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Ontario

BY E-MAIL

May 17, 2012

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

Dear Ms. Walli:

Re: Board staff Submission
PUC Distribution Inc.
Application for 2012 Smart Meter Cost Recovery effective May 1, 2012
Application Board File Number EB-2012-0084

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

Sincerely,

Original Signed By

Stephen Vetsis
Analyst - Applications

Attachment

2012 ELECTRICITY DISTRIBUTION RATES

PUC Distribution Inc.

Application for Disposition and Recovery of Costs Related to Smart Meter Deployment

EB-2012-0084

STAFF SUBMISSION

May 17, 2012

INTRODUCTION

PUC Distribution Inc. ("PUC") filed a stand-alone application ("the "Application") on March 5, 2012, seeking Board approval for the final 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. PUC requested approval of proposed Smart Meter Disposition Riders ("SMDR") and Smart Meter Incremental Revenue Requirement Rate Riders ("SMIRR") effective May 1, 2012. The Application is based on the Board's policy and practice with respect to recovery of smart meter costs.[1]

The Board issued its Letter of Direction and Notice of Application and Hearing on March 30, 2012. The Vulnerable Energy Consumers' Coalition ("VECC") requested and was granted intervenor status and cost award eligibility. No letters of comment were received.[2] The Notice of Application and Hearing established that the Board would consider the Application by way of a written hearing and established timelines for discovery and submissions. Board staff and VECC posed interrogatories to PUC on April 19, 2012. PUC filed its responses to Board staff and VECC interrogatories on May 3, 2012.

This submission reflects observations and concerns which arise from Board staff's review of the record of the proceeding, including the original Application and updates as provided in response to interrogatories.

[1] *Guideline G-2011-0001: Smart Meter Funding and Cost Recovery – Final Disposition*, issued on December 15, 2011.
[2] Response to Board staff IR #1.

THE APPLICATION

Approvals Sought

In the Application as filed on March 5, 2012, PUC applied seeking the following approvals:

- **Smart Meter Disposition Rate Rider:**

  PUC proposed a class specific SMDR of $0.59 per month for each residential customer, $1.04 per month for each GS < 50 kW customer and $1.24 for each GS > 50 kW customer. This rate rider would be in effect from May 1, 2012 to April 30, 2013 and represents a charge to customers resulting from the difference in revenues collected from customers from 2006 to April 30, 2012 and associated interest, and the deferred revenue requirement from 2006 to December 31, 2011.

- **Smart Meter Incremental Revenue Requirement Rate Rider**

  PUC proposed a class-specific SMIRR of $2.77 per month for each residential customer, $6.65 per month for each GS < 50 kW customer and $7.83 for each GS > 50 kW customer. This rate rider would be in effect from May 1, 2012 until the effective date of PUC's rate order arising from PUC's next scheduled cost of service rate application (scheduled for 2013 rates). The SMIRR rate rider reflects the incremental annual revenue requirement related to smart meter costs to be incurred.[3]

Updated Evidence

In its responses to Board staff interrogatories, PUC made or confirmed corrections to its smart meter model for the following:

- Corrected the cost of capital parameters in IRM years to match those approved in PUC's last cost of service application (Board staff IR #11);

[3] PUC's Application, Tab 1/Schedule 5, March 3, 2012, pages 2 and 3.

- Entered monthly data for OM&A and depreciation expense to sheet 8A for a more detailed calculation of interest on the principal of OM&A and depreciation expense, for determination of the SMDR (Board staff IR # 12);
- Reduced 2012 OM&A expenses in line 2.5.6 by $55,000 to reflect the savings associated with reduced meter costs in 2012 (Board staff IR #5);
- Reduced 2012 2012 OM&A expenses in line 2.5.6 by $6,250 to reflect a revised estimate of costs related to web presentment. Increased 2012 capital costs by $14,050 to reflect a revised estimate of costs related to web presentment (Board staff IR #6); and
- Corrected the aggregate federal and provincial corporate income tax rates input in the model for 2012, for calculating the deferred revenue requirement (Board staff IR # 10).

PUC filed a revised smart meter model to reflect the corrections noted in the interrogatories referenced above. A summary of the SMDR and SMIRR proposed in the Application and the change as a result of PUC's responses to interrogatories can be found in the table below.

Table 1: Original and Revised SMDRs and SMIRRs

Class	SMDR ($/month, for 12 months)		SMIRR ($/month)	
	Original	Revised	Original	Revised
Residential	$0.59	$0.51	$2.77	$2.63
GS < 50 kW	$1.04	$0.90	$6.65	$6.58
GS > 50 kW	$1.24	$1.07	$7.83	$7.79

Board staff notes that the updated smart meter model filed with PUC's replies to Board staff interrogatories contains interest rates inputted in sheet 8 for the second, third and fourth quarters of 2012, in other words, beyond April 30, 2012. These inputs have caused the calculation of carrying charges on smart meter funding adder revenues to be applied beyond the proposed effective date of the SMDR. As the smart meter funding amounts are subtracted from historical incurred costs, Board staff estimates that PUC's total residual deferred revenue requirement to be recovered through the SMDR to be understated by approximately $21,460. Board staff suggests that PUC may wish to file an

updated Smart Meter Model with its reply submission, to confirm and correct for the interest on the SMFA.

Prudence of Smart Meter Costs

In response to VECC interrogatory #1, PUC confirmed its total per meter costs as $226.09 per smart meter. The following table summarizes PUC's overall per meter costs, costs above minimum functionality and projected 2012 capital and OM&A expenses:

Cost per installed Smart Meter

	Total Cost	**Cost per Meter**
Overall Capital Costs (including 2012 projected)	$6,585,019	$199.76
Overall OM&A Costs (including 2012 forecast)	$870,109	$26.33
Total Cost Per Smart Meter	**$7,453,128**	**$226.09**
GS > 50 kW meter Capital Costs (includes 2012 projected)	$293,945	-
GS > 50 kW meter OM&A Costs (includes 2012 projected)	$5,290	-
Total Costs for GS > 50 kW Meters	**$314,212**	**-**
Total Number of Smart Meters	32,965	
Total Number of GS > 50 kW Smart Meters	341	
Forecast 2012 Smart Meter Installations	183	
Incremental Capital 2012 projected	$301,650	-
Incremental OM&A 2012 projected	$295,483	-

Sources: Smart Meter Model, Sheet 2, as filed on May 2, 2012 and
Response to VECC staff interrogatory #1, filed on May 3, 2012

Board staff observes that these overall per meter costs are beyond the ranges of per meter costs that the Board has seen for most utilities at the early stages of smart meter deployment.[4] In response to Board staff IR #15, PUC provided its

[4] In Appendix A of the Board's Decision with Reasons EB-2007-0063, issued August 8, 2007, with respect to the combined smart meter proceeding, the Board documented the per meter cost for the 13 applicant utilities then authorized for smart meter deployment. For "urban" distributors for which data was available, the per meter costs ranged from $123.59 to $189.96, while Hydro One Networks' costs were estimated at $479.47. The cost information in the combined smart

average capital costs per meter for the residential, GS < 50 kW and GS > 50 kW classes. On Tab 1, Schedule 4 of the Application, PUC also provided its average OM&A costs per installed meter. These costs are summarized in the table below.

Class	Number of Meters	Capital Cost per Meter	Total (Capital + OM&A) Cost Per Meter
Residential	29,385	$159.39	$185.72
GS < 50 kW	3,239	$500.45	$526.78
GS > 50 kW	341	$863.24	$889.57

Board staff notes that the cost levels reported by PUC for residential meters are in line with the range of costs previously seen by the Board in prudence review applications, as well as costs documented in the combined smart meter proceeding. Board staff notes that the available cost information for GS < 50 kW smart meters was limited at the time of the combined proceeding. In other smart meter prudence review applications before the Board, GS < 50 kW smart meters have, typically, shown per meter costs approximately 2 to 2.5 times higher than the average residential smart meter. While PUC's GS < 50 kW per meter costs are greater than 2.5 times the cost of residential meters, Board staff notes that a significant portion (i.e. approximately 38%) of PUC's GS < 50 kW customers have more expensive meter configurations (e.g. polyphase, transformer rated, etc.). As such, Board staff takes no issue with the above average costs per meter for customers in the class.

On October 26, 2010 the Board issued a letter to all licensed distributors requiring them to file information about smart meter investments on a quarterly basis. On March 3, 2011, the Board issued the Monitoring Report, Smart Meter

meter proceeding is informative, but reflects an early stage of smart meter deployment, and so must be used with caution. However, similar patterns and ranges for utilities serving urban areas as those observed in Appendix A of the Decision with Reasons EB-2007-0063 have been observed in more recent cases in which smart meter costs have been considered.

Investment – September 2010 ("the Monitoring Report").[5] The Monitoring Report summarized the total smart meter related investments of 78 distributors, as of September 30, 2010, and showed an average cost of $226.92 per smart meter. Board staff observes that PUC's costs are in line with the average costs identified in the Monitoring Report. Given PUC's documented procurement practices, discussed in the section that follows, and the fact that PUC's per meter costs do not exceed values shown in the Monitoring Report, Board staff takes no issue with the nature and quantum of PUC's reported per meter costs.

Board staff observes that PUC was authorized to deploy smart meters under O. Reg. 427/06 as amended by O.Reg. 238/08 in accordance with the London Hydro RFP process. It complied with the regulation and the London Hydro RFP process for the procurement of smart meters and associated equipment and for services to install and operate the smart meters and associated equipment. As such, subject to the clarifications requested below with respect to costs beyond minimum functionality and the treatment of unaudited costs, Board staff considers that the documented costs are prudent.

Costs Beyond Minimum Functionality

PUC's application included a request to recover $293,945 in capital costs and $5,290 in OM&A costs beyond minimum functionality for the installation of smart meters for the GS > 50 kW customer class. On page 10 of Tab 1, Schedule 2 of the Application, PUC states that:

> As part of the smart meter deployment program, PUC has decided to install smart meters for the general service > 50 kW customers. PUC has a total of about 3,611 general service customers of which only 372 are in the greater than 50 kW class. As a further breakdown of these 372 customers, 31 already have interval meters. Of the general service customers in the > 50 kW segment, to date approximately 158 customers have smart meters installed and it is planned to convert the

[5] http://www.ontarioenergyboard.ca/OEB/Industry/Regulatory+Proceedings/Policy+Initiatives+and+Consultations/Smart+Metering+Initiative+(SMI)/Smart+Meter+Deployment+Reporting#reports

> remaining 183 customers to smart meters. PUC determined that these customers will have more detailed needs for data than will typical residential and general service < 50 kW customers, and providing them with better information on how much and when they consume electricity may provide these customers with opportunities for more energy conservation and load shifting. In addition, the contracted service of monthly on-site electric meter reading will be completely discontinued once all the customers have been converted to smart meters.

In response to Board staff IR #7, PUC provided an estimate of the remaining useful life for the 158 smart meters it had already installed for customers in the GS > 50 kW customer class. PUC estimated that 49% of those installed meters had no remaining useful life, 18% had one to four years of remaining useful life and 19% had 5 to 10 years of remaining useful life. PUC provided an estimated net book value of $12,000 as at December 31, 2011 for the 158 GS > 50 kW meters replaced in 2011. PUC noted that its plans to treat the net book value of the GS > 50 kW class meters as stranded meter costs and seek recovery in its 2013 cost of service application.

Board staff notes that in other applications considered, or being considered, by the Board, some distributors have sought to recover costs for the installation of smart meters for the GS > 50 kW class. In many of these cases, Board staff observes that the distributors are replacing interval meters with updated meters that will be able to communicate a customer's interval data using the deployed AMI network. These meters are typically replaced when they need repair or replacement or upon re-sealing.[6] Board staff notes that the majority of the GS > 50 kW meters replaced in 2011 were near the end of their useful life and takes no issue with PUC's decision to replace those meters and seek to recover the associated costs, at this time.

Board staff notes PUC's plan to treat the net book value of the replaced GS > 50 kW class meters as stranded meter costs and seek recovery in its 2013 cost of

[6] Horizon Utilities Corporation's smart meter application (EB-2011-0417) is one example where smart meter deployment includes replacement of interval meters in the GS > 50 kW class.

service application. Board staff submits that cost causality should apply to the recovery of stranded meter costs and that PUC should be prepared to provide the net book value of stranded meters separately by rate class in its 2013 cost of service application.

In response to Board staff interrogatories #6 and 9a, PUC identified costs included in the application for CIS system upgrades, web presentment and customer education. In the Application, PUC noted that it participated in group RFPs through the District 9 group to select vendors for these activities.[7]

Board staff notes that these costs are for functions beyond minimum functionality, as defined in the combined proceeding related to Smart Meters (EB-2007-0063), but were not identified as such in the Smart Meter Model or the Application. Board staff submits that PUC should file an updated Smart Meter Model that clearly separates the documented costs for functions related to minimum functionality and beyond minimum functionality, as defined in the combined proceeding. Board staff also submits that PUC has shown prudence in its procurement practises for selecting vendors for these activities.

Level of Unaudited Costs

The Board's guideline G-2011-0001: *Smart Meter Funding and Cost Recovery – Final Disposition* ("the Guideline") states that the majority of costs (i.e. greater than 90%) sought for recovery should be audited. The table below summarizes the actual, unaudited actual and forecasted costs provided by PUC in the Application.

	Actual (2006-2010)	Unaudited Actuals (2011)	Forecast (2012)	TOTAL
Capital	$ 5,916,231	$ 381,188	$ 301,650	$ 6,599,069
OM&A	$ 174,486	$ 336,890	$ 295,483	$ 806,859
% of Total costs	82.24%	9.70%	8.06%	

[7] The District 9 group is a group of 9 distributors consisting of: Algoma Power Inc., Chapleau Public Utilities Corporation., Espanola Regional Hydro Distribution Group, Heart Power Distribution Co. Ltd, North Bay Hydro Distribution Ltd., Northern Ontario Wires Inc. – Cochrane and PUC Distribution Inc.

Board staff estimates that 17.76% of the costs documented by PUC in the Application are unaudited. Board staff notes that if PUC were to provide audited costs for 2011 the level of audited costs would become greater than 90% of the total costs sought for recovery. Board staff suggests that PUC address whether or not its 2011 audit has been completed in its reply submission. If audited costs are available for 2011, Board staff submits that PUC should provide an updated smart meter model and reconcile any discrepancies between the audited and unaudited costs provided.

Cost Allocation Methodology

In its Application, PUC proposed class specific fixed charge SMDRs and SMIRRs for the residential, GS < 50 kW and GS > 50 kW customer classes. In response to Board staff IR #14, PUC confirmed that it used the following cost allocation methodology:

- Return (deemed interest plus return on equity) was allocated based on the number of smart meters installed by rate class;
- Amortization was allocated based on the smart meter costs by rate class.
- OM&A expenses were allocated based on the number of installed smart meters for each rate class.
- Payments in lieu of taxes (PILs) were allocated based on the revenue requirement allocated to each class before PILs; and
- Smart Meter Funding Adder revenues, including carrying charges, were allocated based on actual amounts collected from each class.

In response to VECC IR #8, PUC noted the following, when asked to provide capital costs for installed smart meters separately by customer class:

> PUC does not have the data available to complete the smart meter revenue requirement model by rate class. In accordance with the G-2008-0002 guidelines, accounts 1555 and 1556 were established to track the capital and OM&A costs associated with the smart meter project. Costs were not set up by the impacted customer classes.

> Meter change outs to smart meters were determined by the existing metering configuration and service requirement (transformer rated, polyphase, etc.). Service requirement does not correlate to a specific rate class. For example, there may be GS < 50 customers with a "residential" meter configuration and Residential customers with a "GS<50" meter configuration. PUC did not categorize or track the capital and OM&A costs to a service location and installation, therefore, providing costs by rate class is not feasible.

Board staff notes that PUC's response to VECC IR #8 is contradictory to its response to Board staff IR #14 in that PUC states that it is unable to provide costs by rate class yet, it has allocated amortization to each class based on the smart meter costs per rate class. Board staff further notes that in PUC's response to VECC IR#2, it has provided the number of each meter type installed per rate class, as well as, an average meter cost per meter type. In addition, PUC has provided the smart meter funding adder revenues collected from each class, in response to VECC IR #8c, and provided a calculation of the pro-rated shared capital costs for the GS > 50 kW class, in response to Board staff IR #9d. Board staff observes that if PUC is able to prorate the shared capital costs for the GS > 50 kW class, it is reasonable to expect that it should be able to do so for the residential and GS < 50 kW classes, as well.

Board staff submits that cost causality should be the guiding principle when allocating costs to each class. Based on the information provided in response to Board staff's and VECC's interrogatories, Board staff submits that it appears that PUC has sufficient information to calculate the class specific revenue requirement. Board staff notes that such an approach would be consistent with the cost allocation methodology proposed by VECC and approved by the Board in PowerStream's 2012 smart meter cost recovery application (EB-2011-0128). Board staff submits that PUC should update its cost allocation to the class specific revenue requirement approach, proposed by VECC, and provide updated calculations of the resulting SMDRs and SMIRRs.

Treatment of 2012 Costs

On Sheet 2 of the Smart Meter Model, PUC provided $129,000 in forecasted smart meter capital costs and $50,000 in installation costs for 2012 but did not include the number of forecasted smart meter installations for the residential and GS < 50 kW classes for that year. In response to Board staff IR #9c, PUC noted that the $129,000 in forecasted smart meter capital costs included a $50,000 allowance to complete deployment of smart meters, including new installations, conversion from bulk to individual meters and Elster A3D memory upgrades. PUC estimated that the number of new installations would be in the range of 150 to 200, based on historical trends but noted that the conversion from bulk to individual meters was less predictable.

This approach differs with what the Board has approved for final smart meter disposition in recent applications. In PowerStream's 2011 smart meter application (EB-2011-0128), the utility included costs to the end of 2011. In Kenora Hydro's 2011 cost of service application (EB-2010-0135), smart meter costs to the end of 2010 were included in the SMDR, and capital and operating costs for 2011 were included in the test year rate base and revenue requirement. Similarly, in Hydro Ottawa's 2012 cost of service application (EB-2011-0054), only costs to the end of 2011 were included in the determination of the SMDR.

In other smart meter stand-alone applications currently before the Board, other distributors have included the costs of forecasted new smart meters installed due to customer growth in the determination of the SMIRR.[8] In these cases, utilities have generally also documented capital and one-time operating expenses due to, for example, TOU implementation in 2012.

Board staff notes that both approaches set out above are acceptable, so long as the costs and the demand (number of customers) are forecasted for the same period and the level of the forecasted costs is in line with years where audited costs are available. In the long run, both approaches should be equivalent. As PUC has noted some challenges in estimating the number of meter installations and is scheduled to file its cost of service application for 2013 rates, Board staff submits that it may be more appropriate for PUC to delay recovery of these

[8] e.g. Lakeland Power Distribution Ltd.'s stand-alone Smart Meter Cost Recovery EB-2011-0413.

forecasted costs until its next rebasing application, at which point the smart meter installations will be treated as regular capital additions.

PUC also included estimated OM&A expenditures of $356,733 for 2012 in the smart meter model. In response to Board staff IR #1a, PUC identified which of those costs were for ongoing activities and which were expected to be one-time expenditures in 2012 only. PUC identified $30,000 in Customer Communication costs and $5,000 for expenses associated with meter base repairs for non-mandated meters as the one-time expenditures included in the 2012 OM&A expenses. PUC also identified $40,000 in Business Process Redesign costs and $45,000 in Program Management costs that it expected would be ongoing OM&A expenditures moving forward.

Board staff notes that the 2012 costs in the smart meter model form the basis of the calculation for the annualized incremental revenue requirement that is recovered through the SMIRR. Board staff notes that the SMIRR is to be in effect until the distributor's next cost of service application and, as such, one-time OM&A expenditures should not be included in its calculation. Given that PUC is scheduled to file its cost of service application for 2013 rates, Board staff takes no issue with PUC's inclusion of one-time OM&A expenses in the calculation of the SMIRR as it will only be in effect for one year.

Board staff notes that PUC has completed the majority of its smart meter deployment and will have transitioned all mandated customers to TOU pricing by the end of May 2012. As PUC is seeking final disposition of costs, Board staff questions the need for a combined $85,000 in estimated on-going Business Process Redesign and Program Management OM&A expenses. PUC may wish to further address why it believes such levels of Business Process Redesign and Program Management expenses will be warranted, going forward, in its reply submission.

Other Matters

PUC has also responded to interrogatories regarding the net book value of stranded conventional meters, and has an estimated net book value, including

net salvage revenues, of $1,500,000 as of December 31, 2012. PUC is proposing not to dispose of stranded meters at this time, but to deal with disposition in its next rebasing application, scheduled for 2013 rates. Board staff submits that this is compliant with Guideline G-2011-0001.

In response to VECC IR # 10, PUC discussed operational efficiencies and cost savings resulting from smart meter deployment. In that response, PUC only noted a reduction in meter reading costs of $55,000 for half of 2012 as a cost saving resulting from smart meter deployment. Board staff takes no issue with PUC's explanations, and recognizes that it may take time for further savings to be recognized as PUC, and the utility sector generally, become more accustomed to customer and operational data that smart meters and TOU pricing provide.

Board staff submits that PUC should be prepared to address both the stranded meters and any operational efficiencies further in its 2013 cost of service application.

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Subject to the above comments and clarifications requested, Board staff submits that PUC's Application is compliant with Guideline G-2011-0001, reflects prudently incurred costs and is consistent with Board policy and practice with respect to the disposition and recovery of costs related to smart meter recovery.

- All of which is respectfully submitted -