V 2.17TB

Ontario Energy Board

Smart Meter Model

Choose Your Utility:

Thunder Bay Hydro Electricity Distribution Inc.
Tillsonburg Hydro Inc.

Application Contact Information

Name:	Jenni Pajala
Title:	Supervisor of Regulatory Affairs
Phone Number:	807-343-1016
Email Address:	jpajala@tbhydro.on.ca
We are applying for rates effective:	May 1, 2012
Last COS Re-based Year	2009

Legend

- DROP-DOWN MENU
- INPUT FIELD
- CALCULATION FIELD

Copyright

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

Ontario Energy Board

Smart Meter Model

Thunder Bay Hydro Electricity Distribution Inc.

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

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

Smart Meter Capital Cost and Operational Expense Data	Asset Type	2006	2007	2008	2009	2010	2011	2012 and later	Total
		Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Unaudited Actual	Forecast	
Smart Meter Installation Plan									
Actual/Planned number of Smart Meters installed during the Calendar Year									
Residential		0	0	0	43,168	1,400	323	0	44891
General Service < 50 kW		0	0	0	3,781	671	142	0	4594
Actual/Planned number of Smart Meters installed (Residential and GS < 50 kW only)		0	0	0	46949	2071	465	0	49485
Percentage of Residential and GS < 50 kW Smart Meter Installations Completed		0.00%	0.00%	0.00%	94.88%	99.06%	100.00%	0.00%	100.00%
Actual/Planned number of GS > 50 kW meters installed		0	0	0	0	0	0	0	0
Other (please identify)		0	0	0	0	0	0	0	0
Total Number of Smart Meters installed or planned to be installed		0	0	0	46949	2071	465	0	49485
1 Capital Costs									
1.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)	**Asset Type** Asset type must be selected to enable calculations	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Unaudited Actual	Forecast	
1.1.1 Smart Meters *(may include new meters and modules, etc.)*	Smart Meter				5,649,205	60,956	62,302		$ 5,772,463
1.1.2 Installation Costs *(may include socket kits, labour, vehicle, benefits, etc.)*	Smart Meter				665,347	174,796	74,923		$ 915,065
1.1.3a Workforce Automation Hardware *(may include fieldwork handhelds, barcode hardware, etc.)*	Computer Hardware				28,529				$ 28,529
1.1.3b Workforce Automation Software *(may include fieldwork handhelds, barcode hardware, etc.)*	Computer Software				46,767	233			$ 47,000
Total Advanced Metering Communications Devices (AMCD)		$ -	$ -	$ -	$ 6,389,848	$ 235,985	$ 137,224	$ -	$ 6,763,057
1.2 ADVANCED METERING REGIONAL COLLECTOR (AMRC) (includes LAN)	**Asset Type**	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Unaudited Actual	Forecast	
1.2.1 Collectors	Smart Meter				204,436				$ 204,436
1.2.2 Repeaters *(may include radio licence, etc.)*	Smart Meter					4,693			$ 4,693
1.2.3 Installation *(may include meter seals and rings, collector computer hardware, etc.)*	Smart Meter				386,589	-5,451	6,269		$ 387,407
Total Advanced Metering Regional Collector (AMRC) (Includes LAN)		$ -	$ -	$ -	$ 591,026	-$ 758	$ 6,269	$ -	$ 596,537
1.3 ADVANCED METERING CONTROL COMPUTER (AMCC)	**Asset Type**	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Unaudited Actual	Forecast	
1.3.1 Computer Hardware	Computer Hardware								$ -
1.3.2 Computer Software	Computer Software								$ -
1.3.3 Computer Software Licences & Installation (includes hardware and software) *(may include AS/400 disk space, backup and recovery computer, UPS, etc.)*	Computer Software				172,961	72,472	2,408		$ 247,840
Total Advanced Metering Control Computer (AMCC)		$ -	$ -	$ -	$ 172,961	$ 72,472	$ 2,408	$ -	$ 247,840
1.4 WIDE AREA NETWORK (WAN)	**Asset Type**	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Unaudited Actual	Forecast	
1.4.1 Activiation Fees	Smart Meter				38,784	44,441			$ 83,225
Total Wide Area Network (WAN)		$ -	$ -	$ -	$ 38,784	$ 44,441	$ -	$ -	$ 83,225
1.5 OTHER AMI CAPITAL COSTS RELATED TO MINIMUM FUNCTIONALITY	**Asset Type**	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Unaudited Actual	Forecast	
1.5.1 Customer Equipment *(including repair of damaged equipment)*	Smart Meter				29,910	14,560			$ 44,470
1.5.2 AMI Interface to CIS	Computer Software								$ -
1.5.3 Professional Fees	Smart Meter				63,210		70,000		$ 133,210
1.5.4 Integration	Smart Meter								$ -
1.5.5 Program Management	Smart Meter				162,549	23,848	3,481		$ 189,878
1.5.6 Other AMI Capital	Smart Meter				19,946	32,115			$ 52,061
Total Other AMI Capital Costs Related to Minimum Functionality		$ -	$ -	$ -	$ 275,615	$ 70,523	$ 73,481	$ -	$ 419,620
Total Capital Costs Related to Minimum Functionality		$ -	$ -	$ -	$ 7,468,233	$ 422,663	$ 219,382	$ -	$ 8,110,278
1.6 CAPITAL COSTS BEYOND MINIMUM FUNCTIONALITY *(Please provide a descriptive title and identify nature of beyond minimum functionality costs)*	**Asset Type**	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Unaudited Actual	Forecast	
1.6.1 Costs related to technical capabilities in the smart meters or related communications infrastructure that exceed those specified in O.Reg 425/06	Smart Meter								$ -
1.6.2 Costs for deployment of smart meters to customers other than residential and small general service	Applications Software								$ -
1.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDM/R, etc.	Applications Software						21,362		$ 21,362
Total Capital Costs Beyond Minimum Functionality		$ -	$ -	$ -	$ -	$ -	$ 21,362	$ -	$ 21,362
Total Smart Meter Capital Costs		$ -	$ -	$ -	$ 7,468,233	$ 422,663	$ 240,744	$ -	$ 8,131,640
2 OM&A Expenses									
2.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)		Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Unaudited Actual	Forecast	
2.1.1 Maintenance *(may include meter reverification costs, etc.)*					7,021	2,198	533		$ 9,752
2.1.2 Other *(please specifiy)*									$ -
Total Incremental AMCD OM&A Costs		$ -	$ -	$ -	$ 7,021	$ 2,198	$ 533	$ -	$ 9,752
2.2 ADVANCED METERING REGIONAL COLLECTOR (AMRC) (includes LAN)									
2.2.1 Maintenance									$ -
2.2.2 Other *(please specifiy)* Cellular communication to AMI Network fees						33,025	77,571	70,000	$ 180,596
Total Incremental AMRC OM&A Costs		$ -	$ -	$ -	$ -	$ 33,025	$ 77,571	$ 70,000	$ 180,596
2.3 ADVANCED METERING CONTROL COMPUTER (AMCC)									
2.3.1 Hardware Maintenance *(may include server support, etc.)*									$ -
2.3.2 Software Maintenance *(may include maintenance support, etc.)*					4,772	49,591	87,563	140,016	$ 281,941
2.3.2 Other *(please specifiy)*									$ -
Total Incremental AMCC OM&A Costs		$ -	$ -	$ -	$ 4,772	$ 49,591	$ 87,563	$ 140,016	$ 281,941
2.4 WIDE AREA NETWORK (WAN)									
2.4.1 WAN Maintenance									$ -
2.4.2 Other *(please specifiy)*									$ -
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				52,193	-5,536	51,111	25,256	8,800	$ 131,824
2.5.4 Change Management (may include training, etc.)									$ -
2.5.5 Administration Costs							11,307	8,000	$ 19,307
2.5.6 Other AMI Expenses *(please specify)*				7,167	16,520	60,647	96,048	91,024	$ 271,406
Total Other AMI OM&A Costs Related to Minimum Functionality		$ -	$ -	$ 59,360	$ 10,984	$ 111,758	$ 132,612	$ 107,824	$ 422,538
TOTAL OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY		$ -	$ -	$ 59,360	$ 22,776	$ 196,572	$ 298,279	$ 317,840	$ 894,827
2.6 OM&A COSTS RELATED TO BEYOND MINIMUM FUNCTIONALITY *(Please provide a descriptive title and identify nature of beyond minimum functionality costs)*		Audited Actual	Audited Actual	Audited Actual	Audited Actual	Audited Actual	Unaudited Actual		
2.6.1 Costs related to technical capabilities in the smart meters or related communications infrastructure that exceed those specified in O.Reg 425/06									$ -
2.6.2 Costs for deployment of smart meters to customers other than residential and small general service									$ -

2.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDM/R, etc.						30,177	84,736	$ 114,912
Total OM&A Costs Beyond Minimum Functionality	$ -	$ -	$ -	$ -	$ -	$ 30,177	$ 84,736	$ 114,912
Total Smart Meter OM&A Costs	$ -	$ -	$ 59,360	$ 22,776	$ 196,572	$ 328,456	$ 402,576	$ 1,009,739

3 Aggregate Smart Meter Costs by Category

3.1	**Capital**								
3.1.1	Smart Meter	$ -	$ -	$ -	$ 7,219,977	$ 349,958	$ 216,974	$ -	$ 7,786,909
3.1.2	Computer Hardware	$ -	$ -	$ -	$ 28,529	$ -	$ -	$ -	$ 28,529
3.1.3	Computer Software	$ -	$ -	$ -	$ 219,728	$ 72,705	$ 2,408	$ -	$ 294,841
3.1.4	Tools & Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
3.1.5	Other Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
3.1.6	Applications Software	$ -	$ -	$ -	$ -	$ -	$ 21,362	$ -	$ 21,362
3.1.7	**Total Capital Costs**	**$ -**	**$ -**	**$ -**	**$ 7,468,233**	**$ 422,663**	**$ 240,744**	**$ -**	**$ 8,131,640**
3.2	**OM&A Costs**								
3.2.1	**Total OM&A Costs**	**$ -**	**$ -**	**$ 59,360**	**$ 22,776**	**$ 196,572**	**$ 328,456**	**$ 402,576**	**$ 1,009,739**

Ontario Energy Board

Smart Meter Model

Thunder Bay Hydro Electricity Distribution Inc.

	2006	2007	2008	2009	2010	2011	2012 and later
Cost of Capital							
Capital Structure[1]							
Deemed Short-term Debt Capitalization			0.0%	4.0%	4.0%	4.0%	4.0%
Deemed Long-term Debt Capitalization	50.0%	50.0%	53.3%	52.7%	56.0%	56.0%	56.0%
Deemed Equity Capitalization	50.0%	50.0%	46.7%	43.3%	40.0%	40.0%	40.0%
Preferred Shares							
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Cost of Capital Parameters							
Deemed Short-term Debt Rate				1.33%	1.33%	1.33%	1.33%
Long-term Debt Rate (actual/embedded/deemed)[2]		0.00%		6.00%	6.00%	6.00%	6.00%
Target Return on Equity (ROE)	2.9%	2.93%	2.93%	3.75%	3.75%	3.75%	3.75%
Return on Preferred Shares							
WACC	1.47%	1.47%	1.37%	4.84%	4.91%	4.91%	4.91%
Working Capital Allowance							
Working Capital Allowance Rate	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
(% of the sum of Cost of Power + controllable expenses)							
Taxes/PILs							
Aggregate Corporate Income Tax Rate	36.12%	36.12%	33.50%	32.83%	29.61%	25.74%	23.91%
Capital Tax (until July 1st, 2010)	0.30%	0.225%	0.225%	0.225%	0.075%	0.00%	0.00%
Depreciation Rates							
(expressed as expected useful life in years)							
Smart Meters - years	15	15	15	15	15	15	15
- rate (%)	6.67%	6.67%	6.67%	6.67%	6.67%	6.67%	6.67%
Computer Hardware - years	5	5	5	5	5	5	5
- rate (%)	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
Computer Software - years	5	5	5	5	5	5	5
- rate (%)	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
Tools & Equipment - years	10	10	10	10	10	10	10
- rate (%)	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
Other Equipment - years	10	10	10	10	10	10	10
- rate (%)	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
CCA Rates							
Smart Meters - CCA Class	47	47	47	47	47	47	47
Smart Meters - CCA Rate	8%	8%	8%	8%	8%	8%	8%
Computer Equipment - CCA Class	50	50	50	50	50	50	50
Computer Equipment - CCA Rate	55%	55%	55%	55%	55%	55%	55%
General Equipment - CCA Class	8	8	8	8	8	8	8
General Equipment - CCA Rate	20%	20%	20%	20%	20%	20%	20%
Applications Software - CCA Class							
Applications Software - CCA Rate							

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.*

Ontario Energy Board

Smart Meter Model

Thunder Bay Hydro Electricity Distribution Inc.

	2006	2007	2008	2009	2010	2011	2012 and later
Net Fixed Assets - Smart Meters							
Gross Book Value							
Opening Balance		$ -	$ -	$ -	$ 7,219,977	$ 7,569,935	$ 7,786,909
Capital Additions during year (from Smart Meter Costs)	$ -	$ -	$ -	$ 7,219,977	$ 349,958	$ 216,974	$ -
Retirements/Removals (if applicable)							
Closing Balance	$ -	$ -	$ -	$ 7,219,977	$ 7,569,935	$ 7,786,909	$ 7,786,909
Accumulated Depreciation							
Opening Balance		$ -	$ -	$ -	-$ 240,666	-$ 733,663	-$ 1,245,558
Amortization expense during year	$ -	$ -	$ -	-$ 240,666	-$ 492,997	-$ 511,895	-$ 519,127
Retirements/Removals (if applicable)							
Closing Balance	$ -	$ -	$ -	-$ 240,666	-$ 733,663	-$ 1,245,558	-$ 1,764,685
Net Book Value							
Opening Balance	$ -	$ -	$ -	$ -	$ 6,979,311	$ 6,836,272	$ 6,541,351
Closing Balance	$ -	$ -	$ -	$ 6,979,311	$ 6,836,272	$ 6,541,351	$ 6,022,224
Average Net Book Value	$ -	$ -	$ -	$ 3,489,655	$ 6,907,791	$ 6,688,811	$ 6,281,787
Net Fixed Assets - Computer Hardware							
Gross Book Value							
Opening Balance		$ -	$ -	$ -	$ 28,529	$ 28,529	$ 28,529
Capital Additions during year (from Smart Meter Costs)	$ -	$ -	$ -	$ 28,529	$ -	$ -	$ -
Retirements/Removals (if applicable)							
Closing Balance	$ -	$ -	$ -	$ 28,529	$ 28,529	$ 28,529	$ 28,529
Accumulated Depreciation							
Opening Balance	$ -	$ -	$ -	$ -	-$ 2,853	-$ 8,559	-$ 14,264
Amortization expense during year	$ -	$ -	$ -	-$ 2,853	-$ 5,706	-$ 5,706	-$ 5,706
Retirements/Removals (if applicable)							
Closing Balance	$ -	$ -	$ -	-$ 2,853	-$ 8,559	-$ 14,264	-$ 19,970
Net Book Value							
Opening Balance	$ -	$ -	$ -	$ -	$ 25,676	$ 19,970	$ 14,264
Closing Balance	$ -	$ -	$ -	$ 25,676	$ 19,970	$ 14,264	$ 8,559
Average Net Book Value	$ -	$ -	$ -	$ 12,838	$ 22,823	$ 17,117	$ 11,411
Net Fixed Assets - Computer Software (including Applications Software)							
Gross Book Value							
Opening Balance		$ -	$ -	$ -	$ 219,728	$ 292,433	$ 316,203
Capital Additions during year (from Smart Meter Costs)	$ -	$ -	$ -	$ 219,728	$ 72,705	$ 23,770	$ -
Retirements/Removals (if applicable)							
Closing Balance	$ -	$ -	$ -	$ 219,728	$ 292,433	$ 316,203	$ 316,203
Accumulated Depreciation							
Opening Balance	$ -	$ -	$ -	$ -	-$ 21,973	-$ 73,189	-$ 134,052
Amortization expense during year	$ -	$ -	$ -	-$ 21,973	-$ 51,216	-$ 60,864	-$ 63,241
Retirements/Removals (if applicable)							
Closing Balance	$ -	$ -	$ -	-$ 21,973	-$ 73,189	-$ 134,052	-$ 197,293
Net Book Value							
Opening Balance	$ -	$ -	$ -	$ -	$ 197,755	$ 219,244	$ 182,151
Closing Balance	$ -	$ -	$ -	$ 197,755	$ 219,244	$ 182,151	$ 118,910
Average Net Book Value	$ -	$ -	$ -	$ 98,878	$ 208,500	$ 200,697	$ 150,530
Net Fixed Assets - Tools and Equipment							
Gross Book Value							
Opening Balance		$ -	$ -	$ -	$ -	$ -	$ -
Capital Additions during year (from Smart Meter Costs)	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Retirements/Removals (if applicable)							
Closing Balance	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Accumulated Depreciation							
Opening Balance	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Amortization expense during year	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Retirements/Removals (if applicable)							
Closing Balance	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Net Book Value							
Opening Balance	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Closing Balance	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Average Net Book Value	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Net Fixed Assets - Other Equipment							
Gross Book Value							
Opening Balance		$ -	$ -	$ -	$ -	$ -	$ -
Capital Additions during year (from Smart Meter Costs)	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Retirements/Removals (if applicable)							
Closing Balance	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Accumulated Depreciation							
Opening Balance	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Amortization expense during year	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Retirements/Removals (if applicable)							
Closing Balance	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Net Book Value							
Opening Balance	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Closing Balance	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Average Net Book Value	$ -	$ -	$ -	$ -	$ -	$ -	$ -

Ontario Energy Board

Smart Meter Model

Thunder Bay Hydro Electricity Distribution Inc.

	2006	2007	2008	2009	2010	2011	2012 and Later
Average Net Fixed Asset Values (from Sheet 4)							
Smart Meters	$ -	$ -	$ -	$ 3,489,655	$ 6,907,791	$ 6,688,811	$ 6,281,787
Computer Hardware	$ -	$ -	$ -	$ 12,838	$ 22,823	$ 17,117	$ 11,411
Computer Software	$ -	$ -	$ -	$ 98,878	$ 208,500	$ 200,697	$ 150,530
Tools & Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Net Fixed Assets	**$ -**	**$ -**	**$ -**	**$ 3,601,371**	**$ 7,139,114**	**$ 6,906,626**	**$ 6,443,729**
Working Capital							
Operating Expenses (from Sheet 2)	$ -	$ -	$ 59,360	$ 22,776	$ 196,572	$ 328,456	$ 402,576
Working Capital Factor (from Sheet 3)	15%	15%	15%	15%	15%	15%	15%
Working Capital Allowance	$ -	$ -	$ 8,904	$ 3,416	$ 29,486	$ 49,268	$ 60,386
Incremental Smart Meter Rate Base	**$ -**	**$ -**	**$ 8,904**	**$ 3,604,787**	**$ 7,168,600**	**$ 6,955,894**	**$ 6,504,115**
Return on Rate Base							
Capital Structure							
Deemed Short Term Debt	$ -	$ -	$ -	$ 144,191	$ 286,744	$ 278,236	$ 260,165
Deemed Long Term Debt	$ -	$ -	$ 4,746	$ 1,899,723	$ 4,014,416	$ 3,895,301	$ 3,642,305
Equity	$ -	$ -	$ 4,158	$ 1,560,873	$ 2,867,440	$ 2,782,358	$ 2,601,646
Preferred Shares	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Capitalization	$ -	$ -	$ 8,904	$ 3,604,787	$ 7,168,600	$ 6,955,894	$ 6,504,115
Return on							
Deemed Short Term Debt	$ -	$ -	$ -	$ 1,918	$ 3,814	$ 3,701	$ 3,460
Deemed Long Term Debt	$ -	$ -	$ -	$ 113,983	$ 240,865	$ 233,718	$ 218,538
Equity	$ -	$ -	$ 122	$ 58,533	$ 107,529	$ 104,338	$ 97,562
Preferred Shares	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Return on Capital	$ -	$ -	$ 122	$ 174,434	$ 352,208	$ 341,757	$ 319,560
Operating Expenses	$ -	$ -	$ 59,360	$ 22,776	$ 196,572	$ 328,456	$ 402,576
Debt Financing Expenses (Thunder Bay Hydro-specific)							
Amortization Expenses (from Sheet 4)							
Smart Meters	$ -	$ -	$ -	$ 240,666	$ 492,997	$ 511,895	$ 519,127
Computer Hardware	$ -	$ -	$ -	$ 2,853	$ 5,706	$ 5,706	$ 5,706
Computer Software	$ -	$ -	$ -	$ 21,973	$ 51,216	$ 60,864	$ 63,241
Tools & Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Amortization Expense in Year	$ -	$ -	$ -	$ 265,492	$ 549,919	$ 578,464	$ 588,074
Incremental Revenue Requirement before Taxes/PILs	$ -	$ -	$ 59,482	$ 462,701	$ 1,098,698	$ 1,248,677	$ 1,310,210
Calculation of Taxable Income							
Incremental Operating Expenses	$ -	$ -	$ 59,360	$ 22,776	$ 196,572	$ 328,456	$ 402,576
Amortization Expense	$ -	$ -	$ -	$ 265,492	$ 549,919	$ 578,464	$ 588,074
Interest Expense	$ -	$ -	$ -	$ 115,901	$ 244,679	$ 237,419	$ 221,998
Net Income for Taxes/PILs	$ -	$ -	$ 122	$ 58,533	$ 107,529	$ 104,338	$ 97,562
Grossed-up Taxes/PILs (from Sheet 7)	$ -	$ -	$ 61.37	$ 54.93	-$ 7,326.06	$ 21,806.67	$ 44,265.76
Revenue Requirement, including Grossed-up Taxes/PILs	$ -	$ -	$ 59,543	$ 462,756	$ 1,091,372	$ 1,270,484	$ 1,354,475

For PILs Calculation

UCC - Smart Meters

	2006 Audited Actua	2007 Audited Actua	2008 Audited Actua	2009 Audited Actua	2010 Audited Actua	2011 Unaudited Actua	2012 and later Forecast
Opening UCC	$ -	$ -	$ -	$ -	$ 6,931,177.51	$ 6,712,643.08	$ 6,383,926.71
Capital Additions	$ -	$ -	$ -	$ 7,219,976.57	$ 349,958.09	$ 216,974.04	$ -
Retirements/Removals (if applicable)							
UCC Before Half Year Rule	$ -	$ -	$ -	$ 7,219,976.57	$ 7,281,135.60	$ 6,929,617.12	$ 6,383,926.71
Half Year Rule (1/2 Additions - Disposals)	$ -	$ -	$ -	$ 3,609,988.29	$ 174,979.05	$ 108,487.02	$ -
Reduced UCC	$ -	$ -	$ -	$ 3,609,988.29	$ 7,106,156.56	$ 6,821,130.10	$ 6,383,926.71
CCA Rate Class	47	47	47	47	47	47	47
CCA Rate	8%	8%	8%	8%	8%	8%	8%
CCA	$ -	$ -	$ -	$ 288,799.06	$ 568,492.52	$ 545,690.41	$ 510,714.14
Closing UCC	$ -	$ -	$ -	$ 6,931,177.51	$ 6,712,643.08	$ 6,383,926.71	$ 5,873,212.57

UCC - Computer Equipment

	2006 Audited Actua	2007 Audited Actua	2008 Audited Actua	2009 Audited Actua	2010 Audited Actua	2011 Unaudited Actua	2012 and later Forecast
Opening UCC	$ -	$ -	$ -	$ -	$ 179,985.98	$ 133,704.93	$ 61,912.74
Capital Additions Computer Hardware	$ -	$ -	$ -	$ 28,528.68	$ -	$ -	$ -
Capital Additions Computer Software	$ -	$ -	$ -	$ 219,727.85	$ 72,705.15	$ 2,407.62	$ -
Retirements/Removals (if applicable)							
UCC Before Half Year Rule	$ -	$ -	$ -	$ 248,256.53	$ 252,691.14	$ 136,112.55	$ 61,912.74
Half Year Rule (1/2 Additions - Disposals)	$ -	$ -	$ -	$ 124,128.26	$ 36,352.58	$ 1,203.81	$ -
Reduced UCC	$ -	$ -	$ -	$ 124,128.26	$ 216,338.56	$ 134,908.74	$ 61,912.74
CCA Rate Class	50	50	50	50	50	50	50
CCA Rate	55%	55%	55%	55%	55%	55%	55%
CCA	$ -	$ -	$ -	$ 68,270.55	$ 118,986.21	$ 74,199.81	$ 34,052.01
Closing UCC	$ -	$ -	$ -	$ 179,985.98	$ 133,704.93	$ 61,912.74	$ 27,860.73

UCC - General Equipment

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

PILs Calculation

	2006 Audited Actual	2007 Audited Actual	2008 Audited Actual	2009 Audited Actual	2010 Audited Actual	2011 Unaudited Actual	2012 and later Forecast
INCOME TAX							
Net Income	$ -	$ -	$ 121.83	$ 58,532.73	$ 107,528.99	$ 104,338.41	$ 97,561.73
Amortization	$ -	$ -	$ -	$ 265,491.54	$ 549,918.86	$ 578,464.12	$ 588,073.58
CCA - Smart Meters	$ -	$ -	$ -	-$ 288,799.06	-$ 568,492.52	-$ 545,690.41	-$ 510,714.14
CCA - Computers	$ -	$ -	$ -	-$ 68,270.55	-$ 118,986.21	-$ 74,199.81	-$ 34,052.01
CCA - Applications Software	$ -	$ -	$ -	$ -	$ -	$ -	$ -
CCA - Other Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Change in taxable income	$ -	$ -	$ 121.83	-$ 33,045.34	-$ 30,030.88	$ 62,912.32	$ 140,869.17
Tax Rate (from Sheet 3)	36.12%	36.12%	33.50%	32.83%	29.61%	25.74%	23.91%
Income Taxes Payable	$ -	$ -	$ 40.81	-$ 10,848.78	-$ 8,892.14	$ 16,193.63	$ 33,681.82
ONTARIO CAPITAL TAX							
Smart Meters	$ -	$ -	$ -	$ 6,979,310.69	$ 6,836,271.74	$ 6,541,351.00	$ 6,022,223.75
Computer Hardware	$ -	$ -	$ -	$ 25,675.81	$ 19,970.08	$ 14,264.34	$ 8,558.60
Computer Software (Including Application Software)	$ -	$ -	$ -	$ 197,755.06	$ 219,244.13	$ 182,150.53	$ 118,909.93
Tools & Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Rate Base	$ -	$ -	$ -	$ 7,202,741.56	$ 7,075,485.95	$ 6,737,765.87	$ 6,149,692.29
Less: Exemption							
Deemed Taxable Capital	$ -	$ -	$ -	$ 7,202,741.56	$ 7,075,485.95	$ 6,737,765.87	$ 6,149,692.29
Ontario Capital Tax Rate (from Sheet 3)	0.300%	0.225%	0.225%	0.225%	0.075%	0.000%	0.000%
Net Amount (Taxable Capital x Rate)	$ -	$ -	$ -	$ 16,206.17	$ 5,306.61	$ -	$ -
Change in Income Taxes Payable	$ -	$ -	$ 40.81	-$ 10,848.78	-$ 8,892.14	$ 16,193.63	$ 33,681.82
Change in OCT	$ -	$ -	$ -	$ 16,206.17	$ 5,306.61	$ -	$ -
PILs	$ -	$ -	$ 40.81	$ 5,357.38	-$ 3,585.53	$ 16,193.63	$ 33,681.82
Gross Up PILs							
Tax Rate	36.12%	36.12%	33.50%	32.83%	29.61%	25.74%	23.91%
Change in Income Taxes Payable	$ -	$ -	$ 61.37	-$ 16,151.23	-$ 12,632.68	$ 21,806.67	$ 44,265.76
Change in OCT	$ -	$ -	$ -	$ 16,206.17	$ 5,306.61	$ -	$ -
PILs	$ -	$ -	$ 61.37	$ 54.93	-$ 7,326.06	$ 21,806.67	$ 44,265.76

Ontario Energy Board

Smart Meter Model

Thunder Bay Hydro Electricity Distribution Inc.

This worksheet calculates the funding adder revenues.

Account 1555 - Sub-account Funding Adder Revenues

Interest Rates	Approved Deferral and Variance Accounts	CWIP
2006 Q1		
2006 Q2	4.14%	4.68%
2006 Q3	4.59%	5.05%
2006 Q4	4.59%	4.72%
2007 Q1	4.59%	4.72%
2007 Q2	4.59%	4.72%
2007 Q3	4.59%	5.18%
2007 Q4	5.14%	5.18%
2008 Q1	5.14%	5.18%
2008 Q2	4.08%	5.18%
2008 Q3	3.35%	5.43%
2008 Q4	3.35%	5.43%
2009 Q1	2.45%	6.61%
2009 Q2	1.00%	6.61%
2009 Q3	0.55%	5.67%
2009 Q4	0.55%	4.66%
2010 Q1	0.55%	4.34%
2010 Q2	0.55%	4.34%
2010 Q3	0.89%	4.66%
2010 Q4	1.20%	4.01%
2011 Q1	1.47%	4.29%
2011 Q2	1.47%	4.29%
2011 Q3	1.47%	4.29%
2011 Q4	1.47%	4.29%
2012 Q1	1.47%	4.29%
2012 Q2	1.47%	4.29%
2012 Q3		4.29%
2012 Q4		4.29%

Date	Year	Quarter	Opening Balance (Principal)	Funding Adder Revenues	Interest Rate	Interest	Closing Balance	Annual amounts	Board Approved Smart Meter Funding Adder (from Tariff)
Jan-06	2006	Q1	$ -		0.00%	$ -	$ -		
Feb-06	2006	Q1	$ -		0.00%	$ -	$ -		
Mar-06	2006	Q1	$ -		0.00%	$ -	$ -		
Apr-06	2006	Q2	$ -		4.14%	$ -	$ -		
May-06	2006	Q2	$ -	$ 587.46	4.14%	$ -	$ 587.46		
Jun-06	2006	Q2	$ 587.46	$ 6,566.57	4.14%	$ 2.03	$ 7,156.06		
Jul-06	2006	Q3	$ 7,154.03	$ 10,982.38	4.59%	$ 27.36	$ 18,163.77		
Aug-06	2006	Q3	$ 18,136.41	$ 14,470.34	4.59%	$ 69.37	$ 32,676.12		
Sep-06	2006	Q3	$ 32,606.75	$ 11,975.49	4.59%	$ 124.72	$ 44,706.96		
Oct-06	2006	Q4	$ 44,582.24	$ 13,215.19	4.59%	$ 170.53	$ 57,967.96		
Nov-06	2006	Q4	$ 57,797.43	$ 13,749.97	4.59%	$ 221.08	$ 71,768.48		
Dec-06	2006	Q4	$ 71,547.40	$ 12,170.66	4.59%	$ 273.67	$ 83,991.73	$ 84,606.82	
Jan-07	2007	Q1	$ 83,718.06	$ 15,052.17	4.59%	$ 320.22	$ 99,090.45		
Feb-07	2007	Q1	$ 98,770.23	$ 11,154.70	4.59%	$ 377.80	$ 110,302.73		
Mar-07	2007	Q1	$ 109,924.93	$ 15,066.21	4.59%	$ 420.46	$ 125,411.60		
Apr-07	2007	Q2	$ 124,991.14	$ 11,618.32	4.59%	$ 478.09	$ 137,087.55		
May-07	2007	Q2	$ 136,609.46	$ 15,877.34	4.59%	$ 522.53	$ 153,009.33		
Jun-07	2007	Q2	$ 152,486.80	$ 12,301.38	4.59%	$ 583.26	$ 165,371.44		
Jul-07	2007	Q3	$ 164,788.18	$ 14,189.22	4.59%	$ 630.31	$ 179,607.71		
Aug-07	2007	Q3	$ 178,977.40	$ 12,946.82	4.59%	$ 684.59	$ 192,608.81		
Sep-07	2007	Q3	$ 191,924.22	$ 10,592.08	4.59%	$ 734.11	$ 203,250.41		
Oct-07	2007	Q4	$ 202,516.30	$ 14,163.62	5.14%	$ 867.44	$ 217,547.36		
Nov-07	2007	Q4	$ 216,679.92	$ 13,795.35	5.14%	$ 928.11	$ 231,403.38		
Dec-07	2007	Q4	$ 230,475.27	$ 11,543.64	5.14%	$ 987.20	$ 243,006.11	$ 165,834.97	
Jan-08	2008	Q1	$ 242,018.91	$ 16,018.68	5.14%	$ 1,036.65	$ 259,074.24		
Feb-08	2008	Q1	$ 258,037.59	$ 11,640.01	5.14%	$ 1,105.26	$ 270,782.86		
Mar-08	2008	Q1	$ 269,677.60	$ 12,192.00	5.14%	$ 1,155.12	$ 283,024.72		
Apr-08	2008	Q2	$ 281,869.60	$ 14,338.87	4.08%	$ 958.36	$ 297,166.83		
May-08	2008	Q2	$ 296,208.47	$ 13,045.01	4.08%	$ 1,007.11	$ 310,260.59		
Jun-08	2008	Q2	$ 309,253.48	$ 14,480.28	4.08%	$ 1,051.46	$ 324,785.22		
Jul-08	2008	Q3	$ 323,733.76	$ 14,691.11	3.35%	$ 903.76	$ 339,328.63		
Aug-08	2008	Q3	$ 338,424.87	$ 10,897.02	3.35%	$ 944.77	$ 350,266.66		
Sep-08	2008	Q3	$ 349,321.89	$ 13,660.77	3.35%	$ 975.19	$ 363,957.85		
Oct-08	2008	Q4	$ 362,982.66	$ 13,492.53	3.35%	$ 1,013.33	$ 377,488.52		
Nov-08	2008	Q4	$ 376,475.19	$ 12,290.12	3.35%	$ 1,050.99	$ 389,816.30		
Dec-08	2008	Q4	$ 388,765.31	$ 13,649.79	3.35%	$ 1,085.30	$ 403,500.40	$ 172,683.49	
Jan-09	2009	Q1	$ 402,415.10	$ 14,420.31	2.45%	$ 821.60	$ 417,657.01		
Feb-09	2009	Q1	$ 416,835.41	$ 10,429.47	2.45%	$ 851.04	$ 428,115.92		
Mar-09	2009	Q1	$ 427,264.88	$ 17,182.86	2.45%	$ 872.33	$ 445,320.07		
Apr-09	2009	Q2	$ 444,447.74	$ 12,002.90	1.00%	$ 370.37	$ 456,821.01		
May-09	2009	Q2	$ 456,450.64	$ 12,323.68	1.00%	$ 380.38	$ 469,154.70		
Jun-09	2009	Q2	$ 468,774.32	$ 14,742.13	1.00%	$ 390.65	$ 483,907.10		
Jul-09	2009	Q3	$ 483,516.45	$ 25,762.44	0.55%	$ 221.61	$ 509,500.50		
Aug-09	2009	Q3	$ 509,278.89	$ 72,838.60	0.55%	$ 233.42	$ 582,350.91		
Sep-09	2009	Q3	$ 582,117.49	$ 166,920.98	0.55%	$ 266.80	$ 749,305.27		
Oct-09	2009	Q4	$ 749,038.47	$ 141,021.06	0.55%	$ 343.31	$ 890,402.84		
Nov-09	2009	Q4	$ 890,059.53	$ 105,171.46	0.55%	$ 407.94	$ 995,638.93		
Dec-09	2009	Q4	$ 995,230.99	$ 102,353.10	0.55%	$ 456.15	$ 1,098,040.24	$ 700,784.59	
Jan-10	2010	Q1	$ 1,097,584.09	$ 101,005.31	0.55%	$ 503.06	$ 1,199,092.46		
Feb-10	2010	Q1	$ 1,198,589.40	$ 75,747.45	0.55%	$ 549.35	$ 1,274,886.20		
Mar-10	2010	Q1	$ 1,274,336.85	$ 119,231.13	0.55%	$ 584.07	$ 1,394,152.05		
Apr-10	2010	Q2	$ 1,393,567.98	$ 96,310.52	0.55%	$ 638.72	$ 1,490,517.22		
May-10	2010	Q2	$ 1,489,878.50	$ 85,619.84	0.55%	$ 682.86	$ 1,576,181.20		
Jun-10	2010	Q2	$ 1,575,498.34	$ 106,622.69	0.55%	$ 722.10	$ 1,682,843.13		
Jul-10	2010	Q3	$ 1,682,121.03	$ 92,941.15	0.89%	$ 1,247.57	$ 1,776,309.75		
Aug-10	2010	Q3	$ 1,775,062.18	$ 92,248.54	0.89%	$ 1,316.50	$ 1,868,627.22		
Sep-10	2010	Q3	$ 1,867,310.72	$ 102,447.63	0.89%	$ 1,384.92	$ 1,971,143.27		
Oct-10	2010	Q4	$ 1,969,758.35	$ 81,718.59	1.20%	$ 1,969.76	$ 2,053,446.70		
Nov-10	2010	Q4	$ 2,051,476.94	$ 103,388.94	1.20%	$ 2,051.48	$ 2,156,917.36		
Dec-10	2010	Q4	$ 2,154,865.88	$ 91,336.51	1.20%	$ 2,154.87	$ 2,248,357.26	$ 1,162,423.56	
Jan-11	2011	Q1	$ 2,246,202.39	$ 103,472.03	1.47%	$ 2,751.60	$ 2,352,426.02		
Feb-11	2011	Q1	$ 2,349,674.42	$ 80,028.51	1.47%	$ 2,878.35	$ 2,432,581.28		
Mar-11	2011	Q1	$ 2,429,702.93	$ 115,180.73	1.47%	$ 2,976.39	$ 2,547,860.05		
Apr-11	2011	Q2	$ 2,544,883.66	$ 79,882.59	1.47%	$ 3,117.48	$ 2,627,883.73		
May-11	2011	Q2	$ 2,624,766.25	$ 105,224.63	1.47%	$ 3,215.34	$ 2,733,206.22		
Jun-11	2011	Q2	$ 2,729,990.88	$ 101,688.50	1.47%	$ 3,344.24	$ 2,835,023.62		
Jul-11	2011	Q3	$ 2,831,679.38	$ 102,902.03	1.47%	$ 3,468.81	$ 2,938,050.22		
Aug-11	2011	Q3	$ 2,934,581.41	$ 92,413.22	1.47%	$ 3,594.86	$ 3,030,589.49		
Sep-11	2011	Q3	$ 3,026,994.63	$ 104,060.60	1.47%	$ 3,708.07	$ 3,134,763.30		
Oct-11	2011	Q4	$ 3,131,055.23	$ 91,262.82	1.47%	$ 3,835.54	$ 3,226,153.59		
Nov-11	2011	Q4	$ 3,222,318.05	$ 103,998.80	1.47%	$ 3,947.34	$ 3,330,264.19		
Dec-11	2011	Q4	$ 3,326,316.85	$ 80,508.29	1.47%	$ 4,074.74	$ 3,410,899.88	$ 1,201,535.51	
Jan-12	2012	Q1	$ 3,406,825.14	$ 125,039.16	1.47%	$ 4,173.36	$ 3,536,037.66		
Feb-12	2012	Q1	$ 3,531,864.30	$ 81,304.99	1.47%	$ 4,326.53	$ 3,617,495.82		
Mar-12	2012	Q1	$ 3,613,169.29	$ 69,171.67	1.47%	$ 4,426.13	$ 3,686,767.09		
Apr-12	2012	Q2	$ 3,682,340.96	$ 79,882.59	1.47%	$ 4,510.87	$ 3,766,734.42		
May-12	2012	Q2	$ 3,762,223.55	$ 105,224.63	1.47%	$ 4,608.72	$ 3,872,056.90		
Jun-12	2012	Q2	$ 3,867,448.18	$ 91,519.65	1.47%	$ 4,737.62	$ 3,963,705.45		
Jul-12	2012	Q3	$ 3,958,967.83	$ -	0.00%	$ -	$ 3,958,967.83		
Aug-12	2012	Q3	$ 3,958,967.83	$ -	0.00%	$ -	$ 3,958,967.83		
Sep-12	2012	Q3	$ 3,958,967.83	$ -	0.00%	$ -	$ 3,958,967.83		
Oct-12	2012	Q4	$ 3,958,967.83	$ -	0.00%	$ -	$ 3,958,967.83		
Nov-12	2012	Q4	$ 3,958,967.83	$ -	0.00%	$ -	$ 3,958,967.83		
Dec-12	2012	Q4	$ 3,958,967.83	$ -	0.00%	$ -	$ 3,958,967.83	$ 578,925.92	
Total Funding Adder Revenues Collected				**$ 3,958,967.83**		**$ 107,827.03**	**$ 4,066,794.86**	**$ 4,066,794.86**	

Thunder Bay Hydro Electricity Distribution Inc.

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

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

Prescribed Interest Rates	Approved Deferral and Variance Accounts	CWIP	Date	Year	Quarter	Opening Balance (Principal)	OM&A Expenses	Amortization / Depreciation Expense	Closing Balance (Principal)	(Annual) Interest Rate	Interest (on opening balance)	Cumulative Interest
2006 Q1	0.00%	0.00%	Jan-06	2006	Q1	$ -			-	0.00%	-	-
2006 Q2	4.14%	4.68%	Feb-06	2006	Q1	-			-	0.00%	-	-
2006 Q3	4.59%	5.05%	Mar-06	2006	Q1	-			-	0.00%	-	-
2006 Q4	4.59%	4.72%	Apr-06	2006	Q2	-			-	4.14%	-	-
2007 Q1	4.59%	4.72%	May-06	2006	Q2	-			-	4.14%	-	-
2007 Q2	4.59%	4.72%	Jun-06	2006	Q2	-			-	4.14%	-	-
2007 Q3	4.59%	5.18%	Jul-06	2006	Q3	-			-	4.59%	-	-
2007 Q4	5.14%	5.18%	Aug-06	2006	Q3	-			-	4.59%	-	-
2008 Q1	5.14%	5.18%	Sep-06	2006	Q3	-			-	4.59%	-	-
2008 Q2	4.08%	5.18%	Oct-06	2006	Q4	-			-	4.59%	-	-
2008 Q3	3.35%	5.43%	Nov-06	2006	Q4	-			-	4.59%	-	-
2008 Q4	3.35%	5.43%	Dec-06	2006	Q4	-			-	4.59%	-	-
2009 Q1	2.45%	6.61%	Jan-07	2007	Q1	-			-	4.59%	-	-
2009 Q2	1.00%	6.61%	Feb-07	2007	Q1	-			-	4.59%	-	-
2009 Q3	0.55%	5.67%	Mar-07	2007	Q1	-			-	4.59%	-	-
2009 Q4	0.55%	4.66%	Apr-07	2007	Q2	-			-	4.59%	-	-
2010 Q1	0.55%	4.34%	May-07	2007	Q2	-			-	4.59%	-	-
2010 Q2	0.55%	4.34%	Jun-07	2007	Q2	-			-	4.59%	-	-
2010 Q3	0.89%	4.66%	Jul-07	2007	Q3	-			-	4.59%	-	-
2010 Q4	1.20%	4.01%	Aug-07	2007	Q3	-			-	4.59%	-	-
2011 Q1	1.47%	4.29%	Sep-07	2007	Q3	-			-	4.59%	-	-
2011 Q2	1.47%	4.29%	Oct-07	2007	Q4	-			-	5.14%	-	-
2011 Q3	1.47%	4.29%	Nov-07	2007	Q4	-			-	5.14%	-	-
2011 Q4	1.47%	4.29%	Dec-07	2007	Q4	-			-	5.14%	-	-
2012 Q1	1.47%	4.29%	Jan-08	2008	Q1	-			-	5.14%	-	-
2012 Q2	1.47%	4.29%	Feb-08	2008	Q1	-			-	5.14%	-	-
2012 Q3	0.00%	4.29%	Mar-08	2008	Q1	-	$ 17,168.63		17,168.63	5.14%	-	-
2012 Q4	0.00%	4.29%	Apr-08	2008	Q2	17,168.63	$ 42,191.00		59,359.63	4.08%	58.37	58.37
			May-08	2008	Q2	59,359.63			59,359.63	4.08%	201.82	260.20
			Jun-08	2008	Q2	59,359.63			59,359.63	4.08%	201.82	462.02
			Jul-08	2008	Q3	59,359.63			59,359.63	3.35%	165.71	627.73
			Aug-08	2008	Q3	59,359.63			59,359.63	3.35%	165.71	793.44
			Sep-08	2008	Q3	59,359.63			59,359.63	3.35%	165.71	959.16
			Oct-08	2008	Q4	59,359.63			59,359.63	3.35%	165.71	1,124.87
			Nov-08	2008	Q4	59,359.63			59,359.63	3.35%	165.71	1,290.58
			Dec-08	2008	Q4	59,359.63		$ 1,475.18	60,834.81	3.35%	165.71	1,456.29
			Jan-09	2009	Q1	60,834.81	$ -	$ 53.91	60,888.72	2.45%	124.20	1,580.50
			Feb-09	2009	Q1	60,888.72	$ 428.06	$ 53.91	61,370.69	2.45%	124.31	1,704.81
			Mar-09	2009	Q1	61,370.69	$ 425.22	$ 53.91	61,849.82	2.45%	125.30	1,830.11
			Apr-09	2009	Q2	61,849.82	$ 15,740.49	$ 1,154.51	78,744.82	1.00%	51.54	1,881.65
			May-09	2009	Q2	78,744.82	-$ 9,578.87	$ 8,834.54	78,000.49	1.00%	65.62	1,947.27
			Jun-09	2009	Q2	78,000.49	$ 4,044.90	$ 15,060.23	97,105.62	1.00%	65.00	2,012.27
			Jul-09	2009	Q3	97,105.62	$ 1,884.43	$ 21,961.07	120,951.12	0.55%	44.51	2,056.78
			Aug-09	2009	Q3	120,951.12	$ 5,733.75	$ 26,367.08	153,051.95	0.55%	55.44	2,112.22
			Sep-09	2009	Q3	153,051.95	$ 3,615.91	$ 31,305.21	187,973.07	0.55%	70.15	2,182.36
			Oct-09	2009	Q4	187,973.07	$ 15,343.91	$ 37,116.93	240,433.91	0.55%	86.15	2,268.52
			Nov-09	2009	Q4	240,433.91	$ 3,013.50	$ 39,474.79	282,922.20	0.55%	110.20	2,378.72
			Dec-09	2009	Q4	282,922.20	-$ 13,483.29	$ 38,926.85	308,365.76	0.55%	129.67	2,508.39
			Jan-10	2010	Q1	308,365.76	$ 1,837.73	$ 40,898.56	351,102.05	0.55%	141.33	2,649.72
			Feb-10	2010	Q1	351,102.05	$ 9,323.96	$ 41,292.32	401,718.33	0.55%	160.92	2,810.65
			Mar-10	2010	Q1	401,718.33	$ 7,134.41	$ 40,368.80	449,221.54	0.55%	184.12	2,994.77
			Apr-10	2010	Q2	449,221.54	$ 4,420.37	$ 40,956.52	494,598.43	0.55%	205.89	3,200.66
			May-10	2010	Q2	494,598.43	$ 5,846.27	$ 41,531.42	541,976.12	0.55%	226.69	3,427.35
			Jun-10	2010	Q2	541,976.12	$ 16,498.55	$ 41,997.14	600,471.81	0.55%	248.41	3,675.76
			Jul-10	2010	Q3	600,471.81	$ 17,080.99	$ 42,253.16	659,805.96	0.89%	445.35	4,121.11
			Aug-10	2010	Q3	659,805.96	$ 31,807.70	$ 42,369.24	733,982.90	0.89%	489.36	4,610.46
			Sep-10	2010	Q3	733,982.90	$ 21,626.50	$ 42,513.16	798,122.56	0.89%	544.37	5,154.83
			Oct-10	2010	Q4	798,122.56	$ 25,606.82	$ 42,811.28	866,540.66	1.20%	798.12	5,952.96
			Nov-10	2010	Q4	866,540.66	$ 29,346.99	$ 42,947.38	938,835.03	1.20%	866.54	6,819.50
			Dec-10	2010	Q4	938,835.03	$ 22,665.17	$ 42,845.17	1,004,345.37	1.20%	938.84	7,758.33
			Jan-11	2011	Q1	1,004,345.37	$ 12,028.86	$ 42,987.25	1,059,361.48	1.47%	1,230.32	8,988.65
			Feb-11	2011	Q1	1,059,361.48	$ 27,537.02	$ 43,158.98	1,130,057.48	1.47%	1,297.72	10,286.37
			Mar-11	2011	Q1	1,130,057.48	$ 19,614.44	$ 43,244.31	1,192,916.23	1.47%	1,384.32	11,670.69
			Apr-11	2011	Q2	1,192,916.23	$ 34,195.17	$ 43,244.32	1,270,355.72	1.47%	1,461.32	13,132.02
			May-11	2011	Q2	1,270,355.72	$ 33,391.84	$ 43,376.38	1,347,123.94	1.47%	1,556.19	14,688.20
			Jun-11	2011	Q2	1,347,123.94	$ 17,515.96	$ 43,428.28	1,408,068.18	1.47%	1,650.23	16,338.43
			Jul-11	2011	Q3	1,408,068.18	$ 34,314.13	$ 43,458.62	1,485,840.93	1.47%	1,724.88	18,063.31
			Aug-11	2011	Q3	1,485,840.93	$ 34,159.92	$ 43,507.31	1,563,508.16	1.47%	1,820.16	19,883.47
			Sep-11	2011	Q3	1,563,508.16	$ 22,056.20	$ 43,606.69	1,629,171.05	1.47%	1,915.30	21,798.76
			Oct-11	2011	Q4	1,629,171.05	$ 22,671.46	$ 43,619.24	1,695,461.75	1.47%	1,995.73	23,794.50
			Nov-11	2011	Q4	1,695,461.75	$ 29,948.64	$ 43,686.81	1,769,097.20	1.47%	2,076.94	25,871.44
			Dec-11	2011	Q4	1,769,097.20	$ 41,461.26	$ 43,686.82	1,854,245.28	1.47%	2,167.14	28,038.58
			Jan-12	2012	Q1	1,854,245.28			1,854,245.28	1.47%	2,271.45	30,310.03
			Feb-12	2012	Q1	1,854,245.28			1,854,245.28	1.47%	2,271.45	32,581.48
			Mar-12	2012	Q1	1,854,245.28			1,854,245.28	1.47%	2,271.45	34,852.93
			Apr-12	2012	Q2	1,854,245.28			1,854,245.28	1.47%	2,271.45	37,124.39
			May-12	2012	Q2	1,854,245.28			1,854,245.28	1.47%	2,271.45	39,395.84
			Jun-12	2012	Q2	1,854,245.28			1,854,245.28	1.47%	2,271.45	41,667.29
			Jul-12	2012	Q3	1,854,245.28			1,854,245.28	0.00%	-	41,667.29
			Aug-12	2012	Q3	1,854,245.28			1,854,245.28	0.00%	-	41,667.29
			Sep-12	2012	Q3	1,854,245.28			1,854,245.28	0.00%	-	41,667.29
			Oct-12	2012	Q4	1,854,245.28			1,854,245.28	0.00%	-	41,667.29
			Nov-12	2012	Q4	1,854,245.28			1,854,245.28	0.00%	-	41,667.29
			Dec-12	2012	Q4	1,854,245.28			1,854,245.28	0.00%	-	41,667.29
							$ 608,618.00	$ 1,245,627.28	$ 1,854,245.28			

Ontario Energy Board

Smart Meter Model

Thunder Bay Hydro Electricity Distribution Inc.

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

Year	OM&A (from Sheet 5)	Amortization Expense (from Sheet 5)	Cumulative OM&A and Amortization Expense	Average Cumulative OM&A and Amortization Expense	Average Annual Prescribed Interest Rate for Deferral and Variance Accounts (from Sheets 8A and 8B)	Simple Interest on OM&A and Amortization Expenses
2006	$ -	$ -	$ -	$ -	4.37%	$ -
2007	$ -	$ -	$ -	$ -	4.73%	$ -
2008	$ 59,359.70	$ -	$ 59,359.70	$ 29,679.85	3.98%	$ 1,181.26
2009	$ 22,776.03	$ 265,491.54	$ 347,627.27	$ 203,493.48	1.14%	$ 2,314.74
2010	$ 196,571.79	$ 549,918.86	$ 1,094,117.92	$ 720,872.60	0.80%	$ 5,748.96
2011	$ 328,455.95	$ 578,464.12	$ 2,001,037.99	$ 1,547,577.95	1.47%	$ 22,749.40
2012	$ 402,575.83	$ 588,073.58	$ 2,991,687.40	$ 2,496,362.69	1.47%	$ 36,696.53
Cumulative Interest to 2011						$ 31,994.35
Cumulative Interest to 2012						$ 68,690.88

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

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

	2006	2007	2008	2009	2010	2011	2012 and later	Total
Deferred and forecasted Smart Meter Incremental Revenue Requirement (from Sheet 5)	$ -	$ -	$ 59,542.91	$ 462,756.35	$ 1,091,372.22	$ 1,270,483.73	$ 1,354,475.38	$ 4,238,630.59
Interest on Deferred and forecasted OM&A and Amortization Expense (Sheet 8A/8B) (Check **one** of the boxes below	$ -	$ -	$ 1,456.29	$ 1,052.10	$ 5,249.94	$ 20,280.25		$ 28,038.58
X Sheet 8A (Interest calculated on monthly balances)	$ -	$ -	$ 1,456.29	$ 1,052.10	$ 5,249.94	$ 20,280.25		$ 28,038.58
Sheet 8B (Interest calculated on average annual balances)								$ -
SMFA Revenues (from Sheet 8)	$ 83,718.06	$ 158,300.85	$ 160,396.19	$ 695,168.99	$ 1,148,618.30	$ 1,160,622.75	$ 552,142.69	$ 3,958,967.83
SMFA Interest (from Sheet 8)	$ 888.76	$ 7,534.12	$ 12,287.30	$ 5,615.60	$ 13,805.26	$ 40,912.76	$ 26,783.23	$ 107,827.03
Net Deferred Revenue Requirement	-$ 84,606.82	-$ 165,834.97	-$ 111,684.29	-$ 236,976.14	-$ 65,801.40	$ 89,228.47	$ 775,549.46	$ 199,874.31
Number of Metered Customers (average for 2012 test year)							49062	

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

Years for collection or refunding		2
Deferred Incremental Revenue Requirement from 2006 to December 31, 2011 plus Interest on OM&A and Amortization		$ 2,912,193.79
SMFA Revenues collected from 2006 to 2012 test year (inclusive) Plus Simple Interest on SMFA Revenues		$ 4,066,794.86
Net Deferred Revenue Requirement		-$ 1,154,601.07
SMDR	May 1, 2012 to April 30, 2014	-$ 0.98
Check: Forecasted SMDR Revenues		-$ 1,153,938.24

Match

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

Incremental Revenue Requirement for 2012	$ 1,354,475.38
SMIRR	$ 2.30
Check: Forecasted SMIRR Revenues	$ 1,354,111.20

Match

Smart Meter Disposition Rate Rider as at December 31, 2011

Revenue Requirement 2008	$60,999
Revenue Requirement 2009	$463,808
Revenue Requirement 2010	$1,096,622
Revenue Requirement 2011	$1,290,764
Total Revenue Requirement	$2,912,194
Smart Meter Rate Adder	-$3,958,968
Carrying Charges	-$107,827
Smart Meter True-Up	-$1,154,601
Average # of Metered Customers Jan. to Dec. 2011	49,062
Rate rider $/month/metered customer	**-$0.98**

Smart Meter Incremental Revenue Requirement Rate Rider

Revenue Requirement 2012	$ 1,354,475
Total Revenue Requirement	$ 1,354,475
Smart Meter Rate Adder	$ -
Carrying Charges	$ -
Smart Meter True-Up	$1,354,475
Average # of Metered Customers Jan. to Dec. 2011	49,062
Rate rider $/month/metered customer	**$2.30**