Ontario Energy Board **Commission de l'énergie de l'Ontario**

EB-2012-0084

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c.15 (Schedule B);

AND IN THE MATTER OF an application by PUC Distribution Inc. for an order or orders approving or fixing just and reasonable distribution rates related to Smart Meter deployment, to be effective May 1, 2012.

BEFORE: Ken Quesnelle
Presiding Member

Marika Hare
Member

DECISION AND ORDER
July 19, 2012

Introduction

PUC Distribution Inc. ("PUC"), a licensed distributor of electricity, filed an application (the "Application") with the Ontario Energy Board (the "Board") on March 5, 2012 under section 78 of the *Ontario Energy Board Act*, *1998*, S.O. 1998, c. 15, (Schedule B), seeking approval for changes to the rates that PUC charges for electricity distribution, to be effective May 1, 2012.

PUC is 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. PUC requested approval of proposed Smart Meter Disposition Riders ("SMDRs") and Smart Meter Incremental Revenue Requirement Rate Riders ("SMIRRs") effective May 1, 2012. The Application is based on the Board's policy and practice with respect to recovery of smart meter costs.[1]

[1] On December 15, 2011, the Board issued *Guideline G -2011-0001: Smart Meter Funding and Cost Recovery – Final Disposition*.

The Board issued its Letter of Direction and Notice of Application and Hearing (the "Notice") on March 30, 2012. The Vulnerable Energy Consumers' Coalition ("VECC") was granted intervenor status and cost award eligibility. Six letters of comment were received. The Notice established that the Board would consider the Application by way of a written hearing and established timelines for discovery and submissions.

While the Board has considered the entire record in this proceeding, it has made reference only to such evidence as is necessary to provide context to its findings. The following issues are addressed in this Decision and Order:

- Costs incurred with respect to Smart Meter Deployment and Operation;
- Cost Allocation;
- Stranded Meter Costs; and
- Implementation.

Costs Incurred with Respect to Smart Meter Deployment and Operation

In the Application, PUC sought the following approvals:

a. Smart Meter Disposition Rider – An actual cost recovery rate of $0.59 per Residential customer per month, $1.04 per General Service less than 50kW customer per month and $1.24 for each General Service greater than 50 kW customer per month. PUC proposed that this rate rider be effective for one year (May 1, 2012 to April 30, 2013). This rate rider will collect the difference between the 2006 to December 31, 2011 revenue requirement related to smart meters deployed as of December 31, 2011 (plus interest on operations, maintenance and administration and depreciation expenses) and the smart meter funding adder collected from 2006 to April 30, 2012 (and corresponding interest on the principal balance of SMFA revenues).

b. Smart Meter Incremental Revenue Requirement Rate Rider – A forecasted cost recovery rate rider of $2.77 per Residential customer per month, $6.65 per General Service less than 50kW customer per month and $7.83 per General Service greater than 50kW customer per month for the period May 1, 2012 to April 30, 2013. This rate rider will collect the 2012 incremental revenue requirement related to smart meter costs to be incurred from January 1, 2012 to December 31, 2012.

In responses to interrogatories, PUC made corrections to various data in the Smart Meter Model and revised its proposed rate riders for smart meter cost recovery. PUC's costs in aggregate and on a per meter basis are summarized in the following table, as confirmed by PUC in its response to a Board staff interrogatory:

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 29, 2012 and
Response to VECC staff interrogatory #1, filed on May 3, 2012

On Tab 1, Schedule 4 of the Application, PUC provided its average OM&A costs per smart meter. Those 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 noted that the cost levels reported by PUC for residential meters are in line with the range of costs previously seen by the Board in other smart meter prudence review applications as well as costs documented in the combined smart meter proceeding (EB-2007-0063). Board staff noted that in other similar applications before the Board, GS < 50 kW smart meters had typically shown per meter costs approximately 2 to 2.5 times higher than the average residential smart meter. While

PUC's costs for this class were higher than that for this level, Board staff noted that a significant portion (i.e. approximately 38%) of PUC's GS < 50 kW customers had more expensive meter configurations (e.g. polyphase, transformer rated, etc.). As such, Board staff took no issue with the above average costs per meter for customers in the GS < 50 kW class. Board staff submitted that it considered PUC's documented costs to be prudent.

VECC observed that PUC's total average costs per meter were considerably higher than the range established in the combined smart meter proceeding (EB-2007-0063), but consistent with most recent sector averages.[2] VECC noted that the average capital cost per meter for the GS < 50 kW and GS > 50 kW customer classes was higher than the average costs in other recent smart meter applications. VECC stated that it relies on Board staff's benchmarking analysis and submissions regarding the reasonableness of those costs.

The Board notes that authorization to procure and deploy smart meters has been done in accordance with Government regulations, including successful participation in the London Hydro RFP process, overseen by the Fairness Commissioner, to select (a) vendor(s) for the procurement and/or installation of smart meters and related systems. There is thus a significant degree of cost control discipline that distributors, including PUC, are subject to in the procurement and deployment of smart meters.

Subject to comments found in the sections below, the Board finds that PUC's documented costs, as revised in response to interrogatories and in PUC's reply submission, related to smart meter procurement, installation and operation, and including costs related to TOU rate implementation, are reasonable. As such, the Board approves the recovery of the costs for smart meter deployment and operation as of December 31, 2011.

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. In the Application, PUC stated that it had decided to install smart meters for its GS > 50 kW customers because it determined that these customers would have more detailed needs for data than residential or GS < 50 kW customers.

[2] The Board's Monitoring Report Smart Meter Investment – September 2010, dated March 3, 2011, showed a sector average total cost per meter of $226.92.

Additionally, PUC noted efficiencies to be gained through the discontinuing of contracted monthly on-site meter reading for GS > 50 kW customers upon conversion 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.

Board staff noted that in other applications already considered, or being considered, by the Board, some distributors had sought to recover costs for the installation of smart meters for the GS > 50 kW class. Board staff observed that in many of those cases distributors were replacing interval meters when they needed repair or replacement or upon re-sealing.[3] Board staff noted that the majority of the GS > 50 kW meters replaced in 2011 were near the end of their useful life and took no issue with PUC's decision to replace those meters and seek to recover the associated costs, at this time.

Neither VECC nor PUC made a submission on this issue.

Due to the relatively small expense and the potential for benefits the Board will allow PUC's costs for the installation of the smart meters for the GS > 50 kW class to be recovered. The Board notes however that PUC supplied no cost benefit analysis for any of the factors it offered in justifying the expense. One of the supporting factors cited was the avoidance of manual meter reading which lends itself to easily decipherable costs and benefits. In future filings to the Board, PUC should be mindful of the Board's expectations that investments are to be justified, where possible, by financial analysis.

Level of Unaudited Costs

Board staff noted that PUC's unaudited 2011 costs and forecasted 2012 costs represent approximately 17.76% of the total costs sought for recovery. Board staff noted 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 suggested that PUC address whether or not its 2011 audit had been completed in its reply submission.

[3] E.g. Horizon Utilities Coroporation's smart meter application (EB-2011-0417).

VECC agreed with Board staff's estimate that 17.76% of the costs sought for recovery in the Application were unaudited. VECC stated that if PUC were to provide audited costs for 2011 that its application would then conform to the Board's Guideline regarding audited costs.

In its reply submission, PUC noted that its 2011 external audit results were now available. As a result of the audit, PUC noted two discrepancies in the costs originally reported in the Application. PUC identified a $2,375 overstatement of capital costs and a $2,592 understatement of OM&A in the forecasted 2011 costs included in the Application. PUC filed an updated Smart Meter Model reflecting these changes. With the updated 2011 audited costs, and the adjustments noted above, PUC estimated that 92% of the total costs requested for recovery in the Application were now audited.

The Board accepts PUC's updated 2011 audited costs and approves the amounts for recovery.

Treatment of 2012 Costs

In the Application, 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 forecasted costs were for completion of the deployment of smart meters, including new installations, conversion from bulk to individual meters and completion of memory upgrades for some currently installed meters. 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.

As PUC had noted some challenges in estimating the number of meter installations and the fact that it is scheduled to file its cost of service application for 2013 rates, Board staff submitted that it may be more appropriate for PUC to delay recovery for these forecasted costs until its next rebasing application, at which point the smart meter installations would be treated as regular capital additions. VECC agreed with Board staff.

In its reply submission, PUC agreed to delay the recovery of the forecasted costs related to new meter installations until its next rebasing application. The Board agrees with Board staff and approves PUC's decision to delay the recovery of the forecasted costs related to new meter installations until its next rebasing application.

PUC's Application also included estimated OM&A expenditures of $356,733 for 2012. 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 noted that the 2012 costs included in the Application formed the basis for the calculation of the annualized incremental revenue requirement that is recovered through the SMIRR. Board staff noted that the SMIRR is to be in effect until PUC's next rebasing application and, as such, one-time OM&A expenditures should not be included in its calculation. However, given that PUC is scheduled to file its cost of service application for 2013 rates, Board staff took no issue with PUC's inclusion of one-time OM&A expenses in the calculation of the SMIRR as it would only be in effect for one year.

Board staff also noted that PUC had completed the majority of its smart meter deployment and would have transitioned all mandated customers to Time of Use ("TOU") pricing by the end of May 2012. As PUC was seeking final disposition of costs, Board staff questioned the need for a combined $85,000 in estimated on-going Business Process Redesign and Program Management OM&A expenses. Board staff suggested that PUC address why it felt that such levels of Business Process Redesign and Program Management expenses were warranted, going forward.

VECC did not make a submission on the level of forecasted OM&A expenses for 2012.

In its reply submission, PUC stated that the $40,000 in Business Process Redesign costs was inclusive of process modifications necessitated as a result of upgrades to the MDM/R and CIS systems in order to meet the requirement of Measurement Canada in displaying register reads on customer bills as well as ongoing Business Process Redesign and staff training for the overall transition to TOU billing. The $45,000 in Program Management costs were related to a contract PUC had for sync operator services.

PUC submitted that the Business Process Redesign and Project Management costs should be included in the SMIRR as they are real costs for 2012. PUC stated that, though the majority of the aforementioned costs would be ongoing, it did not negate the underlying principle of the SMIRR which is to calculate the proxy for the incremental change in the distribution rates that would have occurred if the assets and operating expenses were incorporated into the rate base and revenue requirement. PUC noted that the SMIRR will cease at the time of PUC's 2013 cost of service application when the projected Business Process Redesign and Program Management costs will be forecasted and explicitly incorporated into the rate base and revenue requirement.

The Board agrees with Board staff that, as the SMIRR is annualized incremental revenue requirement for installed smart meters, no one-time expenses should be included in its derivation. As PUC is scheduled to file its cost of service application for 2013 rates and the SMIRR will only be in effect for one year, the Board takes no issue with the inclusion of one-time costs in the SMIRR, in this case. The Board is satisfied with PUC's explanations for the need and nature of the forecasted OM&A costs for 2012. The Board approves the recovery of these forecasted costs.

Cost Allocation

In its Application, PUC proposed class-specific SMDRs and SMIRRs. Initial smart meter funding was provided by a uniform SMFA collected from all metered customers, and there was no specific Board direction for recording of costs and revenues by class.

However, it was recognized by the Board that, as there would be differing costs in different customer classes, in large part due to the costs of the meters themselves and, to the extent that accurate data was available from the utility's records, the principle of cost causality would support class-specific cost recovery. To this end, Guideline G-2011-0001 indicates that a utility is expected to address the allocation of costs in its application seeking the disposition of smart meter costs recorded in accounts1555 and 1556. Further, in recent decisions, the Board has reviewed and approved the evolution of approaches for calculating class-specific rate riders.[4]

[4] The Board's decisions with respect to PowerStream Ltd.'s 2010 and 2011 smart meter applications (respectively, EB-2010-0209 and EB-2011-0128) confirmed approaches for allocating costs and calculating class-specific rate riders for recovery of smart meter costs. The approach approved in Decision EB-2011-0128, or an analogous or improved approach is expected where data of adequate quality at a class level is available.

In response to Board staff IR #14, PUC confirmed that it proposed to allocate costs to each class on the following basis:

- 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 per rate class;
- OM&A expenses were allocated based on the number of meters installed for each 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 costs, were allocated based on the actual amounts collected from each class.

In response to VECC staff interrogatory #8a, PUC noted the following, when asked to provide class specific revenue requirements separately for the residential and GS < 50 kW classes:

> 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 rates, 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.

In its submission, Board staff noted that PUC’s response to VECC IR #8a was contradictory to its response to Board staff IR #14 in that PUC stated that it had allocated amortization to each class based on the smart meter costs per rate class. Board staff submitted 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[5], Board staff submitted that it appeared that PUC had sufficient information to calculate the class specific revenue requirement. Board staff noted 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 submitted 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.

VECC agreed with Board staff that cost causality should be the guiding principle when allocation costs to each class. VEEC agreed with Board staff that PUC should update its cost allocation to the class specific revenue requirement proposed by VECC and provide updated calculations of the SMDR and SMIRR on that basis.

In its reply submission, PUC stated that it had utilized the class specific revenue requirement approach when calculating the SMDRs and SMIRRs. PUC stated that it had pro-rated the shared capital costs for all classes. PUC stated that providing separate Smart Meter Models for each rate class would yield the same result shown in Table 1 and Table 2 of Tab 1, Schedule 5 of the application.

PUC did note that, when reviewing the calculation of the SMDR and the SMIRR, the return (deemed interest plus return on equity) was not consistently allocated based on the number of smart meters installed by rate class. PUC stated that the return was allocated using the number of smart meters for the SMDR and allocated using smart meter costs for the SMIRR. PUC provided updated SMDR and SMIRR calculations, shown in the table below.

	Application (March 5, 2011)	**PUC Reply Submission** (Return allocated based on smart meter costs)
Residential		
SMDR	$0.59	$0.52
SMIRR	$2.77	$2.59
GS < 50 kW		
SMDR	$1.04	$1.33
SMIRR	$6.65	$6.46
GS > 50 kW		
SMDR	$1.24	$1.66
SMIRR	$1.66	$7.71

[5] E.g. Responses to Board staff IRs #14 and 15, EB-2012-0084, dated May 2, 2012, and Responses to VECC IRs #8c and 9, EB-2012-0084, dated May 3, 2012.

The Board approves PUC's revised cost allocation methodology as it is consistent with the approach approved by the Board in PowerStream's smart meter cost recovery application (EB-2011-0128). The Board will approve an effective date of May 1, 2012 as proposed by PUC and will approve an implementation date of August 1, 2012. As a result, recovery of the SMDRs should be derived using a 9 month period from August 1, 2012 to April 30, 2013. The SMIRRs are monthly fixed rates based on the annualized revenue requirement and remain in effect until the effective date of the utility's next cost of service rate order, at which point the capital and operating costs are directly incorporated into the rate base and revenue requirement. As PUC is scheduled to rebase its rates for 2013, the Board notes that the SMIRR may be in effect from August 1, 2012 until April 30, 2013.

Stranded Meter Costs

In its Application, PUC proposed not to dispose of stranded meters by way of stranded meter rate riders at this time, but to deal with disposition in its next rebasing application, scheduled for 2013 rates. PUC estimated the net book value of stranded meters as of December 31, 2012 will be $1,500,000. Neither VECC nor Board staff took issue with PUC's proposal. Board staff submitted that PUC's proposal is also compliant with Guideline G-2011-0001. The Board agrees.

Implementation

The Board expects PUC to file detailed supporting material, including all relevant calculations showing the impact of this Decision and Order on PUC's class specific smart meter revenue requirements and the determination of the updated SMDRs and SMIRRs.

As noted above, PUC requested an implementation date of May 1, 2012 for its new rates. Given the filing date and the time required to process an application of this nature, the Board has determined that an implementation date of August 1st, 2012 is appropriate. In developing its draft Rate Order, PUC is directed to establish the SMDRs based on a 9-month recovery period to April 30, 2013 and to accommodate within the SMDR the applicable revenue requirement amounts related to the months of May, June and July.

The SMIRRs shall be implemented on August 1st, 2012. The Board notes that these riders are based on an annual revenue requirement and will be in effect until the effective date of PUC's next cost of service rate order.

PUC is authorized to continue to use the established sub-account Stranded Meter Costs of Account 1555 to record and track remaining costs of the stranded conventional meters replaced by smart meters. The balance of this sub-account should be brought forward for disposition in PUC's next cost of service application.

THE BOARD ORDERS THAT:

1. PUC shall file with the Board, and shall also forward to VECC, a draft Rate Order attaching a proposed Tariff of Rates and Charges reflecting the Board's findings in this Decision and Order, within 7 days of the date of this Decision and Order. The draft Rate Order shall also include customer rate impacts and detailed supporting information showing the calculation of the final rates.

2. VECC and Board staff shall file any comments on the draft Rate Order with the Board and forward to PUC within 7 days of the date of filing of the draft Rate Order.

3. PUC shall file with the Board and forward to VECC responses to any comments on its draft Rate Order within 7 days of the date of receipt of the submission.

Cost Awards

The Board will issue a separate decision on cost awards once the following steps are completed:

1. VECC shall submit its cost claims no later than **7 days** from the date of issuance of the final Rate Order.

2. PUC shall file with the Board and forward to VECC any objections to the claimed costs within **14 days** from the date of issuance of the final Rate Order.

3. VECC shall file with the Board and forward to PUC any responses to any objections for cost claims within **21 days** from the date of issuance of the final Rate Order.

4. PUC shall pay the Board's costs incidental to this proceeding upon receipt of the Board's invoice.

All filings to the Board must quote file number **EB-2012-0084,** be made through the Board's web portal at, www.errr.ontarioenergyboard.ca and consist of two paper copies and one electronic copy in searchable / unrestricted PDF format. Filings must clearly state the sender's name, postal address and telephone number, fax number and e-mail address. Parties must use the document naming conventions and document submission standards outlined in the RESS Document Guideline found at www.ontarioenergyboard.ca. If the web portal is not available parties may email their document to BoardSec@ontarioenergyboard.ca. Those who do not have internet access are required to submit all filings on a CD in PDF format, along with two paper copies. Those who do not have computer access are required to file 2 paper copies.

DATED at Toronto, July 19, 2012

ONTARIO ENERGY BOARD

Original signed by

Kirsten Walli
Board Secretary