Ontario Energy Board
P.O. Box 2319
27th Floor
2300 Yonge Street
Toronto ON M4P 1E4
Telephone: 416- 481-1967
Facsimile: 416- 440-7656
Toll free: 1-888-632-6273

Commission de l'énergie de l'Ontario
C.P. 2319
27e étage
2300, rue Yonge
Toronto ON M4P 1E4
Téléphone: 416- 481-1967
Télécopieur: 416- 440-7656
Numéro sans frais: 1-888-632-6273

Ontario

BY E-MAIL

August 8, 2012

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

Dear Ms. Walli:

Re: Bluewater Power Distribution Corporation
Application for 2012 Smart Meter Cost Recovery effective November 1, 2012
Board File Number EB-2012-0263

In accordance with the process documented in the Notice of Application and Hearing, please find attached Board staff's submission in the above proceeding with respect to Bluewater Power Distribution Corporation's application for rate riders to recover smart meter costs.

Yours truly,

Original signed by

Violet Binette
Project Advisor, Applications & Regulatory Audit

Attach

2012 ELECTRICITY DISTRIBUTION RATES
BLUEWATER POWER DISTRIBUTION CORPORATION
APPLICATION FOR DISPOSITION AND RECOVERY OF COSTS RELATED TO SMART METER DEPLOYMENT

EB-2012-0263

Board Staff Submission

August 8, 2012

Introduction

Bluewater Power Distribution Corporation ("Bluewater Power") is a licensed electricity distributor serving Sarnia, Petrolia, Point Edward, Oil Springs, Alvinston and Watford. Bluewater Power filed a stand-alone application (the "Application") with the Ontario Energy Board (the "Board") on May 31, 2012, seeking Board approval for the disposition and recovery of costs related to smart meter deployment, offset by Smart Meter Funding Adder ("SMFA") revenues collected from May 1, 2006 to April 30, 2012. Bluewater Power requested approval of proposed Smart Meter Disposition Riders ("SMDRs") effective November 1, 2012. The Application is based on the Board's policy and practice with respect to recovery of smart meter costs.[1]

The following is Board staff's submission on the Application, the updates as provided in response to interrogatories, and a further update filed on August 2, 2012.

Approvals Sought

In the Application, Bluewater Power applied for SMDRs for both Residential and GS < 50 kW customer classes. The SMDRs would recover the difference between the May 1, 2006 to December 31, 2012 revenue requirement related to smart meters deployed as of December 31, 2012 and the SMFA revenues collected from May 1, 2006 to April 30, 2012, inclusive of carrying costs. Bluewater Power proposed SMDRs effective November 1, 2012. The proposed SMDRs include costs for November and December 2012, eliminating the need for a Smart Meter Incremental Revenue Requirement Rate Rider. Bluewater Power intends to claim any 2013 smart meter costs as part of its 2013 cost of service application.

Bluewater Power did not request the recovery of stranded meter costs in this Application. These meters continue to be included in rate base for rate-making purposes. Bluewater Power intends to seek recovery of stranded meter costs in its 2013 cost of service application.

[1] *Guideline G-2011-0001: Smart Meter Funding and Cost Recovery – Final Disposition* ("Guideline G-2011-0001"), dated December 15, 2011

In response to interrogatories, Bluewater Power provided recalculations of the SMDRs that included the following revisions:

- The number of customers was updated to reflect the 2013 forecast;
- The SMFA revenues collected from rates classes other than Residential and GS < 50 kW customers classes, were allocated on a 50:50 basis to these two customer classes, in accordance with the methodology in section 3.7 of Guideline G-2011-0001; and
- The interest on OM&A was calculated more accurately on a monthly basis instead of annual (i.e., using sheet 8A of the smart meter model instead of sheet 8B).

The SMDRs, as initially applied for on May 31, 2012 are summarized in the following table. Bluewater Power has proposed a 6 month disposition period for the Residential class to avoid overlap with the introduction of 2013 rates. As the GS < 50 kW class recovery is more significant, Bluewater Power has proposed a 24 month disposition in order to smooth rates. The SMDRs as recalculated in interrogatory responses filed on July 25, 2012, are also summarized in the following table. The rate riders in column 4 reflect the above listed revisions. The rate riders in column 5 reflect class-specific smart meter models provided in response to an interrogatory from VECC.

Table 1: Initial and Updated SMDR

1- Class	2- Recovery Period	3- Initial	4 - Board Staff IR #11 and #19[2]	5 - VECC IR #7
Residential	6 months	$4.32	$4.32	$4.45
GS < 50 kW	24 months	$9.02	$8.82	$8.52

Prudence of Smart Meter Costs

As of March 31, 2012, Bluewater Power had completed 100% of smart meter installations to existing Residential and GS < 50 kW customers.[3] In this Application, Bluewater Power documented its procurement process, the process to become authorized for smart meter deployment in compliance with O. Reg.

[2] Response to Board staff IR #11, filed as Appendix 1
[3] Response to Board staff IR #2

427/06, and its adherence to the London Hydro RFP process. Board staff takes no issue with the explanation on these matters.

In this Application Bluewater Power is applying for recovery of its smart meter costs as at December 31, 2012. The costs up to December 31, 2011 have been audited by an external auditor. The smart meter costs as provided in the Application are summarized below:

Table 2: Smart Meter Capital Cost and Operational Expense

Minimum Functionality (including 2012 forecast)	**Total Cost**	**Cost per Meter**
Capital Costs	$6,053,314	$170.99
OM&A Costs	$534,751	$17.93
Total Costs Related to Minimum Functionality	**$6,688,065**	**$188.92**
Beyond Minimum Functionality (including 2012 forecast)		
Capital Costs	$2,530,673	$71.49
OM&A Costs	$21,120	$0.60
Total Costs Beyond Minimum Functionality	**$2,551,793**	**$72.09**
TOTAL	**$9,239,858**	**$261.01**
Total Number of Smart Meters	35,401	

For comparison purposes, Board staff observes that the Board's *Smart Meter Audit Review Report*, dated March 31, 2010, indicates a sector average capital cost of $186.76 per meter (based on 3,053,931 meters with a capital cost of $570,339,200 as from January 1, 2006 to September 30, 2009). The corresponding average total cost per meter (capital and OM&A) is $207.37 from the data in that report. Following the audit review, the Board issued a letter on October 26, 2010 requiring all distributors to provide information on their smart meter investments on a quarterly basis. The first distributors' quarterly update represented life-to-date investments in smart meter implementation as of September 30, 2010 and, as of this date, the average total cost per meter for reporting Ontario LDCs was $226.92.[4]

[4] Monitoring Report Smart Meter Investment – September 2010, March 3, 2011

Board staff observes that Bluewater Power's total per meter costs are significantly higher than the costs identified in the *Smart Meter Audit Review Report* and the summary of costs to September 30, 2010. Board staff also observes that Bluewater Power's per meter costs are higher than those of distributors that are classified as "mid-size medium-high undergrounding"[5] as shown in the following table.

Table 3: Peer Group Smart Meter Costs

Distributor	File Number	Total Cost per meter
Bluewater Power Distribution Corporation	EB-2012-0263 (in progress)	$261.01
COLLUS Power Corp.	EB-2012-0017	$191.86
Festival Hydro Inc.	EB-2012-0260 (in progress)	$218.86
Peterborough Distribution Incorporated	EB-2012-0008	$161.42
Welland Hydro-Electric System Corp.	EB-2011-0415	$146.83

Board staff takes the position that Bluewater Power's total per meter cost are high in comparison with province-wide data and in comparison with peer group utilities. Board staff provides comments on the following smart meter costs:

a. GS < 50 kW – Average Meter Cost

In response to VECC IR #2, Bluewater Power indicates meter costs ranged from $69.93 for single phase meters to $991.76 for polyphase 600 V meters. The total average cost, including installation, for the GS < 50 kW class is $374.66 per meter. The summary includes $67,091.20 of "other costs" for the GS < 50 kW smart meters. Board staff notes that there is no explanation regarding what these "other costs" are that are part of GS < 50 kW deployment. In the absence of a satisfactory explanation by Bluewater Power in its reply submission, the Board may wish to consider disallowing these costs.

[5] Third Generation Incentive Regulation Stretch Factor Updates

b. Smart Meter Training and Conferences

Based on the detailed description provided by Bluewater Power in its Application, the utility allocated considerable resources to the smart meter project. There were internal teams, Bluewater Power joined working groups and staff attended courses and conferences. The $38,363 cost of research activities included conferences, vendor session and utility visits. In response to Board staff IR #3, Bluewater Power states that seven smart meter conferences were attended by the Smart Meter Project Coordinator for research and advancement of the smart meter project. Board staff notes that there is an absence of evidence demonstrating that these costs are fully incremental (e.g. whether some of the costs for these conferences are covered by utility's training budget which is already part of the base distribution rates) and that they were necessary for Bluewater Power's smart meter program. In the absence of a satisfactory explanation by Bluewater Power in its reply submission, the Board may wish to consider disallowing these costs.

c. Smart Meter Procurement and Installation

Board staff IR #4(a) to 4(d) queried the cost of the following and whether Bluewater Power was seeking recovery of these costs.

- Assessment of all AMI vendors, although only two vendors met criteria;
- Initial work with London Hydro on Statement of Work for Third Party Installation RFQ. Work ceased when Bluewater Power was not satisfied with pace of progress.
- Following smart meter installations services RFP and responses, Bluewater Power put together a team of six staff to review the submissions. A decision was made to terminate the process.
- An RFP was issued to cover installation of all polyphase GS < 50 kW smart meters. Following review, a decision was made to complete the work with internal resources.

Bluewater Power responded that $6,000 was spent on the above and is included in the amount for which Bluewater Power seeks recovery. Board staff submits that Bluewater Power's approach to its smart meter program was very thorough, but that some of the efforts were not effective. In its reply, Bluewater Power may want to include discussion on why the Board should

consider these costs prudently incurred even though some of the procurement work did not produce results.

In response to Board staff IR #4(e), Bluewater Power stated that four weeks of testing was conducted on the MDM/R R7.0 version at a cost of $80,000. The testing was then halted to focus on the release of the R7.2 version. However, Bluewater Power notes that 14 of 44 test scenarios were tested in the four weeks of testing on the R7.0 version, which is the basis for the $80,000 of claimed costs. In response to Board staff IR #7, Bluewater Power stated that the estimated cost of testing for the R7.2 version was $10,497. It is unclear from the record why seven times more costs were required to test the earlier version which consisted of 14 scenarios, while the later version was tested for the remaining 30 scenarios. While Board staff acknowledges that efficiencies can be realized the second time through, the difference between the two sets of claimed costs is significant and not fully explained. In the absence of a satisfactory reply by Bluewater Power explaining this difference, the Board may wish to consider disallowance of 50% of the testing costs for the R7.0 version.

d. Beyond Minimum Functionality Costs

Guideline G-2011-0001 states that costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDM/R, etc. are considered to be costs beyond minimum functionality, and states that such costs may be recoverable and that the distributor should show how these costs are required for its smart meter program.

As noted in Table 2 above, Bluewater Power's minimum functionality costs per meter in this Application are $188.92. Viewed in isolation, these costs are below the averages of the province-wide data, and would place Bluewater Power's per meter costs in the middle of its peer group of utilities. However, Bluewater Power also seeks recovery of $2,551,793 of costs beyond minimum functionality. This represents 27.6% of the total costs for which Bluewater Power is seeking recovery, and represents a cost of $72.09 per installed smart meter.

Board staff observes that, to date, this is the highest cost claimed for costs beyond minimum functionality in terms of costs per meter. In its Application, Bluewater Power observed that there is no published average for costs beyond minimum functionality. However, based on 14 stand-alone smart meter applications, Bluewater Power determined an average of $11.84. Bluewater Power stated in its Application that 4 utilities recorded $0 in costs beyond minimum functionality, and that costs were included within the general costs relating to maintenance of CIS systems. In response to VECC IR #1, Bluewater Power stated that, "The comparisons do not compare the amount actually spent by LDCs on "Beyond Minimum Functionality" but more accurately represents a comparison of the "Beyond Minimum Functionality" costs claimed for recovery through this particular process (ie. Smart Meter Final Disposition as opposed to a Rebasing Application)."

Board staff agrees that there are likely some inconsistencies in the records with respect to smart meter costs beyond minimum functionality, but these are also related to the circumstances of individual distributors. However, Board staff submits that $72.09 per meter for TOU rate implementation, CIS system upgrades, web presentation and integration with the MDM/R is a significant cost, particularly given Bluewater Power's circumstances as a medium-sized distributor largely serving an urbanized area. In the Application, Bluewater Power states that the majority of the beyond minimum functionality costs relate to the integration of the MDM/R with Bluewater Power's SAP-based CIS.

The SAP system integrates finance, supply chain, plant maintenance, engineering, metering, customer information, billing, web presentment, and retail and wholesale settlement functions. Bluewater Power undertook a major SAP version upgrade in 2008-2009, as version 4.7 was 2 years away from no longer being supported by SAP. In the Application, Bluewater Power states that "the upgrade addressed a number of limitations in the existing system that improved functionality and, in some cases, better prepared the CIS for the introduction of smart meters." In response to Board staff IR #8(a), Bluewater Power clarified that when SAP upgrades its product, that upgrade affects the entire system.

The majority of the beyond minimum functionality smart meter costs were incurred in 2011 and 2012, however, it is Board staff's understanding that some of the work took place in 2010. Board staff IR #8(b) queried why smart meter and TOU billing SAP system upgrades were not undertaken in 2009. Bluewater Power responded that the version upgrade project and the smart meter related upgrades were both projects of sufficient size that a phased approach was necessary as the same Bluewater Power personnel would have been involved in each project. Bluewater Power also stated that it does not automatically follow that the cost of simultaneous upgrades would be lower.

Board staff agrees that upgrading the version of the utility's business software is a major undertaking, however, it is staff's position that there was an opportunity to include most, if not all, of the smart meter related upgrades in the version upgrade project. The functional requirements for smart meters were well documented and known, and Bluewater Power could have learned from other distributors further advanced in their smart meter implementation. Presumably, this was one of the benefits from having a group of named distributors to be the first deployers to test the new technologies involved in smart meters, remote meter reading, and handling of customer TOU data back in 2006.

Bluewater Power has engaged the services of many consultants and has hired contract staff for its smart meter program. Board staff submits that Bluewater Power could have taken this approach to address its concerns related to resourcing and personnel to undertake simultaneous SAP version upgrade and smart meter related SAP upgrade projects.

Given the integrated nature of Bluewater Power's SAP system, it is Board staff's understanding that testing of all functions from finance to customer information to billing was required twice: once for the version upgrade project and once for the smart meter related project. Board staff submits that, at a minimum, testing costs would have been reduced had the projects been executed simultaneously.

In its response to Board staff IR #8, Bluewater Power noted the complexity and offerings of the billing portion of the SAP software. Board staff claims no

expertise in this area, however, a business software system with sophisticated offerings in the billing portion of the software should be expected to be readily configured for TOU and for integration with the MDM/R. As the majority of distributors have started billing on TOU, and are prepared to integrate with MDM/R, without charges of $72.09 per meter, Board staff submits that Bluewater Power's proposal for recovery should be reduced.

For the Board's reference, Board staff estimates that the impact of disallowance of costs identified in sections (a), (b) and (c) above, would reduce costs per meter by $4.28. Additionally, based on the applications approved to date, the highest beyond minimum functionality cost per meter approved to date was in the Niagara-on-the-Lake application. The costs in that case were $38.90 per meter. Given the circumstances, Board staff submits that a reduction of 50%, to $36.04 could be considered, as this would bring Bluewater Power's costs down to the range of Niagara-on-the-Lake Hydro, but would still be at the high end of what the Board has seen to date in applications for smart meter cost recovery. Board staff suggests that the Board could provide direction that the remaining beyond minimum functionality costs should be reviewed as part of Bluewater Power's 2013 cost of service application. In this way, consideration of these costs possibly as part of the utility's normal capital expenditures could be tested. As Bluewater Power's 2013 cost of service application could be filed as early as the end of August 2012, Board staff recognizes that the timing is not optimal.

e. Treatment of Unaudited Costs

Guideline G-2011-0001 states that the majority of costs (i.e. greater than 90%) sought for recovery should be audited. Board staff notes that Bluewater Power's audited costs represent approximately 89% of the total costs of the smart meter deployment. The unaudited costs are the 2012 forecast costs.

Board staff submits that the audited costs are close enough to the threshold of 90%, and has no issues with the level of audited costs.

Allocation and Rate Design

The class-specific SMDRs that Bluewater Power originally applied for are summarized in column 3 of Table 1. In its response to interrogatories, Bluewater Power addressed the matter of class-specific revenue requirements and associated SMDRs.

Bluewater Power calculated class-specific SMDRs using the Guelph model provided by the Board in response to Board staff IR #11, which:

- Allocated OM&A expenses on the basis of the number of meters installed for each class;
- Allocated Return and Amortization on the basis of the capital costs of the meters installed for each class;
- Allocated PILs based on the revenue requirement derived for each class before PILs; and
- Calculated SMFA revenues and interest on the principal first directly for the Residential and GS < 50 kW classes. The residual SMFA revenues and interest collected from other metered customer classes (i.e., GS 50-4999 kW and Large Use) is then allocated 50:50 to the Residential and GS < 50 kW classes.

As noted earlier in this submission, Bluewater Power also updated the customer numbers to reflect the 2013 forecast, and calculated the interest on OM&A on a monthly basis. The SMDRs recalculated in response to Board staff IR #11 and #19 are summarized in column 4 of Table 1.

In response to VECC IR #7, Bluewater Power filed separate smart meter models for Residential and GS < 50 kW customer classes. These SMDRs, which reflect 2013 customer forecast and interest on OM&A on a monthly basis, are summarized in column 5 of Table 1. Board staff observes that there appears to be an over-collection of SMFA of $105 in the response to VECC IR #7. Bluewater Power should confirm this number and explain this over-collection in its reply submission.

It is clear from Table 1 that all the cost allocation methodologies applied produced similar SMDRs. As Bluewater Power was able to complete class-

specific smart meter models, albeit with certain assumptions, Board staff submits that this methodology is the best representation of full cost causality, and should be adopted by the Board.

In its Application, Bluewater Power proposed a 6 month disposition period for the Residential class to avoid overlap with the introduction of 2013 rates. As the GS < 50 kW class recovery is more significant, Bluewater Power proposed a 24 month disposition in order to smooth rates. The total bill impact of Bluewater Power's initially proposed SMDRs was 3.7% for the Residential class and 3.2% for the GS < 50 kW class. Board staff has no concerns with the proposed disposition period.

Other Matters

a. Operational Efficiencies and Cost Savings

In response to Board staff IR #14 and #21, Bluewater Power stated that there are no net savings in meter reading costs, and that there is a net increase in these costs. Bluewater Power stated that there are no other operational efficiencies or costs savings associated with the implementation of smart meters.

Board staff notes that Bluewater Power and other Ontario electricity distributors may, more generally, be able to and be expected to realize longer term productivity gains as they gain experience with smart meters and TOU data, and are able to undertake business process re-designs to integrate these new systems with existing operational systems and practices. Board staff submits that Bluewater Power should be prepared to address any operational efficiencies due to smart meter and TOU implementation in its 2013 cost of service rebasing application, particularly given the higher level of smart meter costs documented in this Application.

b. Update Filed August 2, 2012

In the Application filed on May 31, 2012, it states on p40 that, "…OM&A costs which relate primarily to meter reading are only included in this application up to April 30, 2012; from that point where the AMI replaces foot reading by meter readers, the costs form part of regular OM&A after May 1, 2012 as costs were already incorporated into rates relating to meter reading."

In response to Board staff IR #14(c), Bluewater Power stated that the annual cost of manual meter reading for Residential and GS < 50 kW customers was $110,000. The annual cost of transmitting that data from smart meters is $142,647.

On August 2, 2012, Bluewater Power filed an update to its Application. Of the 2012 automated meter reading costs of $142,647, Bluewater Power had included costs for 4 months of 2012. Bluewater Power is now proposing to include its full 2012 automated meter reading costs for recovery in the current Application, amounting to a net increase of $95,098. Bluewater Power has relied on the Cambridge and North Dumfries Hydro Inc. ("CND") decision, Board file number EB-2012-0086, which stated the following with respect to $155,000 of savings identified related to smart meters:

> …the Board is of the view that savings from any productivity gains due to smart meter implementation are one source of the gains that CND is incented to realize under the IRM rate adjustment mechanism. The Board concurs with both Board staff and CND that realized savings should be addressed in CND's next cost of service application, when there should be better information on actual costs and savings and these will be factored into rebased rates.

Board staff observes that it was not apparent from Bluewater Power's Application and interrogatory responses whether: (1) 4 months of the $142,647 expense; or (2) whether 4 months of the difference between $142,647 and $110,000 had been included in the Application. It is now clear from the update that the former is the case. Board staff refers to sections 3.5 and 3.6 of Guideline 2011-0001 which state that, among other information, incremental operating and maintenance costs for smart meters form part of the application for recovery of smart meter costs in a stand-alone application.

Board staff submits that it is appropriate for Bluewater Power to seek recovery of $32,647 (the difference between $142,647 and $110,000 for the full year 2012), but not the full amount. As Bluewater Power has included $47,549 (4 months of $142,647) in its Application, Board staff submits that the

costs in the smart meter model should be revised downward to reflect the difference.

c. Stranded Meters

Bluewater Power also responded to interrogatories regarding the net book value of stranded conventional meters. The NBV at December 31, 2012 is estimated to be $1,897,063, of which $1,735,945 would be Residential and $161,118 would be GS < 50 kW customer class. As required by Guideline G-2011-0001, Board staff submits that Bluewater Power should address stranded meter costs in its next cost of service application.

- All of which is respectfully submitted -