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July 30, 2012
Michael Janigan
Counsel for VECC
ONE Nicholas Street, Suite 1204
Ottawa, ON K1N 7B7

## Re: Festival Hydro Inc.

Response to Submission of VECC Interrogatories EB-2012-0260

Dear Mr. Janigan,
Attached are Festival Hydro Inc's Responses to VECC Interrogatories on Festival's Smart Meter Cost Recovery Stand-Alone Application.

The completed responses and supporting excel worksheets were submitted today via the Ontario Energy Board's RESS system.

If you have any questions please contact me at the number noted below or by email at kmccann@festivalhydro.com.

Yours truly,
Festival Hydro Inc.
ORIGINAL SIGNED BY K. MCCANN
K. McCann, Financial \& Regulatory Manager

Tel (519) 271-4703 x. 221

## EB-2012-0260

## ONTARIO ENERGY BOARD

## IN THE MATTER OF

the Ontario Energy Board Act, 1998, S.O. 1998, c. 15 (Schedule B), as amended;

AND IN THE MATTER OF an Application by<br>Festival Hydro Inc. (Festival) for an order or orders<br>approving or fixing just and reasonable<br>distribution rates to be effective November 1, 2012 to reflect the<br>recovery of costs for deployed smart meters.

## General

In preparing Festival's response to VECC question 4b - Festival identified an error in our allocation of meter costs (1.1.1 of tab 2 of the smart meter model). As such Festival has revised our allocated SMDR's and SMIRR's for the residential and GS<50 classes. The information below from our manager's summary has been updated to reflect the impact of the allocation changes on our final rate riders.

The smart meter rate riders for which Festival seeks approval from the Board are as follows:
a) A Smart Meter Disposition Rate Rider ("SMDR") (Residential and Hensall Residential rate classes - (\$0.73) per metered customer per month; G.S. < 50 kW rate class - $\$ 0.81$ per metered customer per month), to be effective November 1, 2012, to recover the deferred revenue requirement through to December 31, 2011. This represents the difference resulting from revenues collected from customers to April 30, 2012 versus the revenue requirement recoverable to December 31, 2011. The SMDR would be in effect from November 1, 2012 to April 30, 2014, which is the next scheduled implementation date for rates based on a Cost of Service Application for Festival.
b) A Smart Meter Incremental Revenue Requirement Rate Rider ("SMIRR") (Residential and Hensall Residential rate classes - $\$ 2.79$ per metered customer per month; G.S. < 50 kW rate class - $\$ 4.72$ per metered customer per month) to recover the annual revenue requirement associated with Smart Meters installed from inception of the Smart Meter Program through to April 30, 2012 and forecasted Smart Meter Operating Expenditures for April 30, 2012 to December 31, 2012.

Festival is requesting the new SMDR and SMIRR rate riders take effect November 1, 2012, in conjunction with the OEB's semi-annual RPP and TOU commodity price changes.

Festival has calculated the overall monthly bill impact for a typical customer as follows:
Table 1 - Bill Impact

| Class | $\underline{k W h}$ | Total Bill Impact <br> $(\$)$ | Total Bill Impact <br> $(\%)$ |
| :--- | :--- | :--- | :--- |
| Residential | 800 | $\$ 2.06$ | $1.8 \%$ |
| Residential <br> Hensall | 800 | $\$ 2.06$ | $1.8 \%$ |
| G.S. $<50 \mathrm{~kW}$ | 2,000 | $\$ 5.53$ | $2.0 \%$ |
| G.S. $<50 \mathrm{~kW}$ | 10,000 | $\$ 5.53$ | $0.4 \%$ |

(Above table does not take into account possible TOU pricing changes effective Nov 1, 2012)
Being the SMDR and SMIRR rate riders are both fixed charges, the higher the customer's consumption, the lower the percentage impact. While Festival does have a number of G.S. < 50 kW customers with usage of approximately 2000 kWh per month, Festival also has G.S. < 50 kW customers with usage of $20,000 \mathrm{kWh}$ per month. A G.S. $<50 \mathrm{~kW}$ customer with usage of approx. $4,100 \mathrm{kWh}$ per month will see a $1.0 \%$ total impact on their bill.

Information Requests of the Vulnerable Energy Consumers Coalition (VECC)

## VECC Question \# 1

## Reference: Application, Page 3

Preamble: Festival seeks approval of a SMIRR to recover the annual revenue requirement associated with smart meters installed from inception of the smart meter program through to April 30, 2012 and forecasted smart meter operating expenditures for April 30, 2012 to October 31, 2012.
a) Please provide the rationale for including smart meter operating expenditures to October 31, 2012 only.

## RESPONSE

a) Festival was under the belief that given a rate increase effective November $1^{\text {st }}$ is being requested, the forecasted figures would include all estimated costs up to October 31, 2012. Through further discussion with Board staff on the SMIRR calculation, Festival notes that a full 12 months of data needs to be included in our 2012 forecast in order to have the SMIRR calculated correctly. Festival has revised the model accordingly to include projections to December 31,2012.

## VECC Question \# 2

a) Please advise if Festival participated with other LDCs in the implementation of its smart meter program. If so, please discuss any operational efficiencies or costs savings as a result of working collaboratively with other LDCs.

## RESPONSE

a) In order to minimize costs and promote efficiencies in the implementation of the smart meter program, Festival collaborated with other LDCs on various aspects of the smart meter project. Below is a list of some of the major areas where operational efficiencies or costs savings were achieved as a result of this collaborative work:

- For the purchase of the smart meters, Festival utilized the Hydro One Networks Inc. ("Hydro One") approved procurement process identified in paragraph 1(1)5 of O. Reg. 427/06. Festival received the same price from Trilliant that was paid by Hydro One. Note that the cost of the smart meters represents the vast majority of the capital spending.
- With a number of LDCs using the same CIS software (Daffron), it meant that the costs of the TOU changes to the CIS software were shared by all participants. In addition, the efforts of the combined user group resources assisted in the delivery of a cost effective, timely solution.
- For the contracting of ODS and Web presentment services, Festival contacted other LDCs to identify potential vendors and to obtain references for the vendors Festival selected.
- With respect to smart meter customer communication, rather than creating from scratch our own customer communication letters and materials, Festival often went to other LDC websites and made use of materials created by others, tailoring it to fit our needs.

In terms of operational efficiencies, when Festival encountered problems related to smart meter deployment, Festival would often contact other LDCs who use Trilliant meters (namely, Hydro One, Hydro One Brampton and Milton Hydro) to obtain
advice on how they handled similar issues. Since these other LDCs were ahead of Festival in terms of deployment, often they had already dealt with many of the problems and saved Festival valuable time rather than Festival researching and finding a solution on our own.

It is difficult to quantify the dollar value of savings as a result of working collaboratively with other LDCs. However, Festival recognizes that through collaborative efforts, LDCs can strive to keep costs low and spend prudently.

## VECC Question \# 3

## Reference: Application, Page 14

Preamble: Festival indicates its TOU pricing is scheduled to commence with the first full month's consumption after April 30, 2012. Customers will start to receive their first TOU bill in June 2012.
a) Please provide an update on the status of the implementation of Festival's TOU billing.

## RESPONSE:

a) Festival Hydro billed its' first group of customers on TOU pricing on June 18th, 2012. Approximately 815 bills were sent out for the consumption period of 05/01/2012 - 06/01/2012. Since June 18th, 2012 each day Festival has been calculating all eligible TOU customers on their new rates a billing cycle at a time. To date we have moved $97 \%$ of eligible customers to TOU billing. Those eligible that remain on non TOU rates (673 customers) do so for technical reasons. We are presently working to resolve and moving over meter by meter as the issues are being resolved.

## VECC Question \# 4

Reference: Application, Page 2, Program Status
a) Please summarize the types of meters installed for each rate class.
b) Please complete the following table to show average costs based on meter type. Please provide a description of "Other Costs".

| Class | Type <br> of <br> Meter | Quantity | Meter <br> Cost | Average <br> Meter <br> Cost | Installation <br> Cost | Average <br> Installation <br> Cost | Other <br> Costs | Average <br> Other <br> Costs | Total <br> Average <br> Cost |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Residential |  |  |  |  |  |  |  |  |  |
| GS $<50 \mathrm{~kW}$ |  |  |  |  |  |  |  |  |  |
| Total |  |  |  |  |  |  |  |  |  |

c) Please provide a schedule that compares the smart meter financial forecasts (capital \& OM\&A) in Festival's previous applications to the current application and explain any variances greater than $5 \%$.

## RESPONSE

a) The table below summarizes the types of meters installed for each rate class.

| Residential Meters | GS<50 Meters |
| :--- | :--- |
| Landis \& Gyr 1S | Landis \& Gyr 1S |
| Landis \& Gyr 2S | Landis \& Gyr 2S |
| Landis \& Gyr 3S | Landis \& Gyr 3S |
| Landis \& Gyr 12S | Landis \& Gyr 12S |
|  | Landis \& Gyr 16S |
|  | Itron 9S46S |
|  | GE 12S |
|  | Itron 16S |
|  | Itron 45S |

b) The table below includes the detail requested.

| Class | Type of Meter | Quantity | Meter Cost | Inc. PST | Average Meter Cost | Installation Cost | Average Installation Cost | Other Costs | Average Other Costs | Total Average Cost |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Residential | Landis \& Gyr 2 S | 16,266.00 | 105.00 | 113.40 | 1,844,564.40 |  |  |  |  |  |
|  | Landis \& Gyr 2 S | 228.00 | 105.00 | N/A | 23,940.00 |  |  |  |  |  |
|  | Landis \& Gyr 3 S | 34.00 | 149.00 | 160.92 | 5,471.28 |  |  |  |  |  |
|  | Landis \& Gyr 3 S | 2.00 | 149.00 | N/A | 298.00 |  |  |  |  |  |
|  | Laydys \& Gyr 1 S | 4.00 | 160.80 | 173.66 | 694.66 |  |  |  |  |  |
|  | Landis \& Gyr 12S | 1,235.00 | 174.00 | 187.92 | 232,081.20 |  |  |  |  |  |
|  | SCRAP |  |  |  | 6,946.80 |  |  |  |  |  |
|  | TOTAL | 17,769.00 |  |  | 2,100,102.74 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  | Per REVISED MODELS | 17,651.00 | 2,100,103.00 |  | 118.98 | 301,029.00 | 17.05 | 566,899.00 | 32.12 | 168.15 |
|  |  |  |  |  |  |  |  |  |  |  |
| GS<50 | Landis \& Gyr 2 S | 734.00 | 105.00 | 113.40 | 83,235.60 |  |  |  |  |  |
|  | Landis \& Gyr 1 S | 4.00 | 160.80 | 173.66 | 694.66 |  |  |  |  |  |
|  | Landis \& Gyr 3 S | 126.00 | 149.00 | 160.92 | 20,275.92 |  |  |  |  |  |
|  | Landis \& Gyr 3 S | 10.00 | 149.00 | N/A | 1,490.00 |  |  |  |  |  |
|  | Landis \& Gyr 12S | 213.00 | 174.00 | 187.92 | 40,026.96 |  |  |  |  |  |
|  | Landis \& Gyr 16S | 604.00 | 318.00 | N/A | 192,072.00 |  |  |  |  |  |
|  | Itron 45S | 124.00 | 378.00 | N/A | 46,872.00 |  |  |  |  |  |
|  | Itron 16S | 37.00 | 781.00 | N/A | 28,897.00 |  |  |  |  |  |
|  | Itron 9S46S | 128.00 | 806.00 | N/A | 103,168.00 |  |  |  |  |  |
|  | GE 12 S | 44.00 | 904.80 | N/A | 39,811.20 |  |  |  |  |  |
|  |  | 2,024.00 |  |  | 556,543.34 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  | Per REVISED MODELS | 1,999.00 | 556,543.00 |  | 278.41 | 91,505.00 | 45.78 | 82,149.00 | 41.10 | 365.28 |

In preparing the table above, FH reviewed purchase documents in order to report the specific type of meter and price per meter in the table. In doing this exercise, it was determined that the system query used previously to allocate the meter cost to class was incorrect. As such, Festival has revised the cost allocation models based on the information obtained for the table above. In summary, it was found that the residential meter cost had been understated and the GS<50 meter cost had been overstated. It was also noted that the cost of one collector was erroneously included in the meter bucket, as well as a portion of the deposit paid to our meter vendor which was actually used and applied against the purchase of serviewcom and its software maintenance package (which was also from the meter vendor). All of these issues were addressed and corrected in the revised allocation models included with the IR's.

Note that the meter quantity in the detailed section of the table above is greater than the residential and GS<50 meter numbers used in the model. This is a result of meters being ordered in bulk for the project and a small quantity of meters being required on hand to allow for meters to cycle through the returned meter warranty process with Trilliant.

Note as well that installation costs were not tracked by meter type - but rather by meter class through our work order system - and as such the installation cost per meter can be calculated by dividing the number of meters in the model by the labour cost included in the model. All other costs included in the model have been totaled and included in the other cost column in order to calculate the average "other" meter cost.
c) The table below compares the projections included in Festival's prior filings versus the actual costs included in this application.

| Application | Capital | \% from Actual | OM\&A | \% From Actual |
| :--- | ---: | ---: | ---: | ---: |
| 2010 COS | $2,500,000$ | $-32.40 \%$ | 150,000 | $-72.48 \%$ |
| 2011 IRM | $3,700,000$ | $0.05 \%$ | 248,000 | $-54.50 \%$ |
| 2012 IRM | $3,564,835$ | $-3.61 \%$ | 754,153 | $38.37 \%$ |
| 2012 SM Application | $\mathbf{3 , 6 9 8 , 2 2 8}$ |  | $\mathbf{5 4 5 , 0 2 8}$ |  |

The 2010 capital projection was more than $5 \%$ from the actual project costs mainly due to the fact that at the time of filing the COS application (August 2009), Festival had not prepared a detailed smart meter budget beyond looking at a high level at the costs of the meters themselves. By our 2011 IRM, a detailed budget had been put in place taking into account all areas of the project.

The OM\&A costs included in our application differ by more than $5 \%$ from all of our previous applications. In 2010 and 2011 we had under budgeted these costs as compared to actual costs mainly due to a lack of knowledge as to the cost for items such as web presentment, ODS, and CIS upgrades would be. In 2012 we had over
budgeted total costs as compared to actual for a few reasons. The 2012 IRM included depreciation expense in the OM\&A balance. This offset by an underestimate for web presentment, ODS, and CIS upgrades resulted in the budget figure being off.

## VECC Question \# 5

Reference: Smart Meter Recovery Model R1, Sheet 2, 20120529
Preamble: Under section 1.6.3 Capital Costs Beyond Minimum Functionality, Festival shows costs of \$9,660 in 2012, \$109,063 in 2011 and \$26, 424 in 2012 for a total of \$145,147.
a) Please provide a breakdown of these costs for each year.
b) Please advise if the costs in 2011 and 2012 are one-time or recurring.

## RESPONSE

a) The table below details the expenses included in 1.6.3 in the model.

|  | $\mathbf{2 0 1 0}$ | $\mathbf{2 0 1 1}$ | $\mathbf{2 0 1 2}$ |
| :--- | :--- | :--- | :---: |
| Incremental IT resource for TOU impImentation \& CIS Upgrades | $\mathbf{4 , 5 7 6}$ | $\mathbf{2 7 , 9 8 4}$ | $\mathbf{2 6 , 4 2 4}$ |
| AS2 HW/SW \& Install | 5,084 |  |  |
| Daffron upgrades for Smart meter implementation |  | 73,649 |  |
| Test script purchase for unit testing |  | 5,000 |  |
| IT subcontract for TOU implementation and CIS upgrades |  | 2,430 |  |
|  |  |  |  |
|  | 9,660 | 109,063 | 26,424 |

b) The 2012 costs are one-time costs.

## VECC Question \# 6

Reference: Application, Page 20
Preamble: Festival indicates that the most significant incremental cost savings with the implementation of mart meters is the reduction in manual meter reading costs.
a) Please identify any additional operational efficiencies and cost savings that Festival has experienced or anticipates will result from smart meter implementation. Please quantify any savings.
b) Please discuss how any savings are reflected in this application.

## RESPONSE

a) Festival has not experienced and does not anticipate any additional operational efficiencies and cost savings as a result of smart meter implementation. Festival's operations were very lean prior to the implementation of smart meters and as such, operational processes after the rollout of smart meters will continue to require the same compliment of staff in the metering department, billing department, customer service department and an increased compliment of one FTE in the IT department. All other administrative expenses are projected to remain the same after the rollout of smart meters.
b) No additional savings were reflected in this application beyond the savings in meter reading costs.

## VECC Question \# 7

Reference: Application, Page 18
Preamble: The evidence indicates Festival has been collecting a fixed monthly smart meter rate adder from all metered customers since May 1, 2006.
a) Please provide a breakdown by customer class for the Smart Meter Rate Adder Revenue and associated interest collected from other metered customers.

## RESPONSE:

a) The table below provides the breakdown requested.

| Rate Class | Smart Meter Rate <br> Adder Collected | Interest calculated at <br> OEB Prescribed <br> Rates |  <br> interest projected <br> to October 31, <br> 2012 |
| :--- | ---: | ---: | ---: |
| Residential | 891,327 | 31,822 | 923,149 |
| Residential - Hensall | 21,355 | 762 | 22,117 |
| GS < 50 kW | 103,807 | 3,706 | 107,513 |
| GS >50 kW to 4,999 kW | 11,398 | 407 | 11,805 |
| Large Use | 73 | 3 | 76 |
| USL | - | - | - |
| Sentinel Lights | - | - | - |
| Street Lighting | - | - | - |
| Total | $1,027,960$ | 36,700 | $1,064,660$ |

## Appendices - Smart Meter Models

A - Smart Meter Model
B - Smart Meter Residential Model
C - Smart Meter GS<50 Model

## Appendix A



## 我

Ontario Energy Board
Smart Meter Model

Choose Your Utility:
Festival Hydro Inc.
Festival Hydro Inc. - Hensall

## Application Contact Information

Name: Kelly M

Title:
Financial \& Regulatory Manager
Legend

Phone Number:
$519-271-4703 \times 221$
DROP-DOWN MENU

Email Address:
kmccann@festivalhydro.com

We are applying for rates $\square$
November 1, 2012
CALCuLATION Field

Last COS Re-based Year 2010

## Copyright

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

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


| 1.3 ADVANCED METERING CONTROL COMPUTER (AMCC) | Asset Type | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Forecast |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1.3.1 Computer Hardware | Computer Hardware |  |  |  |  | 8,844 | $\square$ |  | \$ | 8,844 |
| 1.3.2 Computer Sotware | Computer Software |  |  |  | $\square$ | 14,250 | - |  | \$ | 14,250 |
| 1.3.3 Computer Software Licences \& Installation (includes hardware and software) (may inlude AS/400 disk space, backup and recovery computer, UPS, etc.) | Computer Software | - | $\square$ | - | - | 79,324 | $\square$ | $\square$ | \$ | 79,324 |
| Total Advanced Metering Control Computer (AMCC) |  | \$ | $\underline{ }$ | S | \$ | \$ $\quad 102,417$ | \$ | S | $\stackrel{ }{\text { s }}$ | $\underline{102,417}$ |
|  | Asset Type |  |  |  |  |  |  |  |  |  |
| 1.4 WIDE AREA NETWORK (WAN) |  | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Forecast |  |  |
| 1.4.1 Activiation Fees |  |  |  |  | $\square$ | $\square$ | $\square$ | $\square$ | \$ | - |
| Total Wide Area Network (WAN) |  |  |  |  |  |  |  |  | $\stackrel{ }{\text { s }}$ | - |
|  | Asset Type |  |  |  |  |  |  |  |  |  |
| 1.5 Other Ami capital costs related to minimum functionality |  | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Forecast |  |  |
| 1.5.1 Customer Equipment (including repair of damaged equipment) |  |  |  |  |  |  |  |  | \$ | - |
| 1.5.2 AMI Interface to CIS | Computer Software |  |  |  |  | 12,812 | 5,997 |  | \$ | 18,809 |
| 1.5.3 Professional Fees | Smart Meter |  |  |  | 7,536 | $\square$ | $\square$ |  | \$ | 7,536 |
| 1.5.4 Integration | Computer Software |  |  |  |  | $\square$ | 24,026 | $\square$ | \$ | 24,026 |
| 1.5.5 Program Management | Other Equipment |  |  |  |  | 31,987 | 19,265 |  | \$ | 51,252 |
| 1.5.6 Other AMI Capital | Other Equipment |  |  |  |  |  | $\square$ | 939 | \$ | 939 |
| Total Other AMI Capital Costs Related to Minimum Functionality |  | $\stackrel{ }{\text { S }}$ | $\stackrel{ }{5}$ | $\stackrel{ }{\text { s }}$ | \$ 7,536 | \$ ${ }^{\text {\$ }}$ 44,799 | \$ ${ }^{\text {\$ }}$ | \$ 939 | S | 102,562 |
| Total Capital Costs Related to Minimum Functionality |  | $\stackrel{ }{\text { ¢ }}$ | $\stackrel{ }{\text { s }}$ | $\stackrel{ }{\text { s }}$ | \$ 7,536 | \% 3 S,425,538 | \$ 118,326 | \$ 1,680 | $\stackrel{ }{\text { s }}$ | 3,553,081 |
|  | Asset Type |  |  |  |  |  |  |  |  |  |
| 1.6 CAPITAL COSTS BEYOND MINIMUM FUNCTIONALITY <br> (Please provide a descriptive title and identify nature of beyond minimum functionality costs) |  | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Forecast |  |  |
| 1.6.1 Costs related to technical capabilities in the smart meters or related communications infrastructure that exceed those specified in O.Reg 425/06 | Computer Software |  |  |  |  |  |  |  | \$ |  |
| 1.6.2 Costs for deployment of smart meters to customers other than residential and small general service | Applications Sotware |  |  |  |  |  |  |  | \$ | - |
| 1.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDM/R, etc. | Other Equipment |  |  |  |  | 9,660 | 109,063 | 26,424 | \$ | 145,147 |
| Total Capital Costs Beyond Minimum Functionality |  | \$ | $\stackrel{5}{5}$ | S | S | \$ ${ }^{\text {\$ }}$ | \$ 109,063 | \$ 26,424 | S | 145,147 |
| Total Smart Meter Capital Costs |  | \$ | \$ | 5 | \$ 7 7,536 | \$ 3 3,435,198 | \$ 227,390 | \$ 28,104 | S | $3,698,228$ |

## 2 OM\&A Expenses

2.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)
2.1.1 Maintenance (may include meter reverification costs, etc.)
2.1.2 Other (please specifiy) Meter r troubleshooting

Total Incremental AMCD OM\&A Costs
2.2 ADVANCED METERING REGIONAL COLLECTOR (AMRC) (includes LAN)
2.2.1 Maintenance
2.2.2 Other (please specifiy)

Total Incremental AMRC OM\&A Costs
2.3 ADVANCED METERING CONTROL COMPUTER (AMCC)
2.3.1 Hardware Maintenance (may include severer support, etc.)
2.3.2 Software Maintenance (may include maintenancos support, et.).
2.3.2 Other (please specifiy) AMCC IT position

Total Incremental AMCC OM\&A Costs

### 2.4 WIDE AREA NETWORK (WAN)

2.4.1 WAN Maintenance
2.4.2 Other (please specifiy) Communication services

## tal Incremental AMRC OM\&A Cos

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 AMI OM\&A Costs Related to Minimum Functionality

## TOTAL OM\&A COSTS RELATED TO MINIMUM FUNCTIONALITY

2.6 OM\&A COSTS RELATED TO BEYOND MINIMUM FUNCTIONALIT
${ }^{\text {Pleasese provide a a descripitive title and identity nature of beyond minimum tunctionality costs) }}$
.6.1 Costs related to technical capabailities in the smart that exceed those specified in 0 Reg 425/06
2.6.2 Costs for deployment of smart meters to customers other than residentia nd small general service
2.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDM/R, etc.

Total OM\&A Costs Beyond Minimum Functionality
Total Smart Meter OM\&A Costs


| 3.1 | Capital |
| :--- | :--- |
| 3.1.1 | Smart Meter |
| 3.1 .2 | Computer Hardware |
| 3.1 .3 | Computer Software |
| 3.1 .4 | Tools \& Equipment |
| 3.1 .5 | Other Equipment |
| 3.1 .6 | Applications Sotware |
| 3.1 .7 | Total Capital Costs |
| 3.2 | OM\&A Costs |
| 3.2 .1 | Total OM\&A Costs |


| $\$$ | - | $\$$ | - | $\$$ | - | $\$$ | 7,536 | $\$$ | $3,242,690$ | $\$$ | 69,039 | $\$$ | 741 | $\$$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\$ 3,320,006$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\$$ | - | $\$$ | - | $\$$ | - | $\$$ | - | $\$$ | 29,045 | $\$$ | - | $\$$ | - | $\$$ |



## 敂 <br> Ontario Energy Board

## Festival Hydro Inc.

## Cost of Capital

Capital Structure
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

## 2006

ng Capital Allowance
Working Capital Allowance Rate
(\% of the sum of Cost of Power + controllable expenses)
Taxes/PILs
Aggregate Corporate Income Tax Rate
Capital Tax (until July 1st, 2010)
Depreciation Rates
(expressed as expected useful life in years)
Smart Meters - years
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

| 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | later |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 0.0\% | 0.0\% | 4.0\% | 4.0\% | 4.0\% |
| 50.0\% | 50.0\% | 53.3\% | 56.7\% | 56.0\% | 56.0\% | 56.0\% |
| 50.0\% | 50.0\% | 46.7\% | 43.3\% | 40.0\% | 40.0\% | 40.0\% |
| 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% |
|  |  | 0.00\% | 0.00\% | 2.07\% | 2.07\% | 2.07\% |
| 7.25\% | 7.25\% | 7.25\% | 7.25\% | 5.68\% | 5.68\% | 5.68\% |
| 9.0\% | 9.00\% | 9.00\% | 9.00\% | 9.85\% | 9.85\% | 9.85\% |
|  | 8.13\% | 8.07\% | 8.01\% | 7.20\% | 7.20\% | 7.20\% |
| 15.0\% | 15.0\% | 15.0\% | 15.0\% | 15.0\% | 15.0\% | 15.0\% |
| 36.12\% | 36.12\% | 33.50\% | 33.00\% | 29.51\% | 28.25\% | 24.58\% |
| 0.30\% | 0.225\% | 0.225\% | 0.225\% | 0.075\% | 0.00\% | 0.00\% |

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.


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 (ff 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 (ff applicable) Closing Balance

## Net Book Value

Opening Balance
Closing Balance
Average Net Book Value



## For PILs Calculation




## PILs Calculation




This worksheet calculates the funding adder revenues
Account 1555-Sub-account Funding Adder Revenues

| Interest RatesApproved Deferral <br> and Variance <br> 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 | $1.47 \%$ | $4.29 \%$ |
| 2012 Q4 |  | $4.29 \%$ |
|  |  |  |
|  |  |  |



Opening Balance
Funding Adder (Principal) $\$$
$\$$
$\$$

 Rate Interest $0.00 \%$ \$ $\begin{array}{ll}0.00 \% & \$ \\ 0.00 \% & \$\end{array}$
$\square$


Account 1555 - Sub-account Funding Adder Revenues

| Interest Rates | Approved Deferral and Variance Accounts | CWIP | Date | Year | Quarter |  | ning Balance (Principal) |  | g Adder nues | Interest Rate |  | Interest |  | sing Balance |  | ual amounts |  | ed <br> ding <br> ariff) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Jan-12 | 2012 | Q1 | \$ | 887,267.34 | \$ | 30,211.57 | 1.47\% | \$ | 1,086.90 | \$ | 918,565.81 |  |  | \$ | 1.52 |
|  |  |  | Feb-12 | 2012 | Q1 | \$ | 917,478.91 | \$ | 30,180.94 | 1.47\% | \$ | 1,123.91 | \$ | 948,783.76 |  |  | \$ | 1.52 |
|  |  |  | Mar-12 | 2012 | Q1 | \$ | 947,659.85 | \$ | 30,194.74 | 1.47\% | \$ | 1,160.88 | \$ | 979,015.47 |  |  | \$ | 1.52 |
|  |  |  | Apr-12 | 2012 | Q2 | \$ | 977,854.59 | \$ | 50,105.56 | 1.47\% | \$ | 1,197.87 | \$ | 1,029,158.02 |  |  | \$ | 1.52 |
|  |  |  | May-12 | 2012 | Q2 | \$ | 1,027,960.15 | \$ | - | 1.47\% | \$ | 1,259.25 | \$ | 1,029,219.40 |  |  | \$ | - |
|  |  |  | Jun-12 | 2012 | Q2 | \$ | 1,027,960.15 | \$ | - | 1.47\% | \$ | 1,259.25 | \$ | 1,029,219.40 |  |  | \$ | - |
|  |  |  | Jul-12 | 2012 | Q3 | \$ | 1,027,960.15 | \$ | - | 1.47\% | \$ | 1,259.25 | \$ | 1,029,219.40 |  |  | \$ | - |
|  |  |  | Aug-12 | 2012 | Q3 | \$ | 1,027,960.15 | \$ | - | 1.47\% | \$ | 1,259.25 | \$ | 1,029,219.40 |  |  | \$ | - |
|  |  |  | Sep-12 | 2012 | Q3 | \$ | 1,027,960.15 | \$ | - | 1.47\% | \$ | 1,259.25 | \$ | 1,029,219.40 |  |  | \$ | - |
|  |  |  | Oct-12 | 2012 | Q4 | \$ | 1,027,960.15 | \$ | - | 1.47\% | \$ | 1,259.25 | \$ | 1,029,219.40 |  |  | \$ | - |
|  |  |  | Nov-12 | 2012 | Q4 | \$ | 1,027,960.15 |  |  | 0.00\% | \$ | - | \$ | 1,027,960.15 |  |  | \$ | - |
|  |  |  | Dec-12 | 2012 | Q4 | \$ | 1,027,960.15 |  |  | 0.00\% | \$ | - | \$ | 1,027,960.15 | \$ | 152,817.87 | \$ | - |



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

| 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 | 01 | - |  |  | - | 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 | 04 | - |  |  | - | 4.59\% | - | - |
| 2009 Q1 | 2.45\% | 6.61\% | Jan-07 | 2007 | 01 | - |  |  | - | 4.59\% | - | - |
| 2009 Q2 | 1.00\% | 6.61\% | Feb-07 | 2007 | Q1 | - |  |  | - | 4.59\% | - | - |
| 2009 Q3 | 0.55\% | 5.67\% | Mar-07 | 2007 | 01 | - |  |  | - | 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 | 04 | - |  |  | - | 5.14\% | - | - |
| 2011 Q3 | 1.47\% | 4.29\% | Nov-07 | 2007 | 04 | - |  |  | . | 5.14\% | - | - |
| 2011 Q4 | 1.47\% | 4.29\% | Dec-07 | 2007 | 04 | - |  |  | - | 5.14\% | - | - |
| 2012 Q1 | 1.47\% | 4.29\% | Jan-08 | 2008 | Q1 | - |  |  | - | 5.14\% | - | - |
| 2012 Q2 | 1.47\% | 4.29\% | Feb-08 | 2008 | Q1 | - |  |  | - | 5.14\% | - | - |
| 2012 Q3 | 1.47\% | 4.29\% | Mar-08 | 2008 | Q1 | - |  |  | - | 5.14\% | - | - |
| $2012 \text { Q4 }$ | 0.00\% | 4.29\% | Apr-08 | 2008 | Q2 | - |  |  | - | 4.08\% | - | - |
|  |  |  | May-08 | 2008 | Q2 | - |  |  | - | 4.08\% | - | - |
|  |  |  | Jun-08 | 2008 | Q2 | - |  |  | - | 4.08\% | - | - |
|  |  |  | Jul-08 | 2008 | Q3 | - |  |  | - | 3.35\% | - | - |
|  |  |  | Aug-08 | 2008 | Q3 | - |  |  | - | 3.35\% | - | - |
|  |  |  | Sep-08 | 2008 | Q3 | - |  |  | - | 3.35\% | - | - |
|  |  |  | Oct-08 | 2008 | Q4 | - |  |  | - | 3.35\% | - | - |
|  |  |  | Nov-08 | 2008 | 04 | - |  |  | - | 3.35\% | - | - |
|  |  |  | Dec-08 | 2008 | 04 | - |  |  | - | 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 | 04 | - |  |  | - | 0.55\% | - | - |
|  |  |  | Dec-09 | 2009 | 04 | - |  |  | - | 0.55\% | - | - |
|  |  |  | Jan-10 | 2010 | Q1 | - |  | \$ 9,665.00 | 9,665.00 | 0.55\% | - | - |
|  |  |  | Feb-10 | 2010 | 01 | 9,665.00 |  | \$ 9,665.00 | 19,330.00 | 0.55\% | 4.43 | 4.43 |
|  |  |  | Mar-10 | 2010 | 01 | 19,330.00 | \$ 881.41 | \$ 9,665.00 | 29,876.41 | 0.55\% | 8.86 | 13.29 |
|  |  |  | Apr-10 | 2010 | Q2 | 29,876.41 | -\$ 128.11 | \$ 9,665.00 | 39,413.30 | 0.55\% | 13.69 | 26.98 |
|  |  |  | May-10 | 2010 | Q2 | 39,413.30 | \$ 3,650.73 | \$ 9,665.00 | 52,729.03 | 0.55\% | 18.06 | 45.05 |
|  |  |  | Jun-10 | 2010 | Q2 | 52,729.03 | \$ 2,782.61 | \$ 9,665.00 | 65,176.64 | 0.55\% | 24.17 | 69.21 |
|  |  |  | Jul-10 | 2010 | Q3 | 65,176.64 | \$ 2,607.80 | \$ 9,665.00 | 77,449.44 | 0.89\% | 48.34 | 117.55 |
|  |  |  | Aug-10 | 2010 | Q3 | 77,449.44 | \$ 2,715.01 | \$ 9,665.00 | 89,829.45 | 0.89\% | 57.44 | 175.00 |
|  |  |  | Sep-10 | 2010 | Qз | 89,829.45 | \$ 2,757.58 | \$ 9,665.00 | 102,252.03 | 0.89\% | 66.62 | 241.62 |
|  |  |  | Oct-10 | 2010 | Q 4 | 102,252.03 | \$ 5,072.96 | \$ 9,665.00 | 116,989.99 | 1.20\% | 102.25 | 343.87 |
|  |  |  | Nov-10 | 2010 | 04 | 116,989.99 | \$ 3,655.48 | \$ 9,665.00 | 130,310.47 | 1.20\% | 116.99 | 460.86 |
|  |  |  | Dec-10 | 2010 | 04 | 130,310.47 | \$ 91,498.21 | \$ 9,665.00 | 231,473.68 | 1.20\% | 130.31 | 591.17 |
|  |  |  | Jan-11 | 2011 | Q1 | 231,473.68 | -\$ 5,641.47 | \$ 20,028.00 | 245,860.21 | 1.47\% | 283.56 | 874.73 |
|  |  |  | Feb-11 | 2011 | Q1 | 245,860.21 | \$ 10,499.11 | \$ 20,028.00 | 276,387.32 | 1.47\% | 301.18 | 1,175.91 |
|  |  |  | Mar-11 | 2011 | Q1 | 276,387.32 | \$ 26,791.59 | \$ 20,028.00 | 323,206.91 | 1.47\% | 338.57 | 1,514.48 |
|  |  |  | Apr-11 | 2011 | 02 | 323,206.91 | -\$ 789.65 | \$ 20,028.00 | 342,445.26 | 1.47\% | 395.93 | 1,910.41 |
|  |  |  | May-11 | 2011 | Q2 | 342,445.26 | \$ 264.95 | \$ 20,028.00 | 362,738.21 | 1.47\% | 419.50 | 2,329.90 |
|  |  |  | Jun-11 | 2011 | Q2 | 362,738.21 | \$ 458.04 | \$ 20,028.00 | 383,224.25 | 1.47\% | 444.35 | 2,774.26 |
|  |  |  | Jul-11 | 2011 | Q3 | 383,224.25 | \$ 10,757.11 | \$ 20,028.00 | 414,009.36 | 1.47\% | 469.45 | 3,243.71 |
|  |  |  | Aug-11 | 2011 | Q3 | 414,009.36 | \$ 35,084.10 | \$ 20,028.00 | 469,121.46 | 1.47\% | 507.16 | 3,750.87 |
|  |  |  | Sep-11 | 2011 | Q3 | 469,121.46 | \$ 18,007.97 | \$ 20,028.00 | 507,157.43 | 1.47\% | 574.67 | 4,325.54 |
|  |  |  | Oct-11 | 2011 | 04 | 507,157.43 | \$ 18,517.76 | \$ 20,028.00 | 545,703.19 | 1.47\% | 621.27 | 4,946.81 |
|  |  |  | Nov-11 | 2011 | 04 | 545,703.19 | \$ 5,861.42 | \$ 20,028.00 | 571,592.61 | 1.47\% | 668.49 | 5,615.30 |
|  |  |  | Dec-11 | 2011 | 04 | 571,592.61 | \$ 69,190.06 | \$ 20,033.00 | 660,815.67 | 1.47\% | 700.20 | 6,315.50 |
|  |  |  | Jan-12 | 2012 | Q1 | 660,815.67 | \$ 10,101.00 | \$ 21,136.00 | 692,052.67 | 1.47\% | 809.50 | 7,125.00 |
|  |  |  | Feb-12 | 2012 | 01 | 692,052.67 | \$ 20,440.01 | \$ 21,136.00 | 733,628.68 | 1.47\% | 847.76 | 7,972.76 |
|  |  |  | Mar-12 | 2012 | Q1 | 733,628.68 | \$ 9,397.00 | \$ 21,136.00 | 764,161.68 | 1.47\% | 898.70 | 8,871.46 |
|  |  |  | Apr-12 | 2012 | Q2 | 764,161.68 | \$ 22,752.00 | \$ 21,136.00 | 808,049.68 | 1.47\% | 936.10 | 9,807.56 |
|  |  |  | May-12 | 2012 | Q2 | 808,049.68 | \$ 20,580.45 | \$ 21,136.00 | 849,766.13 | 1.47\% | 989.86 | 10,797.42 |
|  |  |  | Jun-12 | 2012 | Q2 | 849,766.13 | \$ 31,980.45 | \$ 21,136.00 | 902,882.58 | 1.47\% | 1,040.96 | 11,838.38 |
|  |  |  | Jul-12 | 2012 | Q3 | 902,882.58 | \$ 20,880.45 | \$ 21,136.00 | 944,899.03 | 1.47\% | 1,106.03 | 12,944.41 |
|  |  |  | Aug-12 | 2012 | Q3 | 944,899.03 | \$ 20,880.45 | \$ 21,136.00 | 986,915.48 | 1.47\% | 1,157.50 | 14,101.91 |
|  |  |  | Sep-12 | 2012 | Q3 | 986,915.48 | \$ 20,880.45 | \$ 21,136.00 | 1,028,931.93 | 1.47\% | 1,208.97 | 15,310.88 |
|  |  |  | Oct-12 | 2012 | Q4 | 1,028,931.93 | \$ 20,880.45 | \$ 21,136.00 | 1,070,948.38 | 1.47\% | 1,260.44 | 16,571.33 |


| Nov-12 | 2012 | Q4 | $1,070,948.38$ | $\$$ | $20,880.45$ | $\$$ | $21,136.00$ | $1,112,964.83$ | $0.00 \%$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Dec-12 |  | 04 | $1,112,964.83$ | $\$$ | $20,880.45$ | $\$$ | 21,13600 | $1,154,981.28$ | $0.00 \%$ |

$\begin{array}{lllllllllll}\text { Dec-12 } & 2012 & \text { Q4 } & 1,112,964.83 & \$ & 20,880.45 & \$ & 21,136.00 & 1,154,981.28 & 0.00 \%\end{array}$ $16,571.33$
$16,571.33$
\$ 545,028.28 \$ 609,953.00 \$ 1,154,981.28


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Smart Meter Model

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



## Appendix B



## 我

Ontario Energy Board
Smart Meter Model

Choose Your Utility:
Festival Hydro Inc.
Festival Hydro Inc. - Hensall

## Application Contact Information

Name: Kelly M

Title:
Financial \& Regulatory Manager
Legend

Phone Number:
$519-271-4703 \times 221$
DROP-DOWN MENU

Email Address:
kmccann@festivalhydro.com

We are applying for rates $\square$
November 1, 2012
CALCuLATION Field

Last COS Re-based Year 2010

## Copyright

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

While this model has been provided in Excel format and is required to be filed with the applications, the onus remains on the applicant to ensure the accuracy of the data and the results. The use of any models and spreadsheets does not automatically imply Board approval. The onus is on the distributor to prepare, document and support its application. Board-issued Excel models and spreadsheets are offered to assist parties in providing the necessary information so as to facilitate an expeditious review of an application. The onus remains on the applicant to ensure the accuracy of the data and the results.
Ontario Energy Board
Smart Meter Model
Festival Hydro Inc.
Distributors must enter all incremental costs related to their smart meter program and all revenues recovered to date in theapplicable tabs except for
those costs (and associcited revenues) for which the Board has approved on a final basis, i.e. capital costs have been includel in rate base and OM\& A
costs in revenue requirement 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 $O M \& A$ for 2012 for all smart meters in service.

## Smart Meter Capital Cost and Operational Expense Data

## Actual/Planned number of Smart Meters installed during the Calendar Yea

## Residential

General Service < 50 kW
Actual/Planned number of Smart Meters installed (Residential and $\mathrm{GS}<50 \mathrm{~kW}$ only)
Percentage of Residential and GS < 50 kW Smart Meter Installations Completed
ActualPlanned number of $\mathrm{GS}>50 \mathrm{~kW}$ meters installed
Other (please identify)
Total Number of Smart Meters installed or planned to be installed

## Capital Costs

1.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)
1.1.1 Smart Meters (may include new meters and modules, etc.)
1.1.2 Installation Costs (may include socket kits, labour, vehicle, benefits, elt.)
1.1.3a Workforce Automation Hardware (may include fieldwork handhelels, barcode hardware, etc.)
1.1.3b Workforce Automation Software (may include fieldwork handhellds, barcode 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 licence, eto,
1.2.3 Installation (may include meter seals and rings, collector computer hardiware, etce)
Total Advanced Metering Regional Collector (AMRC) (Includes LAN)
$2006 \quad 2007$
${ }^{2007}$


| 1.3 ADVANCED METERING CONTROL COMPUTER (AMCC) | Asset Type | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Forecast |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1.3.1 Computer Hardware | Computer Hardware |  |  |  |  | 7,944 | $\square$ |  | \$ | 7,944 |
| 1.3.2 Computer Software | Computer Software |  |  |  | $\square$ | 12,800 | $\square$ |  | \$ | 12,800 |
| 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 | - | - | - | $\square$ | 71,253 | $\square$ | - | \$ | 71,253 |
| Total Advanced Metering Control Computer (AMCC) |  | \$ | \$ | $\underline{ }$ | \$ | \$ $\quad 91,997$ | \$ | \$ | S | 91,997 |
|  | Asset Type |  |  |  |  |  |  |  |  |  |
| 1.4 WIDE AREA NETWORK (WAN) |  | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Forecast |  |  |
| 1.4.1 Activiation Fees |  |  |  |  |  | $\square$ | $\square$ | $\square$ | \$ |  |
| Total Wide Area Network (WAN) |  |  |  |  | $\stackrel{\text { S }}{ }$ |  | \$ |  | s |  |
|  | Asset Type |  |  |  |  |  |  |  |  |  |
| 1.5 Other ami capital costs related to minimum functionality |  | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Forecast |  |  |
| 1.5.1 Customer Equipment (including repair of damaged equipment) |  |  |  |  |  |  |  |  | \$ |  |
| 1.5.2 AMI Interface to CIS | Computer Software |  |  |  |  | 11,509 | 5,386 | $\square$ | \$ | 16,895 |
| 1.5.3 Professional Fees | Smart Meter |  |  |  | 6,770 | $\square$ | $\square$ |  | \$ | 6,770 |
| 1.5.4 Integration | Computer Software |  |  |  |  | $\square$ | 21,582 |  | \$ | 21,582 |
| 1.5.5 Program Management | Other Equipment |  |  |  |  | 28,734 | 17,304 |  | \$ | 46,038 |
| 1.5.6 Other AMI Capital | Other Equipment |  |  |  |  |  |  | 844 | \$ | 844 |
| Total Other AMI Capital Costs Related to Minimum Functionality |  | \$ | $\stackrel{ }{S}$ | $\stackrel{ }{S}$ | \$ $\quad 1.770$ | \$ ${ }^{\text {\$ }}$ 40,243 | \$ ${ }^{\text {\$ }}$ | \$ ${ }^{\text {\$ }}$ | \$ | 92,128 |
| Total Capital Costs Related to Minimum Functionality |  |  | $\stackrel{ }{\$}$ | $\stackrel{ }{\text { s }}$ | \$ 6.770 | \$ 2,773,484 | \$ 53,973 | \$ 3 S 424 | $\stackrel{ }{\text { ¢ }}$ | 2,837,650 |
|  | Asset Type |  |  |  |  |  |  |  |  |  |
| 1.6 CAPITAL COSTS BEYOND MINIMUM FUNCTIONALITY <br> (Please provide a descriptive title and identify nature of beyond minimum functionality costs) |  | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Forecast |  |  |
| 1.6.1 Costs related to technical capabilities in the smart meters or related communications infrastructure that exceed those specified in 0. Reg 425/06 | Computer Software |  |  |  |  |  |  |  | \$ |  |
| 1.6.2 Costs for deployment of smart meters to customers other than residential and small general service | Applications Sotware |  |  |  |  |  |  |  | \$ | - |
| 1.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDM/R, etc. | Other Equipment |  |  |  |  | 8,677 | 97,972 | 23,732 | \$ | 130,381 |
| Total Capital Costs Beyond Minimum Functionality |  | \$ | S | S | $\stackrel{ }{5}$ | \$ 8,677 | \$ 97,972 | \$ 23,732 | S | 130,381 |
| Total Smart Meter Capital Costs |  | \$ | 5 | S | \$ 6 6,770 | \$ 2,782,161 | \$ 151,944 | \$ 27,155 | \$ | 2,968,031 |

## 2 OM\&A Expenses

2.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)
2.1.1 Maintenance (may include meter reverification costs, etc.)
2.1.2 Other (please specifiy) Meter r troubleshooting

Total Incremental AMCD OM\&A Costs
2.2 ADVANCED METERING REGIONAL COLLECTOR (AMRC) (includes LAN)
2.2.1 Maintenance
2.2.2 Other (please specifiy)

Total Incremental AMRC OM\&A Costs
2.3 ADVANCED METERING CONTROL COMPUTER (AMCC)
2.3.1 Hardware Maintenance (may include severer support, etc.)
2.3.2 Software Maintenance (may include maintenancos support, etc.)
2.3.2 Other (please specifiy) AMCC IT position

Total Incremental AMCC OM\&A Costs

### 2.4 WIDE AREA NETWORK (WAN)

2.4.1 WAN Maintenance
2.4.2 Other (please specifiy) Communication services

Total Incremental AMRC OM\&A Cost
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 AMI OM\&A Costs Related to Minimum Functionality

## TOTAL OM\&A COSTS RELATED TO MINIMUM FUNCTIONALITY

2.6 OM\&A COSTS RELATED TO BEYOND MINIMUM FUNCTIONALIT

Please provide a descripitive title and identity nature of beyond minimum tunctionality costis)
.6.1 Costs related to technical capabailities in the smart $m$ or hat exceed those specified in 0. Reg 425/06
2.6.2 Costs for deployment of smart meters to customers other than residentia nd small general service
2.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDM/R, etc.

Total OM\&A Costs Beyond Minimum Functionality
Total Smart Meter OM\&A Costs


| 3.1 .1 | Smart Meter |
| :--- | :--- |
| 3.1 .2 | Computer Hardware |
| 3.1 .3 | Computer Software |
| 3.1 .4 | Tools \& Equipment |
| 3.1 .5 | Other Equipment |
| 3.1 .6 | Applications Software |
| 3.1 .7 | Total Capital Costs |
| 3.2 | OM\&A Costs |
| 3.2 .1 | Total OM\&A Costs |




## 葡 <br> Ontario Energy Board

## Festival Hydro Inc.

## Cost of Capital

Capital Structure
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

| 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 and later |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 0.0\% | 0.0\% | 4.0\% | 4.0\% | 4.0\% |
| 50.0\% | 50.0\% | 53.3\% | 56.7\% | 56.0\% | 56.0\% | 56.0\% |
| 50.0\% | 50.0\% | 46.7\% | 43.3\% | 40.0\% | 40.0\% | 40.0\% |
| 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% |
|  |  | 0.00\% | 0.00\% | 2.07\% | 2.07\% | 2.07\% |
| 7.25\% | 7.25\% | 7.25\% | 7.25\% | 5.68\% | 5.68\% | 5.68\% |
| 9.0\% | 9.00\% | 9.00\% | 9.00\% | 9.85\% | 9.85\% | 9.85\% |
| 8.13\% | 8.13\% | 8.07\% | 8.01\% | 7.20\% | 7.20\% | 7.20\% |
| 15.0\% | 15.0\% | 15.0\% | 15.0\% | 15.0\% | 15.0\% | 15.0\% |
| 36.12\% | 36.12\% | 33.50\% | 33.00\% | 29.51\% | 28.25\% | 24.58\% |
| 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
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


Working Capital Allowance Rate
(\% of the sum of Cost of Power + controllable expenses)
Taxes/PILs
Aggregate Corporate Income Tax Rate
Aggregate Corporate Income Tax
Capital Tax (until July 1st, 2010)


## 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.


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 (it Closing Balance

## Net Book Value

Opening Balance
Closing Balance
Average Net Book Value



## For PILs Calculation




## PILs Calculation

|  |  | 2006 Audited Actual |  | 2007 Audited Actual |  | 2008 Audited Actual |  | 2009 Audited Actual |  | 2010 Audited Actual |  | 2011 Audited Actual |  | 2012 and later Forecast |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| income tax |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Net Income | \$ | - | \$ | - | \$ | - | \$ | 127.51 | \$ | 53,653.45 | \$ | 105,603.10 | \$ | 100,773.29 |
| Amortization | \$ | - | \$ | - | \$ | - | \$ | 225.66 | \$ | 102,847.76 | \$ | 214,028.11 | \$ | 224,126.79 |
| CCA - Smart Meters | \$ | - | \$ | - | \$ | - | -\$ | 676.98 | -\$ | 262,142.24 | -\$ | 471,607.57 | -\$ | 378,514.16 |
| CCA - Computers | \$ | - | \$ | - | \$ | - | \$ | - | -\$ | 67,756.57 | -\$ | 81,240.33 | -\$ | 7,416.07 |
| CCA - Applications Software | \$ | - | \$ | - | \$ | - | + | - | \$ | - | \$ | - | \$ | - |
| CCA - Other Equipment | \$ | - | \$ | - | \$ | - | \$ | - | -\$ | 3,741.13 | -\$ | 18,261.63 | -\$ | 28,594.42 |
| Change in taxable income | \$ | - | \$ | - | \$ | - | - | 323.81 | -\$ | 177,138.73 | \$ | 251,478.31 | - | 89,624.57 |
| Tax Rate (from Sheet 3) |  | 36.12\% |  | 36.12\% |  | 33.50\% |  | 33.00\% |  | 29.51\% |  | 28.25\% |  | 24.58\% |
| Income Taxes Payable | \$ | - | \$ | - | \$ | - | - | 106.86 | -\$ | 52,273.64 | \$ | 71,042.62 | - | 22,029.72 |
| ONTARIO CAPITAL TAX |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Smart Meters | \$ | - | \$ | - | \$ | - | \$ | 6,544.18 | \$ | 2,528,355.00 | \$ | 2,363,332.22 | \$ | 2,190,779.12 |
| Computer Hardware | \$ | - | \$ | - | \$ | - | \$ | - | \$ | 23,481.00 | \$ | 18,263.00 | \$ | 13,045.00 |
| Computer Software (Including Application Software) | \$ | - | \$ | - | \$ | - | \$ | - | \$ | 98,480.82 | \$ | 100,866.96 | \$ | 73,588.83 |
| Tools \& Equipment | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - |
| Other Equipment | \$ | - | \$ | - | \$ | - | \$ | - | \$ | 35,540.78 | \$ | 141,311.77 | \$ | 149,389.46 |
| Rate Base | \$ | - | \$ | - | \$ | - | \$ | 6,544.18 | \$ | 2,685,857.61 | \$ | 2,623,773.94 | \$ | 2,426,802.41 |
| Less: Exemption |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Deemed Taxable Capital | \$ | - | \$ | - | \$ | - | \$ | 6,544.18 | \$ | 2,685,857.61 | \$ | 2,623,773.94 | \$ | 2,426,802.41 |
| 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 $\times$ Rate) | \$ | - | \$ | - | \$ | - | \$ | 14.72 | \$ | 2,014.39 | \$ | - | \$ | - |
| Change in Income Taxes Payable | \$ | - | \$ | - | \$ | - | -\$ | 106.86 | -\$ | 52,273.64 | -\$ | 71,042.62 | -\$ | 22,029.72 |
| Change in OCT | \$ | - | \$ | - | \$ | - | \$ | 14.72 | \$ | 2,014.39 | \$ |  | \$ | , |
| PILs | \$ | - | \$ | - | \$ | - | -\$ | 92.13 | -\$ | 50,259.25 | \$ | 71,042.62 | -\$ | 22,029.72 |
| Gross Up PILs |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Tax Rate |  | 36.12\% |  | 36.12\% |  | 33.50\% |  | 33.00\% |  | 29.51\% |  | 28.25\% |  | 24.58\% |
| Change in Income Taxes Payable | \$ | - | \$ | - | \$ | - | -\$ | 159.49 | -\$ | 74,157.53 | -\$ | 99,014.11 | -\$ | 29,209.38 |
| Change in OCT | \$ | - | \$ | - | \$ | - | \$ | 14.72 | \$ | 2,014.39 | \$ | - | \$ | - |
| PILs | \$ | - | \$ | - | \$ | - | -\$ | 144.76 | -\$ | 72,143.13 | -\$ | 99,014.11 | -\$ | 29,209.38 |



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 | 1.47\% | 4.29\% |
| 2012 Q4 |  | 4.29\% |



Opening Balance
Funding Adder (Principal) $\$$
$\$$
$\$$


|  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| - |  |  | 0.00\% | \$ |
| - |  |  | 0.00\% | \$ |
| - |  |  | 0.00\% | \$ |
| - |  |  | 4.14\% | \$ |
| - | \$ | 4,924.94 | 4.14\% | \$ |
| 4,924.94 | \$ | 4,924.94 | 4.14\% | \$ |
| 9,849.88 | \$ | 4,924.94 | 4.59\% | \$ |
| 14,774.82 | \$ | 4,924.94 | 4.59\% | \$ |
| 19,699.76 | \$ | 4,924.94 | 4.59\% | \$ |
| 24,624.70 | \$ | 4,924.94 | 4.59\% | \$ |
| 29,549.64 | \$ | 4,924.94 | 4.59\% | \$ |
| 34,474.58 | \$ | 4,924.94 | 4.59\% | \$ |
| 39,399.52 | \$ | 4,781.93 | 4.59\% | \$ |
| 44,181.45 | \$ | 4,781.93 | 4.59\% | \$ |
| 48,963.39 | \$ | 4,781.93 | 4.59\% | \$ |
| 53,745.32 | \$ | 4,781.93 | 4.59\% | \$ |
| 58,527.26 | \$ | 4,781.93 | 4.59\% | \$ |
| 63,309.19 | \$ | 4,781.93 | 4.59\% | \$ |
| 68,091.13 | \$ | 4,781.93 | 4.59\% | \$ |
| 72,873.06 | \$ | 4,781.93 | 4.59\% | \$ |
| 77,654.99 | \$ | 4,781.93 | 4.59\% | \$ |
| 82,436.93 | \$ | 4,781.93 | 5.14\% | \$ |
| 87,218.86 | \$ | 4,781.93 | 5.14\% | \$ |
| 92,000.80 | \$ | 4,781.93 | 5.14\% | \$ |
| 96,782.73 | \$ | 4,502.44 | 5.14\% | \$ |
| 101,285.17 | \$ | 4,502.44 | 5.14\% | \$ |
| 105,787.61 | \$ | 4,502.44 | 5.14\% | \$ |
| 110,290.04 | \$ | 4,502.44 | 4.08\% | \$ |
| 114,792.48 | \$ | 4,502.44 | 4.08\% | \$ |
| 119,294.92 | \$ | 4,502.44 | 4.08\% | \$ |
| 123,797.36 | \$ | 4,502.44 | 3.35\% | \$ |
| 128,299.79 | \$ | 4,502.44 | 3.35\% | \$ |
| 132,802.23 | \$ | 4,502.44 | 3.35\% | \$ |
| 137,304.67 | \$ | 4,502.44 | 3.35\% | \$ |
| 141,807.11 | \$ | 4,502.44 | 3.35\% | \$ |
| 146,309.54 | \$ | 4,502.44 | 3.35\% | \$ |
| 150,811.98 | \$ | 13,140.28 | 2.45\% | \$ |
| 163,952.26 | \$ | 13,140.28 | 2.45\% | \$ |
| 177,092.54 | \$ | 13,140.28 | 2.45\% | \$ |
| 190,232.82 | \$ | 13,140.28 | 1.00\% | \$ |
| 203,373.10 | \$ | 13,140.28 | 1.00\% | \$ |
| 216,513.38 | \$ | 13,140.28 | 1.00\% | \$ |
| 229,653.66 | \$ | 13,140.28 | 0.55\% | \$ |
| 242,793.93 | \$ | 13,140.28 | 0.55\% | \$ |
| 255,934.21 | \$ | 13,140.28 | 0.55\% | \$ |
| 269,074.49 | \$ | 13,140.28 | 0.55\% | \$ |
| 282,214.77 | \$ | 13,140.28 | 0.55\% | + |
| 295,355.05 | \$ | 13,140.28 | 0.55\% |  |
| 308,495.33 | \$ | 17,557.96 | 0.55\% | \$ |
| 326,053.29 | \$ | 17,557.96 | 0.55\% |  |
| 343,611.24 | \$ | 17,557.96 | 0.55\% | \$ |
| 361,169.20 | \$ | 17,557.96 | 0.55\% | \$ |
| 378,727.16 | \$ | 17,557.96 | 0.55\% | + |
| 396,285.11 | \$ | 17,557.96 | 0.55\% | \$ |
| 413,843.07 | \$ | 17,557.96 | 0.89\% | \$ |
| 431,401.03 | \$ | 17,557.96 | 0.89\% | \$ |
| 448,958.98 | \$ | 17,557.96 | 0.89\% | \$ |
| 466,516.94 | \$ | 17,557.96 | 1.20\% | \$ |
| 484,074.90 | \$ | 17,557.96 | 1.20\% | \$ |
| 501,632.85 | \$ | 17,557.96 | 1.20\% | \$ |
| 519,190.81 | \$ | 23,110.01 | 1.47\% |  |
| 542,300.82 | \$ | 23,110.01 | 1.47\% | \$ |
| 565,410.82 | \$ | 23,110.01 | 1.47\% | \$ |
| 588,520.83 | \$ | 23,110.01 | 1.47\% | \$ |
| 611,630.83 | \$ | 23,110.01 | 1.47\% |  |
| 634,740.84 | \$ | 23,110.01 | 1.47\% | \$ |
| 657,850.84 | \$ | 23,110.01 | 1.47\% | \$ |
| 680,960.85 | \$ | 23,110.01 | 1.47\% | \$ |
| 704,070.85 | \$ | 23,110.01 | 1.47\% | \$ |
| 727,180.86 | \$ | 23,110.01 | 1.47\% | \$ |
| 750,290.86 | \$ | 23,110.01 | 1.47\% | \$ |
| 773,400.87 | \$ | 23,110.01 | 1.47\% | \$ |


| 10 |  |
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| $1.47 \%$ | $\$$ |
|  |  |
|  |  |

Interest

## Closi



Account 1555-Sub-account Funding Adder Revenues

| Interest Rates | Approved Deferral and Variance Accounts | CWIP | Date Jan-12 | $\begin{aligned} & \text { Year } \\ & 2012 \end{aligned}$ | Quarter | Opening Balance <br> (Principal) |  | Funding Adder Revenues |  | Interest Rate | Interest |  | Closing Balance |  | Annual amounts |  | Board Approved Smart Meter Funding Adder (from Tariff) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Q1 | \$ | 796,510.87 | \$ | 27,143.86 | 1.47\% | \$ | 975.73 | \$ | 824,630.46 |  |  | \$ | 1.52 |
|  |  |  | Feb-12 | 2012 | Q1 | \$ | 823,654.73 | \$ | 27,143.86 | 1.47\% | \$ | 1,008.98 | \$ | 851,807.57 |  |  | \$ | 1.52 |
|  |  |  | Mar-12 | 2012 | Q1 | \$ | 850,798.59 | \$ | 27,143.86 | 1.47\% | \$ | 1,042.23 | \$ | 878,984.68 |  |  | \$ | 1.52 |
|  |  |  | Apr-12 | 2012 | Q2 | \$ | 877,942.45 | \$ | 45,059.86 | 1.47\% | \$ | 1,075.48 | \$ | 924,077.79 |  |  | \$ | 1.52 |
|  |  |  | May-12 | 2012 | Q2 | \$ | 923,002.31 | \$ | - | 1.47\% | \$ | 1,130.68 | \$ | 924,132.99 |  |  | \$ | - |
|  |  |  | Jun-12 | 2012 | Q2 | \$ | 923,002.31 | \$ | - | 1.47\% | \$ | 1,130.68 | \$ | 924,132.99 |  |  | \$ | - |
|  |  |  | Jul-12 | 2012 | Q3 | \$ | 923,002.31 | \$ | - | 1.47\% | \$ | 1,130.68 | \$ | 924,132.99 |  |  | \$ | - |
|  |  |  | Aug-12 | 2012 | Q3 | \$ | 923,002.31 | \$ | - | 1.47\% | \$ | 1,130.68 | \$ | 924,132.99 |  |  | \$ | - |
|  |  |  | Sep-12 | 2012 | Q3 | \$ | 923,002.31 | \$ | - | 1.47\% | \$ | 1,130.68 | \$ | 924,132.99 |  |  | \$ | - |
|  |  |  | Oct-12 | 2012 | Q4 | \$ | 923,002.31 | \$ | - | 1.47\% | \$ | 1,130.68 | \$ | 924,132.99 |  |  | \$ | - |
|  |  |  | Nov-12 | 2012 | Q4 | \$ | 923,002.31 |  |  | 0.00\% | \$ | - | \$ | 923,002.31 |  |  | \$ | - |
|  |  |  | Dec-12 | 2012 | Q4 | \$ | 923,002.31 |  |  | 0.00\% | \$ | - | \$ | 923,002.31 | \$ | 137,377.94 | \$ | - |



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


| 876,931.27 | \$ | 18,756.91 | \$ | 15,076.50 | 910,764.67 | 0.00\% | - | 13,789.49 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 910,764.67 | \$ | 18,742.91 | \$ | 15,076.50 | 944,584.08 | 0.00\% | - | 13,789.49 |



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Smart Meter Model

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



## Appendix C



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Ontario Energy Board
Smart Meter Model

Choose Your Utility:
Festival Hydro Inc.
Festival Hydro Inc. - Hensall

## Application Contact Information

Name: Kelly M

Title:
Financial \& Regulatory Manager
Legend

Phone Number:
$519-271-4703 \times 221$
DROP-DOWN MENU

Email Address:
kmccann@festivalhydro.com

We are applying for rates $\square$
November 1, 2012
CALCuLATION Field

Last COS Re-based Year 2010

## Copyright

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

While this model has been provided in Excel format and is required to be filed with the applications, the onus remains on the applicant to ensure the accuracy of the data and the results. The use of any models and spreadsheets does not automatically imply Board approval. The onus is on the distributor to prepare, document and support its application. Board-issued Excel models and spreadsheets are offered to assist parties in providing the necessary information so as to facilitate an expeditious review of an application. The onus remains on the applicant to ensure the accuracy of the data and the results.
Ontario Energy Board
Smart Meter Model
Festival Hydro Inc.
Distributors must enter all incremental costs related to their smart meter program and all revenues recovered to date in theapplicable tabs except for
those costs (and associcited revenues) for which the Board has approved on a final basis, i.e. capital costs have been includel in rate base and OM\& A
costs in revenue requirement 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 $O M \& A$ for 2012 for all smart meters in service.

## Smart Meter Capital Cost and Operational Expense Data

## Actual/Planned number of Smart Meters installed during the Calendar Yea

## Residential

General Service $<50 \mathrm{~kW}$
ActualPlanned number of Smart Meters installed (Residential and $\mathrm{GS}<50 \mathrm{~kW}$ only)
Percentage of Residential and GS < 50 kW Smart Meter Installations Completed
ActualPlanned number of $\mathrm{GS}>50 \mathrm{~kW}$ meters installed
Other (please identify)
Total Number of Smart Meters installed or planned to be installed

## Capital Costs

1.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)
1.1.1 Smart Meters (may include new meters and modules, etc.)
1.1.2 Installation Costs (may include socket kits, labour, vehicle, benefits, elt.)
1.1.3a Workforce Automation Hardware (may include fieldwork handhelels, barcode hardware, etc.)
1.1.3b Workforce Automation Software (may include fieldwork handhellds, barcode 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 licence, etco
1.2.3 Installation (may include meter seals and rings, collector computer hardiware, etce)
Total Advanced Metering Regional Collector (AMRC) (Includes LAN)



| 1.3 ADVANCED METERING CONTROL COMPUTER (AMCC) | Asset Type | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Forecast |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1.3.1 Computer Hardware | Computer Hardware |  |  |  |  | 900 | $\square$ |  | \$ | 900 |
| 1.3.2 Computer Software | Computer Software |  |  | $\square$ | $\square$ | [ 1,450 | $\square$ | $\square$ | \$ | 1,450 |
| 1.3.3 Computer Software Licences \& Installation (includes hardware and software) (may include $A S / 400$ disk space, backup and recovery computer, UPS, etc.) | Computer Software | - | $\square$ | $\square$ | $\square$ | 8,073 | - | - | \$ | 8,073 |
| Total Advanced Metering Control Computer (AMCC) |  | \$ | \$ | S | \$ | \$ 10.423 | \$ | \$ | S | $\underline{10,423}$ |
| Asset Type |  |  |  |  |  |  |  |  |  |  |
| 1.4 WIDE AREA NETWORK (WAN) |  | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Forecast |  |  |
| 1.4.1 Activiation Fees |  |  |  |  |  |  |  |  | \$ | - |
| Total Wide Area Network (WAN) |  | \$ | \$ | S | \$ | \$ | \$ | \$ | \$ | - |
| Asset Type |  |  |  |  |  |  |  |  |  |  |
| 1.5 Other ami capital costs related to minimum functionality |  | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Forecast |  |  |
| 1.5.1 Customer Equipment (including repair of damaged equipment) |  |  |  |  |  |  |  |  | \$ |  |
| 1.5.2 AMI Interface to CIS | Computer Software |  |  |  |  | 1,303 | - 610 |  | \$ | 1,913 |
| 1.5.3 Professional Fees | Smart Meter |  |  |  | 767 | $\square$ | $\square$ | - | \$ | 767 |
| 1.5.4 Integration | Computer Software |  |  |  |  |  | 2,444 |  | \$ | 2,444 |
| 1.5.5 Program Management | Other Equipment |  |  |  |  | 3,253 | 1,961 |  | \$ | 5,214 |
| 1.5.6 Other AMI Capital | Other Equipment |  |  |  |  |  |  | 95 | \$ | 95 |
| Total Other AMI Capital Costs Related to Minimum Functionality |  |  | \$ | S | 1 | \$ 4.55 | \$ ${ }^{\text {\$ }}$ | \$ 9 | S | 10,435 |
| Total Capital Costs Related to Minimum Functionality |  | \$ | S | \$ | $\$ \quad 767$ | \$ 652,057 | \$ $\quad 64,354$ | -- | S | 715,434 |
| Asset Type |  |  |  |  |  |  |  |  |  |  |
| 1.6 CAPITAL COSTS BEYOND MINIMUM FUNCTIONALITY <br> (Please provide a descriptive title and identify nature of beyond minimum functionality costs) |  | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Audited Actual | Forecast |  |  |
| 1.6.1 Costs related to technical capabilities in the smart meters or related communications infrastructure that exceed those specified in O .Reg 425/06 | Computer Software |  |  |  |  |  |  |  | \$ |  |
| 1.6.2 Costs for deployment of smart meters to customers other than residential and small general service | Applications Software |  |  |  |  |  |  |  | \$ | - |
| 1.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDM/R, etc. | Other Equipment |  |  |  |  | 982 | 11,092 | 2,688 | \$ | 14,762 |
| Total Capital Costs Beyond Minimum Functionality |  | \$ | \$ | S | \$ | \$ 98 | \$ 11,092 | \% ${ }^{\text {\$ }}$ | \$ | 14,762 |
| Total Smart Meter Capital Costs |  | \$ | \$ | $\stackrel{\text { s }}{ }$ | \$ ${ }^{\text {\$ }}$ | \$ 653,040 | \$ 75.446 | \$ 944 | $\stackrel{ }{\text { s }}$ | $\underline{730,197}$ |

## 2 OM\&A Expenses

2.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)
2.1.1 Maintenance (may include meter reverification costs, etc)
2.1.2 Other (please specifiy) Meter r troubleshooting

Total Incremental AMCD OM\&A Costs
2.2 ADVANCED METERING REGIONAL COLLECTOR (AMRC) (includes LAN)
2.2.1 Maintenance
2.2.2 Other (please specifiy)

Total Incremental AMRC OM\&A Costs
2.3 ADVANCED METERING CONTROL COMPUTER (AMCC)
2.3.1 Hardware Maintenance (may include severer support, etc.)
2.3.2 Software Maintenance (may include maintenancos support, et.).
2.3.2 Other (please specifiy) AMCC IT position

Total Incremental AMCC OM\&A Costs

### 2.4 WIDE AREA NETWORK (WAN)

2.4.1 WAN Maintenance
2.4.2 Other (please specifiy) Communication services

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 AMI OM\&A Costs Related to Minimum Functionality

## TOTAL OM\&A COSTS RELATED TO MINMUM FUNCTIONALTY

2.6 OM\&A COSTS RELATED TO BEYOND MINIMUM FUNCTIONALIT

Please provide a descripitive title and identity nature of beyond minimum tunctionality costis)
.6.1 Costs related to technical capabailities in the smart that exceed those specified in 0. Reg 425/06
2.6.2 Costs for deployment of smart meters to customers other than residentia nd small general service
26.3 Costs for TOU rate implementation, CIS system upgrades, web presentatio integration with the MDM/R, etc.

Total OM\&A Costs Beyond Minimum Functionality
Total Smart Meter OM\&A Costs


| 3.1 .1 | Smart Meter |
| :--- | :--- |
| 3.1 .2 | Computer Hardware |
| 3.1 .3 | Computer Software |
| 3.1.4 | Tools \& Equipment |
| 3.1 .5 | Other Equipment |
| 3.1 .6 | Applications Software |
| 3.1 .7 | Total Capital Costs |
| 3.2 | OM\&A Costs |
| 3.2.1 | Total OM\&A Costs |




## 葡 <br> Ontario Energy Board

## Festival Hydro Inc.

## Cost of Capital

Capital Structure
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

| 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 and later |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 0.0\% | 0.0\% | 4.0\% | 4.0\% | 4.0\% |
| 50.0\% | 50.0\% | 53.3\% | 56.7\% | 56.0\% | 56.0\% | 56.0\% |
| 50.0\% | 50.0\% | 46.7\% | 43.3\% | 40.0\% | 40.0\% | 40.0\% |
| 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% |
|  |  | 0.00\% | 0.00\% | 2.07\% | 2.07\% | 2.07\% |
| 7.25\% | 7.25\% | 7.25\% | 7.25\% | 5.68\% | 5.68\% | 5.68\% |
| 9.0\% | 9.00\% | 9.00\% | 9.00\% | 9.85\% | 9.85\% | 9.85\% |
| 8.13\% | 8.13\% | 8.07\% | 8.01\% | 7.20\% | 7.20\% | 7.20\% |
| 15.0\% | 15.0\% | 15.0\% | 15.0\% | 15.0\% | 15.0\% | 15.0\% |
| 36.12\% | 36.12\% | 33.50\% | 33.00\% | 29.51\% | 28.25\% | 24.58\% |
| 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
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


Working Capital Allowance Rate
(\% of the sum of Cost of Power + controllable expenses)
Taxes/PILs
Aggregate Corporate Income Tax Rate
Aggregate Corporate Income Tax
Capital Tax (until July 1st, 2010)


## 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.


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 (ff applicable) Closing Balance

## Net Book Value

Opening Balance
Average Net Book Value



## For PILs Calculation




## PILs Calculation




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 | 1.47\% | 4.29\% |
| 2012 Q4 |  | 4.29\% |



Opening Balance
Funding Adder (Principal) $\$$
$\$$
$\$$




Account 1555-Sub-account Funding Adder Revenues

| Interest Rates | Approved Deferral and Variance Accounts | CWIP | Date Jan-12 | Year | Quarter | Opening Balance <br> (Principal) |  | Funding Adder Revenues |  | Interest Rate | Interest |  | Closing Balance |  | Annual amounts |  | Board Approved Smart Meter Funding Adder (from Tariff) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 2012 | Q1 | \$ | 90,756.37 | \$ | 3,050.09 | 1.47\% | \$ | 111.18 | \$ | 93,917.64 |  |  | \$ | 1.52 |
|  |  |  | Feb-12 | 2012 | Q1 | \$ | 93,806.46 | \$ | 3,050.09 | 1.47\% | \$ | 114.91 | \$ | 96,971.47 |  |  | \$ | 1.52 |
|  |  |  | Mar-12 | 2012 | Q1 | \$ | 96,856.56 | \$ | 3,050.09 | 1.47\% | \$ | 118.65 | \$ | 100,025.30 |  |  | \$ | 1.52 |
|  |  |  | Apr-12 | 2012 | Q2 | \$ | 99,906.65 | \$ | 5,051.80 | 1.47\% | \$ | 122.39 | \$ | 105,080.84 |  |  | \$ | 1.52 |
|  |  |  | May-12 | 2012 | Q2 | \$ | 104,958.45 | \$ | - | 1.47\% | \$ | 128.57 | \$ | 105,087.02 |  |  | \$ | - |
|  |  |  | Jun-12 | 2012 | Q2 | \$ | 104,958.45 | \$ | - | 1.47\% | \$ | 128.57 | \$ | 105,087.02 |  |  | \$ | - |
|  |  |  | Jul-12 | 2012 | Q3 | \$ | 104,958.45 | \$ | - | 1.47\% | \$ | 128.57 | \$ | 105,087.02 |  |  | \$ | - |
|  |  |  | Aug-12 | 2012 | Q3 | \$ | 104,958.45 | \$ | - | 1.47\% | \$ | 128.57 | \$ | 105,087.02 |  |  | \$ | - |
|  |  |  | Sep-12 | 2012 | Q3 | \$ | 104,958.45 | \$ | - | 1.47\% | \$ | 128.57 | \$ | 105,087.02 |  |  | \$ | - |
|  |  |  | Oct-12 | 2012 | Q4 | \$ | 104,958.45 | \$ | - | 1.47\% | \$ | 128.57 | \$ | 105,087.02 |  |  | \$ | - |
|  |  |  | Nov-12 | 2012 | Q4 | \$ | 104,958.45 |  |  | 0.00\% | \$ | - | \$ | 104,958.45 |  |  | \$ | - |
|  |  |  | Dec-12 | 2012 | Q4 | \$ | 104,958.45 |  |  | 0.00\% | \$ | - | \$ | 104,958.45 | \$ | 15,440.63 | \$ | - |



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

| 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 | 01 | - |  |  | - | 0.00\% | - | - |
| 2006 Q3 | 4.59\% | 5.05\% | Mar-06 | 2006 | 01 | - |  |  | - | 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 | Qз | - |  |  | - | 4.59\% | - | - |
| 2008 Q2 | 4.08\% | 5.18\% | Oct-06 | 2006 | 04 | - |  |  | - | 4.59\% | - | - |
| 2008 Q3 | 3.35\% | 5.43\% | Nov-06 | 2006 | Q4 | - |  |  | - | 4.59\% | - | - |
| 2008 Q4 | 3.35\% | 5.43\% | Dec-06 | 2006 | 04 | - |  |  | - | 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 | 01 | - |  |  | - | 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 | аз | - |  |  | - | 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 | 04 | - |  |  | - | 5.14\% | - | - |
| 2011 Q3 | 1.47\% | 4.29\% | Nov-07 | 2007 | 04 | - |  |  | - | 5.14\% | - | - |
| 2011 Q4 | 1.47\% | 4.29\% | Dec-07 | 2007 | 04 | - |  |  | - | 5.14\% | - | - |
| 2012 Q1 | 1.47\% | 4.29\% | Jan-08 | 2008 | Q1 | - |  |  | - | 5.14\% | - | - |
| 2012 Q2 | 1.47\% | 4.29\% | Feb-08 | 2008 | Q1 | - |  |  | - | 5.14\% | - | - |
| 2012 Q3 | 1.47\% | 4.29\% | Mar-08 | 2008 | Q1 | - |  |  | - | 5.14\% | - | - |
| 2012 Q4 | 0.00\% | 4.29\% | Apr-08 | 2008 | Q2 | - |  |  | - | 4.08\% | - | - |
|  |  |  | May-08 | 2008 | Q2 | - |  |  | - | 4.08\% | - | - |
|  |  |  | Jun-08 | 2008 | Q2 | - |  |  | - | 4.08\% | - | - |
|  |  |  | Jul-08 | 2008 | Q3 | - |  |  | - | 3.35\% | - | - |
|  |  |  | Aug-08 | 2008 | Qз | - |  |  | - | 3.35\% | - | - |
|  |  |  | Sep-08 | 2008 | Q3 | - |  |  | - | 3.35\% | - | - |
|  |  |  | Oct-08 | 2008 | Q4 | - |  |  | - | 3.35\% | - | - |
|  |  |  | Nov-08 | 2008 | 04 | - |  |  | - | 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 | 04 | - |  |  | - | 0.55\% | - | - |
|  |  |  | Dec-09 | 2009 | 04 | - |  |  | - | 0.55\% | - | - |
|  |  |  | Jan-10 | 2010 | 01 | - |  | \$ 1,034.16 | 1,034.16 | 0.55\% | - | - |
|  |  |  | Feb-10 | 2010 | Q1 | 1,034.16 |  | \$ 1,034.16 | 2,068.32 | 0.55\% | 0.47 | 0.47 |
|  |  |  | Mar-10 | 2010 | 01 | 2,068.32 | \$ 89.64 | \$ 1,034.16 | 3,192.12 | 0.55\% | 0.95 | 1.42 |
|  |  |  | Apr-10 | 2010 | Q2 | 3,192.12 | -\$ 13.03 | \$ 1,034.16 | 4,213.25 | 0.55\% | 1.46 | 2.89 |
|  |  |  | May-10 | 2010 | 92 | 4,213.25 | \$ 371.28 | \$ 1,034.16 | 5,618.69 | 0.55\% | 1.93 | 4.82 |
|  |  |  | Jun-10 | 2010 | Q2 | 5,618.69 | \$ 282.99 | \$ 1,034.16 | 6,935.84 | 0.55\% | 2.58 | 7.39 |
|  |  |  | Jul-10 | 2010 | Q3 | 6,935.84 | \$ 265.21 | \$ 1,034.16 | 8,235.21 | 0.89\% | 5.14 | 12.54 |
|  |  |  | Aug-10 | 2010 | Q3 | 8,235.21 | \$ 276.12 | \$ 1,034.16 | 9,545.49 | 0.89\% | 6.11 | 18.64 |
|  |  |  | Sep-10 | 2010 | Q3 | 9,545.49 | \$ 280.45 | \$ 1,034.16 | 10,860.10 | 0.89\% | 7.08 | 25.72 |
|  |  |  | Oct-10 | 2010 | 04 | 10,860.10 | \$ 515.92 | \$ 1,034.16 | 12,410.18 | 1.20\% | 10.86 | 36.58 |
|  |  |  | Nov-10 | 2010 | 04 | 12,410.18 | \$ 371.76 | \$ 1,034.16 | 13,816.10 | 1.20\% | 12.41 | 48.99 |
|  |  |  | Dec-10 | 2010 | 04 | 13,816.10 | \$ 9,305.37 | \$ 1,034.16 | 24,155.63 | 1.20\% | 13.82 | 62.81 |
|  |  |  | Jan-11 | 2011 | Q1 | 24,155.63 | -\$ 573.74 | \$ 5,818.92 | 29,400.81 | 1.47\% | 29.59 | 92.40 |
|  |  |  | Feb-11 | 2011 | or | 29,400.81 | \$ 1,067.76 | \$ 5,818.92 | 36,287.49 | 1.47\% | 36.02 | 128.42 |
|  |  |  | Mar-11 | 2011 | Q1 | 36,287.49 | \$ 2,724.70 | \$ 5,818.92 | 44,831.11 | 1.47\% | 44.45 | 172.87 |
|  |  |  | Apr-11 | 2011 | Q2 | 44,831.11 | -\$ 80.31 | \$ 5,818.92 | 50,569.73 | 1.47\% | 54.92 | 227.79 |
|  |  |  | May-11 | 2011 | Q2 | 50,569.73 | \$ 26.95 | \$ 5,818.92 | 56,415.59 | 1.47\% | 61.95 | 289.73 |
|  |  |  | Jun-11 | 2011 | 02 | 56,415.59 | \$ 46.58 | \$ 5,818.92 | 62,281.09 | 1.47\% | 69.11 | 358.84 |
|  |  |  | Jul-11 | 2011 | Qз | 62,281.09 | \$ 1,094.00 | \$ 5,818.92 | 69,194.01 | 1.47\% | 76.29 | 435.14 |
|  |  |  | Aug-11 | 2011 | Q3 | 69,194.01 | \$ $\quad 3,568.05$ | \$ 5,818.92 | 78,580.99 | 1.47\% | 84.76 | 519.90 |
|  |  |  | Sep-11 | 2011 | оз | 78,580.99 | \$ 1,831.41 | \$ 5,818.92 | 86,231.32 | 1.47\% | 96.26 | 616.16 |
|  |  |  | Oct-11 | 2011 | 04 | 86,231.32 | \$ 1,883.26 | \$ 5,818.92 | 93,933.49 | 1.47\% | 105.63 | 721.80 |
|  |  |  | Nov-11 | 2011 | 04 | 93,933.49 | \$ $\quad 596.11$ | \$ 5,818.92 | 100,348.52 | 1.47\% | 115.07 | 836.86 |
|  |  |  | Dec-11 | 2011 | Q4 | 100,348.52 | \$ 7,036.63 | \$ 5,818.92 | 113,204.07 | 1.47\% | 122.93 | 959.79 |
|  |  |  | Jan-12 | 2012 | 01 | 113,204.07 | \$ 1,027.27 | \$ 6,059.50 | 120,290.84 | 1.47\% | 138.67 | 1,098.47 |
|  |  |  | Feb-12 | 2012 | Q1 | 120,290.84 | \$ $\quad 2,078.75$ | \$ 6,059.50 | 128,429.09 | 1.47\% | 147.36 | 1,245.82 |
|  |  |  | Mar-12 | 2012 | Q1 | 128,429.09 | \$ 955.67 | \$ 6,059.50 | 135,444.26 | 1.47\% | 157.33 | 1,403.15 |
|  |  |  | Apr-12 | 2012 | 02 | 135,444.26 | \$ 2,313.88 | \$ 6,059.50 | 143,817.64 | 1.47\% | 165.92 | 1,569.07 |
|  |  |  | May-12 | 2012 | Q2 | 143,817.64 | \$ 2,093.03 | \$ 6,059.50 | 151,970.17 | 1.47\% | 176.18 | 1,745.24 |
|  |  |  | Jun-12 | 2012 | Q2 | 151,970.17 | \$ 3,269.41 | \$ 6,059.50 | 161,299.09 | 1.47\% | 186.16 | 1,931.41 |
|  |  |  | Jul-12 | 2012 | Q3 | 161,299.09 | \$ 2,123.54 | \$ 6,059.50 | 169,482.13 | 1.47\% | 197.59 | 2,129.00 |
|  |  |  | Aug-12 | 2012 | Q3 | 169,482.13 | \$ 2,123.54 | \$ 6,059.50 | 177,665.17 | 1.47\% | 207.62 | 2,336.61 |
|  |  |  | Sep-12 | 2012 | Q3 | 177,665.17 | \$ 2,123.54 | \$ 6,059.50 | 185,848.21 | 1.47\% | 217.64 | 2,554.25 |
|  |  |  | Oct-12 | 2012 | Q4 | 185,848.21 | \$ 2,123.54 | \$ 6,059.50 | 194,031.25 | 1.47\% | 227.66 | 2,781.92 |


| Nov-12 | 2012 | 04 | 194,031.25 | \$ | 2,123.54 | \$ | 6,059.50 | 202,214.29 | 0.00\% | - | 2,781.92 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dec-12 | 2012 | 04 | 202,214.29 | \$ | 2,123.54 | \$ | 6,059.50 | 210,397.34 | 0.00\% | - | 2,781.92 |



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Smart Meter Model

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



