2012 ELECTRICITY DISTRIBUTION RATES

Kitchener-Wilmot Hydro Inc.

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

EB-2012-0288

STAFF SUBMISSION

September 14, 2012

INTRODUCTION

Kitchener-Wilmot Hydro Inc. ("KWHI") is a licensed electricity distributor serving customers in the City of Kitchener and Municipality of Wilmot. KWHI filed a stand-alone application (the "Application") with the Board on June 15, 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. KWHI requested approval of proposed Smart Meter Disposition Riders ("SMDRs") effective November 1, 2012 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]

The Board issued its Letter of Direction and Notice of Application and Hearing on July 5, 2012 and issued a corrected Notice of Application on July 10, 2012. The Vulnerable Energy Consumers' Coalition ("VECC") requested and was granted intervenor status and cost award eligibility. No letters of comment were received. The Notice of Application and Hearing established that the Board would consider the Application by way of a written hearing and set timelines for discovery and submissions.

Board staff and VECC filed interrogatories on August 2, 2012, and KWHI filed its responses to all interrogatories on August 17, 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] On December 15, 2011, the Board issued *Guideline -2011-0001: Smart Meter Funding and Cost Recovery – Final Disposition* ("Guideline G-2011-0001"). In preparing its Application, KWHI used Smart Meter Model, Version 2.21, issued in April 2012 for 2013 applications, along with Guideline G-2011-0001, and prepared its Application considering recent Board decisions on smart meter cost disposition and recovery.

THE APPLICATION

Approvals Sought

In the Application filed on June 15, 2012, KWHI applied for the following approvals:

- A SMDR of ($.0046) per month for residential customers and $8.6823 per month for GS<50kW customers, to dispose of the deferred revenue requirement related to smart meters installed through December 31, 2012, net of the Smart Meter Funding Adder ("SMFA") revenues collected to April 30, 2012. The SMDR would be in place for a period of 18 months, from November 1, 2012 until April 30, 2014; and
- A SMIRR of $0.5930 per month for residential customers and $4.7369 per month for GS<50kW customers, to recover the annual revenue requirement associated with smart meters installed from the inception of the Smart Meter program through to December 31, 2012 including forecasted costs after December 31, 2012. The SMIRR would be in place from May 1, 2013 until April 30, 2014 the implementation date for new rates as determined in KWHI's next cost of service Application, expected to be May 1, 2014.[2]

Smart Meter Model Version 2.21KWH

Board staff notes that KWHI used a customized version of the Smart Meter Model, Version 2.21KWH, in its Application. Version 2.21 of the Smart Meter Model was prepared by Board staff and issued in April 2012 to distributors making cost of service applications for January 1, 2013 rates. Version 2.21 was designed to calculate the SMDR to recover smart meter costs to December 31, 2012, with the SMIRR then being based on the incremental revenue requirement for 2013, including forecasted 2013 capital and operational costs related to installed smart meters.[3]

[2] Application, para. 5

[3] Version 2.21 has subsequently been replaced by Version 3.00 of the Smart Meter Model, posted on the Board's website on June 28, 2012. Version 3.00 has been upgraded for Excel

Prior to filing its Application, KWHI was in contact with Board staff to discuss certain modifications needed for its circumstances. Board staff provided to KWHI the customized version to provide the necessary flexibility required by the utility, specifically to fix a minor cell reference error affecting the calculation of the SMIRR based on 2013 costs, and to allow depreciation expense calculations to reflect monthly in service dates for additions, as KWHI uses and has been approved by the Board, in contrast to the more common and simpler average in-service (mid-year addition) rule used by most distributors. However, Board staff notes that the calculations of the deferred and ongoing revenue requirement based on the smart meter costs, and the SMDRs and SMIRRs to recover the revenue requirement, are unaltered as compared to the standard Smart Meter Model. It is Board staff's submission that the calculations are consistent with the methodology employed in other applications for smart meter cost recovery and approved by the Board to date. As such, Board staff submits that KWHI's use of this customized version of the Smart Meter Model in this Application is appropriate.

Proposed Effective Dates for SMDRs and SMIRRs

KWHI has applied for an effective date of November 1, 2012 for the SMDR, for a period of 18 months to April 30, 2014. However, the SMIRR is proposed to be effective May 1, 2013, for a period of 12 months to April 30, 2014, coinciding with the expected effective date for KWHI's rates based on a cost of service rates application.

Board staff submits that that KWHI's approach is reasonable. Based on the Smart Meter Model Version 2.21KWH, the SMDR is determined to recover the deferred revenue requirement of installed smart meters to December 31, 2012, offset by SMFA revenues and associated interest. This includes forecasted costs for a stub period from November 1 to December 31, 2012. Board staff submits that costs for this period are small in comparison to the total costs recoverable and, as operating expenses, they are reasonably easy to predict.

2010, and includes functionality to calculate class-specific SMDRs and SMIRRs, but the basic revenue requirement derivation is unchanged.

Board staff notes that the Board approved the analogous recovery of forecasted "stub period" amounts in PowerStream's 2011 smart meter cost recovery application EB-2011-0128.

Board staff submits that making the SMIRR effective May 1, 2013 is also appropriate. KWHI, like many other Ontario electricity distributors, has a rate year from May 1 to April 30, representing a four-month lag from the fiscal calendar year. The SMIRR in this Application is based on the incremental revenue requirement related to installed smart meters for the 2013 rate year. As such, recovery should commence on May 1, 2013, to align with KWHI's 2013 distribution rates that will be determined in its 2013 IRM rates application. The SMIRR will continue to April 30 of the year in which KWHI rebases, expected to be for 2014 rates. In this manner, the lag between the fiscal year and rate year is accounted for, and KWHI is held whole with respect to the recovery of the ongoing incremental revenue requirement for installed smart meters until its next rebases rates through a cost of service application.

KWHI has input the prescribed short-term interest rate so that interest (on both the principal of SMFA revenues and on the principal of deferred OM&A and depreciation expenses) is calculated up to October 31, 2012, consistent with the proposal that the SMDR become effective November 1, 2012.

Board staff notes that the use of the 2013 model in KWHI's Application also avoids the issue of foregone SMIRR revenue recovery that the Board has had to address in recent decisions on smart meter cost recovery applications.

Updated Evidence

KWHI revised its proposed SMDRs and SMIRRs in responses to interrogatories, with respect to the following:

- KWHI noted that it had inadvertently entered the amortization expense for Other Equipment as a positive, rather than a negative, number, and

corrected this error in preparing its responses to interrogatories for both aggregate and class-specific smart meter models;[4]

- In response to Board staff interrogatory 9 b), KWHI corrected the calculations of the class-specific SMIRRs to remove 2012 SMFA revenues and interest which had been factored into the determination of the 2013 incremental revenue requirement in error; and
- In response to an interrogatory from VECC, KWHI calculated class-specific SMDRs and SMIRRs based on applying the class-specific costs to the Smart Meter Model Version 2.17.[5]

The proposed class-specific SMDRs and SMIRRs and those calculated in response to Board staff interrogatory 9 and VECC interrogatories 14 a) and 17 are summarized below:

Table 1: Original and Revised SMDRs and SMIRRs

Class	**SMDR ($/month, effective November 1, 2012 for 18 months)**			**SMIRR ($/month, effective May 1, 2013)**		
	Original	**Revised**		**Original**	**Revised**	
		Board staff IR 9 b)	VECC IRs 14 a), 17 and Board staff IR 9 c)		Board staff IR 9 b)	VECC IRs 14 a), 17 and Board staff IR 9 c)
Residential	($0.0046)	unchanged	$0.1345	$0.5930	$1.6102	1.6171
GS < 50 kW	$8.6823	unchanged	$8.4176	$4.7369	$5.7069	5.5530

KWHI now proposes the class-specific SMDRs and SMIRRs as calculated in response to class-specific models as provided in response to VECC interrogatory 14 a) and 17 and Board staff IR 9 c). Board staff submits that the class-specific SMDRs and SMIRRs, as provided in the responses to these interrogatories and reflecting corrections made to the data in the Application as documented above, have been calculated appropriately through the class-specific models.

[4] Responses to Board staff IR # 9 and VECC interrogatories 10, 14, 16 and 17

[5] Response to VECC interrogatory 14 a). See also response to Board staff interrogatory 9 c).

However, Board staff notes that KWHI has proposed the SMDRs and SMIRRs to four decimal places. This number of digits is common for other rate riders, where the charge determinant is volumetric (either kWh or kW, depending on the customer class). However, Board staff submits that the SMDR and SMIRR are, by design, monthly charges applied on a per customer basis and are invariant of consumption or demand, and should only be determined to two decimal places, similar to that of the fixed monthly charge. This treatment is also consistent with how these costs will largely be treated for recovery in rates when incorporated into KWHI's rate base and revenue requirement in its next cost of service application. As such, Board staff submits that the correct proposed SMDRs and SMIRRs should be as shown in the following table and as calculated in the class-specific smart meter models filed by KWHI in its responses to interrogatories:

Table 2: SMDRs and SMIRRs rounded as fixed monthly rates

	SMDR ($/month, effective November 1, 2012 for 18 months)	SMIRR ($/month, effective May 1, 2013)
Residential	$0.13	$1.62
GS < 50 kW	$8.42	$5.55

Prudence of Smart Meter Costs

At Least 90% of Smart Meter Costs are Audited

In its Application, KWHI stated that all of the historical costs for which disposition and recovery to December 31, 2011 have been audited, and that this represents 99.99% of smart meter deployment and 95.29% of smart meter costs for which recovery is sought in this Application.[6] With this confirmation, Board staff submits that KWHI's Application complies with Guideline G-2011-0001 with regard to the expectation that at least 90% of the smart meter costs be audited actuals.

[6] Application, para. 18.

Aggregate Smart Meter Costs

In its Application, KWHI has documented $13,382,870 for capital and $1,429,463 for OM&A expenses related to the deployment and operation of smart meters.[7]

KWHI has documented $82,478 of smart meter costs for repair and replacement of customer-owned equipment (e.g. meter bases), and documented that these costs were expenses per Board guidelines.[8] In response to an interrogatory,[9] KWHI provided further explanation of these costs. KWHI documented that 168 smart meter installations for residential and GS < 50 kW required repair or replacement of customer-owned equipment, so that the average cost per installation requiring repair or replacement would be about $490. KWHI noted that it used two external ESA-licensed contractors for the work which was unpredictable and "emergency" in nature. Board staff takes no issue with these costs and the explanations for them.

Costs Beyond Minimum Functionality

In its Application, KWHI has documented $335,322 for capital costs and $537,777 for OM&A expenses "beyond minimum functionality".

KWHI documented $355,322 as capital costs for upgrading its CIS/billing system for TOU billing. KWHI documented that the system conversions were done internally by utility staff. In addition, KWHI has documented ongoing OM&A expenses of $140,000 per annum. In response to an interrogatory,[10] KWHI provided further information of the CIS system conversion. KWHI noted that it did not do a formal cost-benefit analysis, but that discussions with other LDCs led it to conclude that a full CIS/billing system replacement would have been much more costly.

[7] Application, para. 43, Table 7
[8] Application, para. 49 and Table 10.
[9] Responses to Board staff interrogatory 2 and VECC interrogatory 8.
[10] Response to Board staff interrogatory 5.

Board staff and VECC both noted that OM&A expenses increase in 2012 and 2013, and sought further explanation for the increases. In response to interrogatories,[11] KWHI notes that the Service Agreement with Sensus for the operation of the AMI network has a monthly fee per collector and a monthly fee per meter. The monthly fee per collector commenced in 2010, but the per meter fee only commenced in 2012 once contractual performance standards were met. KWHI also documented that certain other costs, such as for the annual security audit, also commenced in 2012. ODS fees, beginning in 2011, and exceeding $125,000 per year, are another factor for increased and ongoing OM&A expenses. Board staff submits that the explanations put forward by KWHI in support of its increased OM&A expenses are reasonable. However, Board staff submits that KWHI should be prepared to support the ongoing incremental OM&A expenses in its next cost of service rates application.

In its Application, KWHI has documented its procurement process and the process to become authorized for smart meter deployment in compliance with O.Reg. 427/06. KWHI has documented how its adherence to the London Hydro RFP process, and its cooperation with other Ontario local distribution companies has resulted in improved technology selection and deployment, and cost benefits to KWHI and ultimately to ratepayers. Board staff takes no issue with KWHI's explanations on these matters.

Costs per Smart Meter

In its Application, KWHI provided tables[12] showing the average cost per installed meter, according to meter type and customer class. Residential meters average $127.29, while GS < 50 kW smart meters average $504.06. The overall average is $160.24. Further explanation for the cost was provided in response to interrogatories. Board staff notes that these costs are well within the ranges that the Board has seen for most utilities serving urbanized areas, notwithstanding the fact that KWHI's service territory is both urban and rural in nature[13] and

[11] Responses to Board staff interrogatory 7 and VECC interrogatory 12.
[12] Application, para. 52, Table 13, 14 and 15.
[13] 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

considers that these per meter costs are reasonable and supported by the documentation.

Further, Board staff observes that the proposed SMIRR is $1.62/month for Residential customers and $5.55/month for GS < 50 kW customers are lower than what the Board has reviewed and approved in many applications to date. The SMIRR is, by design, a proxy for the incremental increase in distribution rates to recover the annualized capital-related and operating costs of smart meters as if they were in rate base and operating expenses. The SMIRR is below the range of $3 to $4 that was originally estimated for residential smart meters (albeit on limited and preliminary data) in the Board's Report on smart meters in 2005, reflecting technological improvements and experience gained by manufacturers and the industry over time.[14] Board staff submits that KWHI's proposed SMIRRs are indicative of the utility's efforts to effect the deployment and operation of smart meters to its residential and small general service customers in an efficient and cost effective manner.

Noting that KWHI became authorized to deploy smart meters through compliance with the London Hydro RFP process, as required in subsection 1.(1) 8 of O. Reg. 427/06,[15] Board staff submits that KWHI has acted in accordance with the regulations in its processes for the procurement of smart meters and associated equipment and for services to install and operate the smart meters and associated equipment. As such, Board staff considers that the documented historical costs and the forecasted costs are prudent.

---

for the 13 applicant utilities, including Horizon, 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. The cost information in the combined smart 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 or are being considered by the Board.

[14] *Smart Meter Implementation Plan - Report of the Board To the Minister*, January 26, 2005, pg. vi, http://www.ontarioenergyboard.ca/documents/communications/pressreleases/2005/press_release_sm_implementationplan_260105.pdf

[15] Application, paras. 12, 24, 26 and 27

2012 and 2013 Costs

Board staff notes that KWHI has not included new capital costs for smart meters to be forecasted to be deployed in 2012 and 2013 due to customer growth, although it has included operating expenses related to currently installed smart meters. The need to include 2012 and 2013 costs is also necessitated by the use of the (customized) Version 2.21KWH of the Smart Meter Model, which calculates the SMIRR based on the forecasted 2013 incremental revenue requirement.

Board staff submits that KWHI's approach is consistent 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. The Board has also accepted this treatment in recent cost of service[16] and stand-alone smart meter[17] applications.

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

Board staff submits that both approaches set out above are acceptable, so long as the costs and the demand (number of customers) are for the same period and the forecasted costs for both 2012 and 2013 are less than 10% of the total costs of the program. In the long run, both approaches should be equivalent. Board staff submits that KWHI will be compensated through the SMIRR revenues collected from any new customers for smart meter costs associated with

[16] e.g. Decision and Order EB-2010-0135, regarding Kenora Hydro's 2011 cost of service rates application, and Decision and Order EB-2011-0054, regarding Hydro Ottawa Limited's 2012 cost of service rates application.
[17] e.g. Decision and Order EB-2012-0086, regarding Cambridge and North Dumfries Hydro Inc.'s 2012 smart meter cost recovery application.

customer growth until its distribution rates are next rebased through a cost of service application.

Other Matters

Stranded Meters

KWHI is proposing not to dispose of stranded meters at this time, but to deal with disposition in its next rebasing application, scheduled for 2014 rates.[18] The aggregated net book value of stranded meters, in aggregate for the Residential and GS < 50 kW classes, is estimated to be about $3.77 million as of December 31, 2013. The stranded conventional meters will continued to be amortized until disposition. [19] .

Board staff submits that KWHI's proposal is consistent with Guideline G-2011-0001. However, in its next cost of service application for 2014 rates, KWHI should make a proposal for the recovery of stranded meter costs through class-specific Stranded Meter Rate Riders, as envisaged in Section 3.7 of Guideline G-2011-0001.

Operational Efficiencies Realized due to Smart Meter Deployment

In its Application and response to interrogatories,[20] KWHI documented that a reduction in maintenance expenses for meters of about $292K was factored into its revenue requirement for its 2010 rates application. KWHI also documented that data sent back by smart meters is also of assistance in detecting tampering and outages, and allowed for early detection and replacement of a failing transformer, thus avoiding possible overtime costs in case of an emergency. KWHI also indicated that it plans to invest in an Outage Management System that will use smart meter data to detect issues in its network and thus allow for further efficiencies in operations and maintenance and capital investments.

[18] Application, para. 9
[19] Response to Board staff interrogatory 1.
[20] Application, para. 45 and rresponses to Board staff interrogatory 3 and VECC interrogatory 10.

Board staff takes no issues with KWHI's initiatives in this regard, but submits that KWHI should be prepared to address any operational efficiencies due to smart meter and TOU implementation in its next cost of service application.

_____

Subject to the above comments, Board staff submits that KWHI's Application is consistent 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 deployment and operation.

- All of which is respectfully submitted -