



ONTARIO ENERGY BOARD

2012 ELECTRICITY DISTRIBUTION RATES

Niagara-on-the-Lake Hydro Inc.

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

EB-2012-0036

STAFF SUBMISSION

April 12, 2012

INTRODUCTION

Niagara-on-the-Lake Hydro Inc. (“NOTL”) filed a stand-alone application (“the Application”) with the Board on January 30, 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. NOTL 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 February 17, 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 NOTL on March 15, 2012. NOTL filed its responses to Board staff and VECC interrogatories on March 22, 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-2008-0002: Smart Meter Funding and Cost Recovery*, issued October 22, 2008. On December 15, 2011, the Board issued *Guideline -2011-0001: Smart Meter Funding and Cost Recovery – Final Disposition*. NOTL used Smart Meter Model, Version 2.17, and prepared its application considering recent Board decisions on smart meter cost disposition and recovery.

² Response to Board staff IR #1.

THE APPLICATION

Approvals Sought

In the Application as filed on January 30, 2012, NOTL applied seeking the following approvals:

- **Smart Meter Disposition Rate Rider:**

NOTL proposed a class specific SMDR of \$1.07 per month for each residential customer and \$1.20 per month for each GS < 50 kW customer. This rate rider would be in effect from May 1, 2012 to April 30, 2014 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**

NOTL proposed a class-specific SMIRR of \$3.08 per month for each residential customer and \$3.66 per month for each GS < 50 kW customer. This rate rider would be in effect from May 1, 2012 until the effective date of NOTL's rate order arising from NOTL's next scheduled cost of service rate application (scheduled for 2014 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, NOTL made or confirmed corrections for the following:

- Input 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 # 11); and

³ NOTL's Application, January 31, 2012, pages 2 and 3.

- Corrected the aggregate federal and provincial corporate income tax rates input in the model for each year from 2006 to 2011, for calculating the deferred revenue requirement (Board staff IR # 10).

NOTL 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 NOTL's responses to interrogatories can be found in the table below.

Table 1: Original and Revised SMDRs and SMIRRs

| Class | SMDR (\$/month, for 24 months) | | SMIRR (\$/month) | |
|----------------------|--------------------------------|---------|------------------|---------|
| | Original | Revised | Original | Revised |
| Residential | \$1.07 | \$1.07 | \$3.07 | \$3.06 |
| GS < 50 kW | \$1.20 | \$1.21 | \$3.66 | \$3.63 |

Board staff notes that the updated Smart Meter Model filed with NOTL's replies to Board staff interrogatories contains interest rates inputted in sheet 8 for the second, third and fourth quarters of 2012, past 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 NOTL's total residual deferred revenue requirement to be recovered through the SMDR to be understated by approximately \$4,300. Board staff suggests that NOTL 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 Board staff interrogatory #8, NOTL confirmed its per meter costs as \$254.17 per smart meter. The following table summarizes NOTL's 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) | \$1,887,650 | \$233.68 |
| Overall OM&A Costs (including 2012 forecast) | \$43,544 | \$20.49 |
| Total Cost Per Smart Meter | \$2,052,940 | \$254.17 |
| Capital Costs Beyond Minimum Functionality (includes 2012 projected) | \$268,479 | \$33.24 |
| OM&A Costs Above Minimum Functionality (includes 2012 projected) | \$45,733 | \$5.66 |
| Total Costs Above Minimum Functionality | \$314,212 | \$38.90 |
| Total Number of Smart Meters | 8,078 | |
| Forecast 2012 Smart Meter Installations | 165 | |
| Incremental Capital 2012 projected | \$44,984 | - |
| Incremental OM&A 2012 projected | \$39,667 | - |

Sources: Smart Meter Model, Sheet 3, as filed on March 29, 2012 and
Response to Board staff interrogatory #8a, filed on March 29, 2012

Board staff observes that these per meter costs are beyond the ranges of per meter costs that the Board has seen for most utilities, with Hydro One Networks Inc. being the main exception.⁴ In response to Board staff interrogatory #8b, NOTL noted that it had cooperated with eight other LDCs in the Niagara Erie Power Alliance (“NEPA”) to reduce their smart meter costs through RFP’s for an AMI vendor, AMI installation, and disposal of meters.

NOTL noted that its service territory contains a large rural area containing farm-related operations that are supplied with a central metering arrangement. NOTL further noted

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 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.

that the town of Niagara-on-the-Lake is a small tourist-based town with a disproportionately large number of small commercial accounts to residential (i.e. NOTL has documented that it has approximately 1250 GS < 50 customers compared to approximately 6650 residential customers). NOTL noted that GS < 50 class customers typically have more expensive meter configurations. NOTL also noted that it has completed virtually all of the more difficult and expensive meter installations in its service territory and that its reported total cost per meter includes approximately \$20 per meter for the cost of migrating to a new smart meter/TOU ready CIS system. NOTL estimated that it was required to install approximately 750 non-standard smart meters (e.g. central, polyphase and network), representing 9.5% of all meters with an average cost of approximately \$400 per installation.

Board staff submits that NOTL's explanation of its higher than average total cost per installed smart meter is reasonable and takes no issue with the documented overall cost per smart meter installed.

Board staff observes that NOTL 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 the CIS system and the treatment of unaudited costs, Board staff considers that the documented costs are prudent.

Costs Beyond Minimum Functionality

NOTL's application included a request to recover \$268,479 in capital costs and \$45,733 in OM&A costs beyond minimum functionality, as defined in the combined proceeding related to Smart Meters (EB-2007-0063) and in Guideline G-2011-0001. These costs include: CIS system upgrades; MDM/R integration; TOU implementation; customer education; and web presentment.

In the Application, NOTL noted that it participated in group RFPs through the NEPA group to select vendors for these activities.

NOTL noted that it had originally received an estimate of \$170,000 from its then CIS vendor, COS Computer Systems, to make its CIS system ready for time of use pricing. NOTL later noted that it had selected the Harris Northstar CIS system, through an RFP with nine other distributors in the Utility Combined Services (“UCS”) consortium, at a cost in excess of the estimate provided by COS Computer Systems. In response to Board staff interrogatory #8b, NOTL provided the following explanation for selecting the more expensive CIS option:

One of our primary reasons for migrating to UCS systems was the fact that we had concerns with the long-term viability of our then current CIS vendor in the utility market. With only one other LDC client and the owner and programmer nearing retirement with no succession plan in place, we were at great risk of not meeting our regulatory requirements. Based on the company’s previous track record, we had little faith that the necessary functionality changes could be completed on schedule and on budget. Our new vendor (Harris) supports as much as half the Ontario market and the UCS group consists of 10 members.

In response to VECC interrogatory #8, NOTL stated that the total contract price from Harris Computer Corporation for Northstar was \$190,140 plus out-of-pocket expenses. Given the reasoning for the decision to select the Harris CIS system, Board staff questions whether smart meter deployment is the sole driver for the CIS system change. NOTL should address whether or not the CIS system upgrade costs documented in the Application are incremental to and non-duplicative of costs currently recovered in approved distribution rates, in its reply submission. Board staff submits that costs for a new CIS should not be funded by the smart meter program unless it can be clearly demonstrated that the costs are exclusively related to the smart meter program. Costs for a new CIS would typically be addressed at the distributor’s next cost of service rate application.

Provided that NOTL is able to demonstrate that its CIS changeover costs are incremental to and non-duplicative of costs currently approved in its distribution rates and exclusively related to the smart meter program, Board staff takes no issue with the nature or quantum of NOTL’s documented costs above minimum functionality. If NOTL is unable to show that the documented CIS system cost are incremental to amounts

currently in distribution rates and exclusively related to the smart meter program, Board staff submits that the CIS changeover costs requested for recovery should be reduced accordingly. These costs would then be addressed at NOTL's next cost of service rate application. Board staff notes that NOTL's documented average cost per meter, when including costs above minimum functionality and the nature of NOTL's customer base, is not drastically beyond the range of costs seen by the Board for smart meter cost recovery.

Cost Allocation Methodology

In its Application, NOTL proposed class specific fixed charge SMDRs and SMIRRs for the residential and GS < 50 kW customer classes. NOTL used the following cost allocation methodology:

- Allocation of the return (deemed interest plus return on equity) and amortization based on the allocation of Account 1860 in the cost allocation model (CWMC in the model);
- Allocate the OM&A based on the number of meters installed for each class;
- Allocate payments in lieu of taxes (PILs) based on the revenue requirement allocated to each class before PILs; and
- Smart Meter Funding Adder revenues, including carrying costs, were subtracted from the overall revenue requirement. The resulting amount was allocated based on the overall percentage arising from the three allocations above.

In response to Board staff IR #13, NOTL noted the following, when asked why it was unable to provide capital costs for installed smart meters separately for the residential and GS < 50 kW classes:

NOTL did not track residential and GS costs during the purchase and installation process. We have attempted to estimate the separate costs but are impeded by the fact that the various meter types can generally be found on both rate classes. Our contract mass installer rates varied by meter locations inside, outside, rural and urban which further complicates such a process.

Board staff accepts NOTL's explanation of its inability to provide actual smart meter capital costs separately by customer class. NOTL has proposed to use the 1860 CWMC allocators from its 2006 Cost Allocation Review informational filing to allocate the overall smart meter capital costs to the residential and GS < 50 kW customer classes. Board staff notes that the informational filing from the 2006 Cost Allocation Review underpinned the cost allocation approved by the Board in the Decision and Order from NOTL's 2009 cost of service application (EB-2008-0237). Board staff observes that, with the exception of the use of the 1860 CWMC allocation, NOTL's cost allocation methodology is similar to the approach approved by the Board in PowerStream's 2010 smart meter cost recovery application (EB-2010-0209). Board staff notes that PowerStream did track its smart meter capital costs by rate class and used actual capital costs when allocating the return to the residential and GS < 50 kW classes in its 2010 smart meter cost recovery application.

Board staff believes that, due to its age, the 1860 CWMC cost allocator may no longer be a relevant proxy for allocating meter capital costs to classes with smart meters. Board staff suggests that if NOTL's CIS system is capable of identifying the meter configuration for customers in the residential and GS < 50 kW classes that it adopt an approach similar to that in Appendix G of Welland Hydro's Smart Meter Cost recovery application (EB-2011-0415). That is, NOTL could attempt to allocate capital costs to each class based on meter configurations. NOTL should address this in its reply submission.

Subject to the above comments, Board staff submits that NOTL's cost allocation methodology is reasonable.

Treatment of 2012 Costs

Board staff notes that NOTL has included capital costs for 165 smart meters forecasted to be deployed in 2012 in the determination of the SMIRR. 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 both the capital costs and forecasted number of new smart meters installed due to customer growth in the determination of the SMIRR.⁵ 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 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 NOTL has completed its smart meter deployment and has implemented TOU billing in October 2011, Board staff is of the view that NOTL's approach is appropriate in this Application.

Treatment of Unaudited Costs

Board staff notes that NOTL's unaudited 2011 costs and forecasted 2012 costs represent approximately 21% of the total costs of the smart meter deployment. Based on the capital and OM&A expenditures related to minimum functionality that NOTL has provided in the Smart Meter Model for 2011, Board staff estimates a total cost per meter of \$819.60 for meters installed in 2011, significantly higher than the average per meter costs discussed earlier in this submission. Board staff suggests that NOTL address whether or not its unaudited costs for the purchase and installation of smart meters in 2011 and forecasted for 2012 show any significant variation from the cost levels established in years where audited costs are available.

In the normal course, Board staff would take no issue with NOTL's proposal, provided that NOTL is able to show that the unaudited costs in 2011 and 2012 do not significantly vary from the audited amounts, on a per meter basis. Given that the unaudited costs and forecasted costs are significantly above the 10% threshold suggested in the Filing Guidelines and appear to be significantly higher on a per meter basis than costs in prior years, Board staff believes that it would be more appropriate for the Board to approve

⁵ e.g. Lakeland Power Distribution Ltd.'s stand-alone Smart Meter Cost Recovery EB-2011-0413.

the disposition of costs to the end of December 31, 2010. Disposition of NOTL's costs for 2011 and 2012 could be deferred to its scheduled cost of service application for 2014 rates, by which time the costs would be audited and the reasons for the increased costs could be more fully tested.

Other Matters

NOTL 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 \$133,000 as of December 31, 2013. NOTL 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. Board staff submits that this is compliant with Guideline G-2011-0001.

In response to VECC IR # 14, NOTL discussed operational efficiencies and cost savings resulting from smart meter deployment. In that response, NOTL noted that it had not recognized any notable operational efficiencies, to date. NOTL further noted that the AMI system has added a new level of complexity and cost to its business. NOTL noted that the only identifiable cost offset is the reduction in meter reading costs. In response to Board staff IR #6, NOTL noted that it had offset the estimated annual operating expenses for its smart meters by the estimated meter reading savings of approximately \$33,420. Board staff takes no issue with NOTL's explanations, and recognizes that it may take time for further savings to be recognized as NOTL, and the utility sector generally, become more accustomed to customer and operational data that smart meters and TOU pricing provide.

Board staff submits that NOTL should be prepared to address both the stranded meters and any operational efficiencies further in its 2014 cost of service application.

Subject to the above comments and clarifications requested, Board staff submits that NOTL'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 -