0.0000 | 0.00 | 250 | 0.0000 | 0.00 | 0.00 | 0.00\% | 0.00\% | 0.00\% |
| Total: Distribution |  |  | 717.87 |  |  | 760.14 | 42.27 | 5.89\% | 7.41\% | 7.05\% |
| Retail Transmission Rate - Network Service Rate | 250.00 | 2.60530 | 651.33 | 250.00 | 2.59950 | 649.88 | (1.45) | -0.22\% | 6.33\% | 6.03\% |
| Retail Transmission Rate - Line and Transformation Connection Service Rate | 250.00 | 1.83070 | 457.68 | 250.00 | 1.82710 | 456.78 | (0.90) | -0.20\% | 4.45\% | 4.24\% |
| Total: Retail Transmission |  |  | 1,109.00 |  |  | 1,106.65 | (2.35) | (0.21\%) | 10.79\% | 10.27\% |
| Sub-Total: Delivery (Distribution and Retail Transmission) |  |  | 1,826.87 |  |  | 1,866.79 | 39.92 | 2.19\% | 18.19\% | 17.32\% |
| Wholesale Market Service Rate | 94,434.63 | 0.0052 | 491.06 | 94,434.63 | 0.0052 | 491.06 | 0.00 | 0.00\% | 4.79\% | 4.56\% |
| Rural Rate Protection Charge | 94,434.63 | 0.0011 | 103.88 | 94,434.63 | 0.0011 | 103.88 | 0.00 | 0.00\% | 1.01\% | 0.96\% |
| Standard Supply Service - Administration Charge (if applicable) | 1 | 0.25 | 0.25 | 1 | 0.25 | 0.25 | 0.00 | 0.00\% | 0.00\% | 0.00\% |
| Sub-Total: Regulatory |  |  | 595.19 |  |  | 595.19 | 0.00 | 0.00\% | 5.80\% | 5.52\% |
| Debt Retirement Charge (DRC) | 91,250.00 | 0.00700 | 638.75 | 91,250.00 | 0.00700 | 638.75 | 0.00 | 0.00\% | 6.23\% | 5.93\% |
|  |  |  |  |  |  |  |  |  |  |  |
| Total Bill on RPP (before taxes) |  |  | 10,048.97 |  |  | 10,088.89 | 39.92 | 0.40\% | 98.33\% |  |
| HST |  | 13\% | 1,306.37 |  | 13\% | 1,311.56 | 5.19 | 0.40\% | 12.78\% |  |
| Total Bill (including HST) |  |  | 11,355.33 |  |  | 11,400.44 | 45.11 | 0.40\% | 111.11\% |  |
| Ontario Clean Energy Benefit (OCEB) |  | (10\%) | (1,135.53) |  | (10\%) | $(1,140.04)$ | (4.51) | 0.40\% | -11.11\% |  |
| Total Bill on RPP (including OCEB) |  |  | 10,219.80 |  |  | 10,260.40 | 40.60 | 0.40\% | 100.00\% |  |
|  |  |  |  |  |  |  |  |  |  |  |
| Total Bill on TOU (before taxes) |  |  | 10,557.02 |  |  | 10,596.95 | 39.92 | 0.38\% |  | 98.33\% |
| HST |  | 13\% | 1,372.41 |  | 13\% | 1,377.60 | 5.19 | 0.38\% |  | 12.78\% |
| Total Bill (including HST) |  |  | 11,929.44 |  |  | 11,974.55 | 45.11 | 0.38\% |  | 111.11\% |
| Ontario Clean Energy Benefit (OCEB) |  | (10\%) | (1,192.94) |  | (10\%) | (1,197.46) | (4.51) | 0.38\% |  | -11.11\% |
| Total Bill on TOU (including OCEB) |  |  | 10,736.49 |  |  | 10,777.10 | 40.60 | 0.38\% |  | 100.00\% |


|  | General Service Greater Than 50 kW Bill Impact - 182,500 kWh, 500 |  |  |  |  |  | Change (\$) | Change (\%) | $\begin{gathered} \hline \text { \% of Total } \\ \text { RPP Bill } \\ \hline \end{gathered}$ | \% of Total TOU Bill |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | CURRENT ESTIMATED BILL |  |  | PROPOSED ESTIMATED BILL |  |  |  |  |  |  |
|  | Volume | Current Rate (\$) | Current Charge (\$) | Volume | Proposed Rate (\$) | Proposed Charge (\$) |  |  |  |  |
| Energy First Tier (kWh) | 188,869.25 | 0.0740 | 13,976.32 | 188,869.25 | 0.0740 | 13,976.32 | 0.00 | 0.00\% | 68.59\% |  |
| Energy Second Tier (kWh) | 0.00 | 0.0870 | 0.00 | 0.00 | 0.0870 | 0.00 | 0.00 | 0.00\% | 0.00\% |  |
|  |  |  |  |  |  |  |  |  |  |  |
| TOU - Off Peak | 120,876.32 | 0.0630 | 7,615.21 | 120,876.32 | 0.0630 | 7,615.21 | 0.00 | 0.00\% |  | 35.57\% |
| TOU - Mid Peak | 33,996.47 | 0.0990 | 3,365.65 | 33,996.47 | 0.0990 | 3,365.65 | 0.00 | 0.00\% |  | 15.72\% |
| TOU - On Peak | 33,996.47 | 0.1180 | 4,011.58 | 33,996.47 | 0.1180 | 4,011.58 | 0.00 | 0.00\% |  | 18.74\% |
|  |  |  |  |  |  |  |  |  |  |  |
| Service Charge | 1 | 108.32 | 108.32 | 1 | 109.71 | 109.71 | 1.39 | 1.28\% | 0.54\% | 0.51\% |
| Service Charge Rate Rider(s) | 1 | 0.0200 | 0.02 | 1 | 33.1037 | 33.10 | 33.08 | 165418.27\% | 0.16\% | 0.15\% |
| Distribution Volumetric Rate | 500 | 2.4381 | 1,219.05 | 500 | 2.4693 | 1,234.65 | 15.60 | 1.28\% | 6.06\% | 5.77\% |
| Low Voltage Volumetric Rate | 500 |  | 0.00 | 500 |  | 0.00 | 0.00 | 0.00\% | 0.00\% | 0.00\% |
| Distribution Volumetric Rate Rider(s) | 500 | 0.0000 | 0.00 | 500 | 0.0000 | 0.00 | 0.00 | 0.00\% | 0.00\% | 0.00\% |
| Total: Distribution |  |  | 1,327.39 |  |  | 1,377.46 | 50.07 | 3.77\% | 6.76\% | 6.43\% |
| Retail Transmission Rate - Network Service <br> Rate <br> Real | 500.00 | 2.60530 | 1,302.65 | 500.00 | 2.59950 | 1,299.75 | (2.90) | -0.22\% | 6.38\% | 6.07\% |
| Retail Transmission Rate - Line and Transformation Connection Service Rate | 500.00 | 1.83070 | 915.35 | 500.00 | 1.82710 | 913.55 | (1.80) | -0.20\% | 4.48\% | 4.27\% |
| Total: Retail Transmission |  |  | 2,218.00 |  |  | 2,213.30 | (4.70) | (0.21\%) | 10.86\% | 10.34\% |
| Sub-Total: Delivery (Distribution and Retail Transmission) |  |  | 3,545.39 |  |  | 3,590.76 | 45.37 | 1.28\% | 17.62\% | 16.77\% |
| Wholesale Market Service Rate | 188,869.25 | 0.0052 | 982.12 | 188,869.25 | 0.0052 | 982.12 | 0.00 | 0.00\% | 4.82\% | 4.59\% |
| Rural Rate Protection Charge | 188,869.25 | 0.0011 | 207.76 | 188,869.25 | 0.0011 | 207.76 | 0.00 | 0.00\% | 1.02\% | 0.97\% |
| Standard Supply Service - Administration Charge (if applicable) | 1 | 0.25 | 0.25 | 1 | 0.25 | 0.25 | 0.00 | 0.00\% | 0.00\% | 0.00\% |
| Sub-Total: Regulatory |  |  | 1,190.13 |  |  | 1,190.13 | 0.00 | 0.00\% | 5.84\% | 5.56\% |
| Debt Retirement Charge (DRC) | 182,500.00 | 0.00700 | 1,277.50 | 182,500.00 | 0.00700 | 1,277.50 | 0.00 | 0.00\% | 6.27\% | 5.97\% |
|  |  |  |  |  |  |  |  |  |  |  |
| Total Bill on RPP (before taxes) |  |  | 19,989.34 |  |  | 20,034.71 | 45.37 | 0.23\% | 98.33\% |  |
| HST |  | 13\% | 2,598.61 |  | 13\% | 2,604.51 | 5.90 | 0.23\% | 12.78\% |  |
| Total Bill (including HST) |  |  | 22,587.96 |  |  | 22,639.23 | 51.27 | 0.23\% | 111.11\% |  |
| Ontario Clean Energy Benefit (OCEB) |  | (10\%) | $(2,258.80)$ |  | (10\%) | $(2,263.92)$ | (5.13) | 0.23\% | -11.11\% |  |
| Total Bill on RPP (including OCEB) |  |  | 20,329.16 |  |  | 20,375.30 | 46.15 | 0.23\% | 100.00\% |  |
|  |  |  |  |  |  |  |  |  |  |  |
| Total Bill on TOU (before taxes) |  |  | 21,005.46 |  |  | 21,050.83 | 45.37 | 0.22\% |  | 98.33\% |
| HST |  | 13\% | 2,730.71 |  | 13\% | 2,736.61 | 5.90 | 0.22\% |  | 12.78\% |
| Total Bill (including HST) |  |  | 23,736.17 |  |  | 23,787.44 | 51.27 | 0.22\% |  | 111.11\% |
| Ontario Clean Energy Benefit (OCEB) |  | (10\%) | $(2,373.62)$ |  | (10\%) | (2,378.74) | (5.13) | 0.22\% |  | -11.11\% |
| Total Bill on TOU (including OCEB) |  |  | 21,362.55 |  |  | 21,408.70 | 46.15 | 0.22\% |  | 100.00\% |


[^0]:    ${ }^{1}$ DECISION AND ORDER ON ISSUES LIST November 2, 2012, Final Issues List, SME Application for Smart Metering Charge, page one footnote 1.

[^1]:    ${ }^{2}$ Guideline G-2011-0001, Smart Meter Funding and Cost Recovery - Final Disposition, December 15, 2011, page 17.

[^2]:    ${ }^{3}$ HOBNI's Cost of Service Rate Application EB-2010-0132 Exhibit 9, Tab 3, Schedule 1.1 - Costs Beyond Minimum Functionality.

