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**BY E-MAIL**

February 26, 2010

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

Dear Ms. Walli:

**Re: Cambridge and North Dumfries Hydro Inc.**
**2010 Distribution Rate Application**
**Board Staff Submission**
**Board File No. EB-2009-0260**

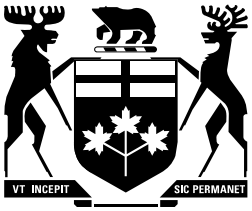
In accordance with Procedural Order No. 4, please find attached Board staff's Submission in the above proceeding. Please forward the following to Cambridge and North Dumfries Hydro Inc. and to all other registered parties to this proceeding.

Yours truly,

*Original Signed By*

Keith C. Ritchie
Project Advisor – Applications & Regulatory Audit

Att.




# ONTARIO ENERGY BOARD

## STAFF SUBMISSION

## 2010 ELECTRICITY DISTRIBUTION RATES

## Cambridge and North Dumfries Hydro Inc.

## EB-2009-0260

## February 26, 2010

## INTRODUCTION

Cambridge & North Dumfries Hydro Inc. ("C&ND Hydro" or the "Applicant") is a licensed electricity distributor serving approximately 85,000 customers in the City of Cambridge and the Township of North Dumfries, located in southwestern Ontario. C&ND Hydro filed its 2010 rebasing application (the "Application") on August 31, 2009. C&ND Hydro requested approval of its proposed distribution rates and other charges effective May 1, 2010. The Application was based on a future test year cost of service methodology.

The Vulnerable Energy Consumers' Coalition ("VECC"), the School Energy Coalition ("SEC"), and Energy Probe Research Foundation ("Energy Probe") were granted intervenor status. No letters of comment were received.[1] The embedded distributors, Waterloo North Hydro Inc. and Hydro One Networks Inc., were served Notice and a copy of the Application but did not participate in the proceeding.

The proceeding was conducted through written discovery, with two rounds of written interrogatories. Pursuant to Procedural Order No. 3, a settlement conference was conducted on January 20, 2010. A partial settlement was reached between the Applicant and the registered intervenors. Board staff attended and participated in the settlement conference, but is not a party to the settlement. The settlement was filed with the Board on February 10, 2010. On February 17, 2010, C&ND Hydro filed a revised proposed settlement agreement (the "Revised Partial Settlement").

On February 18, the Board issued a Decision on Partial Settlement which accepted the Revised Partial Settlement. The Board also accepted that parties' positions on unsettled issues, as documented in Attachment A of the Revised Partial Settlement, would be heard through written submissions, and confirmed the schedule for written submissions as already documented in Procedural Orders 3 and 4.

Parties did not agree to settlement on the following issues and proposed that these issues be addressed through written submission:

- Load Forecasting
- Normalization and recovery of expenses previously recovered in part through Other Revenues for Water and Sewage Billing which is ceasing in Q4 of 2010

[1] Response to Board staff Supplemental IR # 26.

- Normalization of Customer Information System ("CIS") Operations, Maintenance and Administration ("OM&A") expenses
- Working Capital Allowance – The need for a Lead/Lag Study for C&ND Hydro's next cost of service rebasing application
- Cost of Capital
    - Return on Equity
    - Short-term Debt Component of the Deemed Capital Structure
- Deferral and Variance Accounts – Account 1588 Global Adjustment Sub-account; and
- Harmonized Sales Tax ("HST").

C&ND Hydro provided its submissions on the above issues in its Argument-in-Chief ("AIC") filed on February 19, 2010.

This submission reflects observations and concerns which arise from Board staff's review of the pre-filed evidence and interrogatory responses made by C&ND Hydro on the above issues for which settlement was not reached and which C&ND Hydro addressed in its AIC. Board staff's submission does not address settled issues of the Revised Partial Settlement accepted by the Board.

## LOAD FORECAST

Exhibit 3 of the Application discusses how the customer count and load forecast are developed by C&ND Hydro. C&ND Hydro's weather normalized load forecast is developed using a three-step process:

1. A total system-wide weather normalized energy forecast is developed using a multivariate regression model that incorporates historical load, weather, and economic data.
2. This energy forecast is adjusted by historical loss factors to derive the system-wide billed energy forecast.
3. The system-wide billed energy forecast is allocated by rate class using a forecast of customer numbers and historical usage per customer.

In its AIC, C&ND Hydro notes that it has revised the purchased load forecast from 1,522,594 MWh, as shown in the Application[2] to 1,420,552 MWh, as provided in the

[2] Exhibit 3/page 17/Table 6

response to VECC IR # 14, parts c) and f). C&ND Hydro notes that the model estimated in VECC IR # 14 c) uses a trend variable to account for CDM impacts and also to remove the negative and insignificant (and counterintuitive) population coefficient in the regression model originally used in the application. The estimate provided in response to VECC IR # 14 f) updates the model using updated Ontario GDP data as of October 2009.

C&ND Hydro submits that its updated and preferred model addresses the concerns raised by Board staff and intervenors over the negative population coefficient, uses more current data, results in a higher $R^2$, and is consistent with 2009 actual purchased kWh of 1,450,836 MWh.

### *Discussion and Submission*

*Multivariate Regression Load Forecasting*

Board staff notes that, while an applicant is required to produce its forecast of demand – number of customers, consumption and kW demand – as part of its test year forecast, and that this information is essential for allocating costs amongst customer classes and as the billing determinants to determine rates to recover the revenue requirement, there is little guidance provided on how the forecast has to be developed.

In initial Cost of Service applications considered by the Board for 2008 distribution rates, simplified approaches that relied heavily on normalized average consumption ("NAC") were used. The Board accepted these in the absence of better information, but stated its expectations for improved approaches. In some 2009 cost of service applications, attempts to improve on techniques and to introduce more sophisticated econometric methods were used. Board staff views these attempts to adopt more sophisticated techniques as generally successful. However, econometric modelling of economic phenomena is as much an art as a science. It is not merely a matter of regressing demand against a list of explanatory variables and accepting the outcome if it has a "good enough" fit (i.e. the $R^2$ is high enough). The estimated model should pass other tests of reasonableness: Are the coefficients of variables plausible in sign and significance? Is the functional form appropriate? Are there signs of model misspecification, such as auto correlated errors, or implausible coefficients? Do the predicted values forecasted by the model seem reasonable?

C&ND Hydro, along with other distributors that have filed cost of service applications for 2010 distribution rates, are using econometric multivariate regression modelling to attempt to improve the load forecast. Board staff submits that the approach is of limited success in this and some other applications.

First, Board staff is concerned with the emphasis on a high $R^2$ as being the primary focus of the goodness of fit of the model, as discussed above. Board staff is also concerned with the reliance of C&ND Hydro, along with other distributors, to explain load reductions solely as a result of CDM programmes and the economic downturn, without more quantitative support. The economic downturn became apparent in August 2008 and there is economic support that the recovery started within 12 months and is proceeding. That the recovery is expected to be gradual and prolonged is not being questioned, but Board staff also wonders if the effects of the downturn is as pronounced as may be factored into C&ND Hydro's proposed original and revised forecasts.

Further, the CDM success claims would seem at odds with expected behaviour given the nature of electricity service. Electricity service is an essential service, with close to 100% penetration. The price elasticity for subscription will be close to zero. The price elasticity of electricity consumption will be higher than for subscribership, but it will be inelastic. Large businesses that are major consumers of electricity will typically show more price sensitivity than do smaller consumption customers, based on how their electricity consumption factors into the costs of production and hence their competitiveness and profitability.

While noting that changes in electricity prices have been real since restructuring, Board staff believes that the magnitude of the changes are not so high as to suggest the claimed reductions due to CDM. Board staff notes that forecasting models estimated by C&ND Hydro in this application, and by other distributors in other applications, do not include price variables (for commodity and transportation and delivery, either in aggregate or separately). While this may be done somewhat out of practicality, as each distributor would have to construct such (a) variable(s), and also forecast the price for bridge and test periods, it is indicative of what statisticians and econometricians would technically term model misspecification. Omitting price assumes that electricity demand has a zero price elasticity – which runs counter to all of our assumptions for CDM, smart metering and smart grid. If there is no price sensitivity, then offering CDM programmes, and installing smart meters and implementing TOU pricing to tell customers when they are consuming and sending price signals to shift or reduce load is fruitless. Also,

omitting price as a variable and attributing impacts as being due to CDM results in a bias estimate of CDM impacts.

In Decisions for 2008 and 2009 Cost of Service decisions, the Board has signalled its preference for more sophisticated techniques than the NAC) approach first employed. Board staff notes that when properly done, more sophisticated techniques can be very informative. However, when poorly designed and implemented, the errors can be serious. It is not certain that a sophisticated econometric model is needed in all cases. Some distributors serve communities with limited economic and population growth. Where growth is constant and low, simpler trending methods, with averaging or other approaches to normalize for weather may be sufficient.

In the case of C&ND Hydro, however, Board staff submits that simpler techniques would not be adequate. C&ND Hydro is a large distributor serving a large, diverse and growing customer base. A more sophisticated regression approach as has been used in this case is the preferred approach. However, Board staff submits that such approaches must be both conceptually and technically sound, and reasonable in light of actual data and experience. Board staff offers the following particular comments on C&ND Hydro's proposed load forecast model.

In responses to various interrogatories from Board staff and intervenors, C&ND Hydro has provided alternative model estimates on the record.[3] Board staff notes that, in response to Board staff IR #9 c), C&ND Hydro estimated a model excluding the insignificant population and spring/fall variables. C&ND Hydro has made no mention of this model in its AIC.

Board staff has prepared the following table comparing the regression statistics from the original Application, that from Board staff IR # 9 c (where insignificant Population and Spring/Fall Flag variables were omitted), and VECC # 14 c (also Energy Probe IR # 63 a), where a CDM linear trend beginning in January 2006 is introduced.

[3] Responses to Board staff IR #9, VECC IR # 14 and Energy Probe IR # 63 are the most important, although there are several others exploring C&ND Hydro's overall load forecast modelling approach.

| | Regression Statistics | | | | | |
|---|---|---|---|---|---|---|
| | Original Application | | Board staff IR # 9 | | VECC IR # 14 c), Energy Probe IR # 63 a) | |
| | Coefficient | t-Statistic | Coefficient | t-Statistic | Coefficient | t-Statistic |
| Intercept | -55225433 | -3.76 | -70050911.2 | -6.14 | -99056218 | -6.9 |
| Heating Degree Days | 19717 | 11.77 | 18927.14 | 13.03 | 18962.19 | 12.91 |
| Cooling Degree Days | 70966 | 3.91 | 63416.16 | 3.68 | 92888.40 | 5.74 |
| Ontario Real GDP Monthly % | 620580 | 5.15 | 465325.24 | 11.89 | 442596.94 | 4.07 |
| Number of Days in Month | 2401393 | 6.59 | 2437660.82 | 6.69 | 2383041.35 | 7.47 |
| Spring/Fall Flag | 827157 | 1.04 | | | 92372.92 | 0.13 |
| Population | -283 | -1.54 | | | 376.69 | 2.01 |
| Number of Peak Hours | 224771 | 10.81 | 220941.45 | 11.79 | 172910.76 | 8.78 |
| CDM Flag | | | | | -292802.88 | -6.83 |
| | | | | | | |
| Multiple R | 97.10% | | 97.04% | | 97.80% | |
| R-squared | 94.30% | | 94.16% | | 95.70% | |
| Adjusted R-squared | 94.00% | | 93.97% | | 95.40% | |
| F-statistic | | 350.80 | | 484.00 | | 407.40 |
| | | | | | | |
| Purchased Forecast (kWh) | | | | | | |
| 2009 (Weather Normalized) | 1,527,719,000 | | 1,543,585,000 | | 1,468,651,648 | |
| 2010 (Weather Normalized) | 1,522,594,000 | | 1,541,693,000 | | 1,429,225,393 | |
| | | | | | | |
| Billed Forecast (kWh) | | | | | | |
| = Purchased kWh/1.0262 | | | | | | |
| 2009 (Weather Normalized) | 1,488,745,000 | | 1,504,175,599 | | 1,431,155,377 | |
| 2010 (Weather Normalized) | 1,483,750,000 | | 1,502,331,904 | | 1,392,735,717 | |

As noted above, C&ND Hydro's revised proposal is that from VECC IR # 14 f), which is an update of the above VECC IR # 14 c) with more recent Ontario GDP data, which results in a 2010 weather normalized forecast of 1,420,552,000 kWh[4].

Board staff submits that the regression model in Board staff IR # 9 c) is at least as good as C&ND Hydro's original model and even that in VECC IR # 14. In none of the other models is the Spring/Fall Flag statistically significant. Indeed, there is not an *a priori* requirement for such a variable, although it is often included and should be tested. In fact, a binary variable for Spring/Fall will be related to the combination of Heating Degree Days and Cooling Degree Days, and may turn out not to be required, as is clearly demonstrated by the fact that this variable is statistically insignificant in the models in the original Application and in VECC IR # 14 c).

C&ND Hydro has focussed its attention on achieving a high $R^2$ in the model, as it explicitly documents in the response to VECC IR # 63. $R^2$ is just one statistic and may not be the most revealing. The F-statistic is another valid and generally more revealing

[4] Cambridge and North Dumfries Hydro's AIC, page 6, para. 16

statistic. In general, a higher F-statistic is indicative of a better model (under the assumptions that would validate the use of linear regression in the first place). From the above table, the model in Board staff IR # 9 has a higher F-statistic than for the models in the original Application or in VECC IR # 14 c). This is carried forward in the generally higher t-statistics for individual variable coefficients. The higher t-statistics and F-statistic are indicative of a more parsimonious model with an adequate fit. In particular, Board staff submits that the model in Board staff IR # 9 is better than that in C&ND Hydro's original Application.

Board staff has concerns over the model in VECC IR # 14 c), which introduces a linear CDM trend variable beginning in 2006. While the model has a higher $R^2$, the F-statistic, while highly significant, is lower than that in Board staff IR # 9. The population coefficient has an expected positive sign and is statistically significant now. However, the t-statistic for the income variable (Ontario GDP) is lower, while still being statistically significant. Board staff interprets this model of showing increasing multicollinearity amongst the variables. In this case, it would seem that the CDM trend and the income variable show interrelationships. In Board staff's submission, it is not clear that this model is superior to that in Board staff # 9, as shown by the model statistics.

Board staff is also concerned about the inclusion of the CDM trend. First, there is little support for this variable, and certainly no support that the CDM impact is a linear trend as is used in the model in VECC IR # 14 c) and Energy Probe IR # 63. Second, as shown in the above table, the coefficient has a large value quantitatively. It means that, for each passing month, there is, all else being equal an incremental loss of nearly 293,000 kWh due to CDM. The construction of the variable, as shown in the Excel spreadsheet provided in Energy Probe IR # 63 a), shows that the trend variable increases to 60 by December 2010, even though the trend variable had only a value of 36 at the last data point in the model estimation range, December 2008. The following table shows the impact of the CDM trend variable on purchases for each of the years, and indicates that the impact is to reduce purchased kWh by over 190,000,000 in 2010. This is a reduction of 11.8% from what the model would produce in the absence of the CDM flag.[5] Board staff submits that there is no support for this level of CDM impact, and that this large result would suggest that the CDM trend is collinear with the income variable, which is consistent with the impacts of model coefficients and t-statistics. The CDM trend variable

[5] -191,493,081/(1,429,225,393+191,493,081) = 11.8%

is improving the model $R^2$, as any added variable would, but the results are not necessarily an improvement on both conceptual and practical bases.

| Contribution of CDM trend in each year (kWh) | |
|---|---|
| 2006 - | 22,838,624 |
| 2007 - | 65,002,238 |
| 2008 - | 107,165,852 |
| 2009 - | 149,329,467 |
| 2010 - | 191,493,081 |

Finally, C&ND Hydro submits that the revised forecast documented in VECC IR # 14 is consistent with 2009 actual purchases of 1,450,836,000 MWh. Board staff submits that this argument is simply invalid and should be discounted, simply on the basis that the utility is comparing a weather-normalized forecast to an unnormalized actual. No valid conclusions should be drawn from this apples-to-oranges comparison.

The Board must decide on C&ND Hydro's load forecast. In Board staff's submission, the parsimonious model documented in Board staff IR # 9, which results in a load forecast for the test year of 1,502,332 MWh, a 5.8% increase from the revised forecast proposed by the Applicant, is at least as valid, and may be better both conceptually and econometrically, and better in line with actual data. An option would be to require C&ND Hydro to provide estimates for 2009 and 2010 based on the updated economic data as used in the response to VECC IR # 14 f) but based on the model estimated in Board staff IR # 9. C&ND Hydro should show all calculations of the forecast, similar to what was provided in Energy Probe IR # 63.

Finally, Board staff submits that C&ND Hydro should continue to refine and improve its techniques in support of its next Cost of Service rate application, and that C&ND Hydro may wish to collaborate with other, similar distributors in such efforts.

## OTHER REVENUES

### Background

In its Application, C&ND Hydro noted that the termination of the water and sewage billing agreement with its shareholders will result in a loss of Other Revenues. However, the costs of billing and collecting (envelopes, paper and printing and mailing, among others remain). The loss of the water and sewage billing means the loss of revenues that help

to recover or subsidize the cost of billing and collecting that the utility must do as part of servicing its electricity ratepayers.

In its Application, C&ND Hydro noted the reduction in Other Revenues for the fourth quarter of 2010. In its AIC, C&ND Hydro noted that the annual expected Other Revenues lost will be four times the quarterly amount, or $440,000. However, C&ND Hydro argues that the costs remain. 2010 is the year that the utility is rebasing, and will set base rates that will, based on current Board policies, be followed by three years of price cap adjustment, where there is no opportunity to further adjust for the lost revenues over all four quarters beginning in 2011.

In consideration of this, C&ND Hydro has proposed in its AIC to normalize or amortize the lost revenues over the four years (the 2010 rebasing year and three subsequent years of IRM adjustments). C&D Hydro's proposal is replicated in the following table.

| | Q1 | Q2 | Q3 | Q4 | Annual |
|---|---|---|---|---|---|
| **2010** | | | | -$110,000 | -$110,000 |
| **2011** | -$110,000 | -$110,000 | -$110,000 | -$110,000 | -$440,000 |
| **2012** | -$110,000 | -$110,000 | -$110,000 | -$110,000 | -$440,000 |
| **2013** | -$110,000 | -$110,000 | -$110,000 | -$110,000 | -$440,000 |

| | |
|---|---|
| **Total (2010-2013)** | -$1,430,000 |
| **Amortized over four years** | -$357,500 |

C&ND Hydro submits that this treatment is analogous to that of Greater Sudbury Hydro in that utility's 2009 costs of service rate application, whereby the Board accepted "normalization" of OM&A costs for a new system. In that case, the OM&A costs would not occur in the 2009 test year, but would occur in subsequent years. On the presumption that no costs would apply in 2009, but there would be about $100,000 in costs for each of the subsequent years, the Board allowed ¾ of the expected OM&A expenses, or $75,000 to be recoverable in the rebased rates (and flowed through in subsequent years when rates are subject to the IRM price cap adjustment).

### *Discussion and Submission*

The issue of normalizing or amortizing expenses, or in this case, other revenues that help to recover the expense, over the test rebasing year and the subsequent IRM term has come up in other applications. There is no definitive Board policy and practice although there are some trends. Each instance is dealt with based on the facts and on the general practice in similar circumstances.

In this context, Board staff notes that we are dealing with operating expenses – i.e. ongoing expenses incurred in a current period for services provided in that period – in contrast to capital investments made that, once incurred, will have an operating life over a period of time and for which the initial capital costs and the opportunity cost related to that capital investment is to be recoverable over the expected life of the asset from all customers –current and future – that will be serviced by that asset.

Normally, operating expenses are not normalized or amortized over multiple years. These are current period costs recovered in the period incurred – i.e. the test rate year for a one-year cost of service application. They are generally seen as ongoing costs that generally will recur each year to provide products and services in that year. Rates are a unitized recovery of costs, so that establishing rates based on the test year costs and demand assumes similar demand/cost relationships in the subsequent IRM period, while the I-X price cap adjustment currently used by the Board then adjusts for inflationary pressures less expected productivity improvements.

In some cases, the test year operating expenses may be affected by one-time costs that may not recur in subsequent periods. In the case of the water and sewage contract, C&ND Hydro is arguing that the operating costs will continue but that the 2010 test year revenues that recover these costs will not.

Board staff does not disagree with C&ND Hydro's evidence that it will lose revenues and that costs will remain. However, Board staff does not agree with C&ND Hydro's proposal to normalize the lost revenues from Q4 of 2010 to the end of 2013 as a "normalized" reduction to revenue offsets of $357,500 per annum. This is equivalent to saying that the costs are ongoing and invariant and the loss of revenues is permanent. In other words, the utility is arguing that the costs must now be borne solely by electricity ratepayers and there is nothing that the utility can do about this.

Board staff submits that this argument is artificial. It does not mimic what would occur in a competitive market. If a firm in a competitive market loses a source of revenues, it must then examine ways of eliminating the costs previously used to generate those revenues that have now been lost, or of finding other sources of revenue to be generated from those costs; if it does not its profitability will be adversely impacted and its shareholders will expect the firm's management to take action.

A firm may try to recover the costs by raising its prices, but market pressures – the prices of competitors or substitute products and services, and the price sensitivity of customers - will limit how much the costs can be recovered by raising prices. Because the utility has a *de facto* monopoly on providing distribution electricity services of what is almost an

essential service and showing little price sensitivity or substitutability, these market pressures are absent. In fact, economic regulation, such as is practiced by the Board in the Ontario energy sector, acts as a proxy for competitive market forces in these monopolistic sectors.

Board staff also disagrees with C&ND Hydro's presumption that the costs are ongoing and invariant. These are expenses incurred to provide services in the same period, not sunk capital costs that may not be redeployable or salvageable. That some of the costs, related to postage, stationary and envelopes, and printing, may not be totally unavoidable is not at question. However, work time by employees on customer accounts or the amount of stationary used may be reduced. In the case of employee work, work on water and sewage accounts and receipts and remittance to the City will be avoided, and the bill and printing may use less paper and ink as the bill now serves only one purpose.

As noted above, the IRM price cap adjustment formula also expects that there will be process, technological or other innovations effected by a utility to mitigate inflationary cost pressures, and the I-X price cap formula both incentivizes the firm to search for these and ensures a "sharing" of productivity gains between shareholders and customers. This is expected to occur over the IRM period from the rebased rates in any event.

In this particular case, where there is a known and discrete event, Board staff suggests that a separate and explicit approach may be warranted. Board staff suggests that the annual impact of the lost revenues be amortized over the period of 2010 and three years of IRM. As documented, the Other Revenues for Water and Sewer billing is forecasted at $440,000 for 2010, to which the reduction of $110,000 for the cessation of water and sewage billing in 2010 Q4 now applies. Board staff then suggests that "loss of revenues" impact be reduced by ¼ in each of the succeeding years, so that it will be zero for C&ND Hydro's next rebasing expected for 2014. This reduction each year is to reflect either replacement revenues from new sources or cost savings or redeployment to other operations that the utility's management should be expected to effect to offset the revenues from Water and Sewer Billing being lost. Board staff's proposal is documented in the following table:

| | Q1 | Q2 | Q3 | Q4 | Annual |
|---|---|---|---|---|---|
| **2010** | | | | -$110,000 | -$110,000 |
| **2011** | -$82,500 | -$82,500 | -$82,500 | -$82,500 | -$330,000 |
| **2012** | -$55,000 | -$55,000 | -$55,000 | -$55,000 | -$220,000 |
| **2013** | -$27,500 | -$27,500 | -$27,500 | -$27,500 | -$110,000 |

| | |
|---|---|
| **Total (2010-2013)** | -$770,000 |
| **Amortized over four years** | -$192,500 |

This results in a normalized reduction in Other Revenues of $192,500, a material reduction of $165,000 from C&ND Hydro's proposal of $357,500.

Board staff acknowledges that there are some similarities between C&ND Hydro's situation and that in the Greater Sudbury Hydro case which the Applicant cites. However, Board staff also submits that there is a difference in C&ND Hydro's situation.

Board staff submits that CN&D Hydro's opportunities and incentives to search for cost savings due to the loss of revenues for the water and sewage billing contract should be possible. This is occurring at the same time as the utility is implementing a new CIS and billing system, and implementing TOU and monthly billing upon completion of smart meter deployment. C&ND Hydro has also documented that it had abandoned pre-authorized payment options due to bank costs. With the above CIS and billing changes being implemented, the utility has an opportunity to search for and implement process and technological changes that will allow for more cost-effective billing operations.

Board staff submits that its proposal may be one way of providing such motivation in a way that also balances impacts of customers and the financial viability of the utility.

## OPERATIONS, MAINTENANCE AND ADMINISTRATION

### Background

The only unsettled matter with respect to OM&A is expenditures in the amount of $42,500 related to C&ND Hydro's proposal to move to monthly billing, to be coordinated with full deployment of smart meters this year and implementation of the new billing system. C&ND Hydro notes that the incremental costs of $42,500 for November and December 2010 would not fully recover the costs in subsequent years under IRM, when the costs will be incurred in all twelve months each year. C&ND Hydro proposes that the OM&A incremental costs be "normalized" or amortized over the rebasing year and the subsequent three years of IRM, with an amount of $244,625 ($42,500 plus three years of $312,000 spread over four years).

C&ND Hydro submits that this normalization should be done for the same reasons provided for with respect to the “normalized” treatment of the “Other Revenues” lost due to the loss of the Water and Sewage Billing contract.

***Discussion and Submission***

Board staff distinguishes between this matter and that dealing with the loss of the Water and Sewage Billing contract in so far as these costs are directly attributable to the provision of core electricity distribution services to ratepayers. Board staff notes that the Board has sometimes allowed for a “normalization” of costs, as C&ND Hydro has cited from the 2009 rates application for Greater Sudbury Hydro. In this case, these are operating costs that result from a prudently incurred capital investment, for the new CIS and billing system. The capital cost for the system is set at $1.85 million in 2010, with any under-expenditure to be tracked in a deferral account for subsequent refunding to customers; any capital over-expenditure is to be borne solely by C&ND Hydro’s shareholders. That the CIS and billing system are integral to the provision of electricity distribution services is not being questioned, and hence ongoing costs for the operation of these systems are legitimate costs for which recovery should be allowed in rates. To this end, Board staff does not oppose some form of “normalization” of the costs, but does raise concerns over the incidence and support for such treatment. The difficulty, in Board staff’s view, is that the test year cost of service approach sets a revenue requirement and rates to recover necessary and prudent costs of providing safe, reliable and high quality services and meeting demand, including the opportunity to earn for investors a market-based return on capital and maintain the financial viability of the firm. At the same time, the rebased rates for the basis for IRM adjustments in subsequent years, and so should reflect a “normal” level or relationship of rates, costs and demand.

The Board must balance this situation of rates relating to the test year, in a pure cost of service application, and that of recognizing that these become the basis for rates in more mechanistic adjustments in subsequent years. Strict treatment of 2010 in a forward test year application would argue that no normalization is appropriate.

Board staff is not certain that the incremental costs for monthly billing will or should be at $312,000 annually on a going forward basis. C&ND Hydro has not implemented the new systems yet and will not do so until later in 2010. With the new billing systems, and experiences that C&ND Hydro and its ratepayers gain over time with smart meters, TOU pricing and monthly billing, there may become alternative and more efficient ways of serving customers, such as online bills and metering information, or e-billing

arrangements with banks. In response to Board staff IR # 18, C&ND Hydro states that savings are small compared to costs, and has factored estimated savings of $19,184 against costs in its estimates. However, C&ND Hydro states that one reason for moving to monthly billing is that "[c]ustomers have been asking for monthly billing."[6] There would seem to be some illogic that customers are asking for a service that, all else being equal, results in increased costs and hence rates. With this in mind, Board staff submits that the basis for the incremental costs for monthly billing, of $42,500 for November-December 2010, and $312,000 annually, may not be well supported and C&ND Hydro has not well explored or supported offsetting savings.

One option would be to allow the $42,500 incremental costs for the 2010 test year as being supported by the record. C&ND Hydro could apply for a cost of service rebasing in a subsequent year, when the new systems are in place and it has better information on the costs and savings, and the net incremental cost of moving to monthly billing.

Another option, although admittedly arbitrary, would be to allow about $142,500 as a "normalized" amount. This is approximately halfway between the 2010 incremental costs of $42,500 and the $244,625 proposed by C&ND Hydro in its AIC. This is more than the pure test year would allow, but would also provide an incentive for C&ND Hydro to operate within this envelope and to look for more cost-effective ways of providing monthly billing.

## Working Capital Allowance

In its original application, C&ND Hydro forecasted a Working Capital Allowance ("WCA") of $18,989,476. C&ND Hydro has used 15% of OM&A and cost of power in the calculation of working capital. The Revised Partial Settlement includes an updated Working Capital Allowance of $17,537,926, as shown in Attachment D, page 2 of 2.

No lead/lag study was provided, and, in its AIC, C&ND Hydro indicates that it sees no need for an updated lead-lag study to be prepared and filed in its next cost of service rebasing application, scheduled for 2014.

### *Discussion and Submission*

Per the Revised Partial Settlement Agreement no parties took issue with C&ND Hydro's use of the 15% WCA formula for use in the current Application. Similarly, Board staff

[6] Response to Board staff IR # 18 b).

takes no issue with C&ND Hydro's methodology for calculating the WCA in this Application. However, Board staff submits that C&ND Hydro should update the WCA in determining the revenue requirement and associated distribution rates to recover it in preparing its draft Rate Order, to reflect any changes in controllable expenses and load forecasts as determined by the Board in its Decision, as well as to reflect the most current estimate of the RPP commodity price of $0.06215/kWh, from the Board RPP Report of October 15, 2009[7], as well as updates to reflect current uniform and retail transmission prices. Further, Board staff submits that C&ND Hydro should provide sufficient detail and discussion to aid other parties in understanding the numbers provided and their derivation.

C&ND Hydro has used the standard WCA derivation as 15% of the sum of the Cost of Power and controllable expenses. This methodology was inherited from the regulation of the electricity distribution sector by Ontario Hydro prior to restructuring and was documented in the 2000 Electricity Distribution Rate Handbook. The Board has generally accepted this approach for setting electricity distribution rates to date, although certain larger distributors have conducted lead-lag studies to provide alternative working capital requirements.

Board staff notes that C&ND Hydro has indicated that it does not intend on conducting a lead-lag study as part of its next cost of service rebasing application.

Board staff submits that it would be both timely and appropriate for C&ND Hydro to support its WCA proposal at its next rebasing application with a lead-lag study. In this Application, C&ND Hydro has noted that it is implementing monthly billing and TOU pricing by the end of 2010, in conjunction with deployment of smart meters and a new CIS and billing system. These changes will, in Board staff's submission, materially alter the utility's working capital requirements. Implementation of smart meters and billing based on TOU interval demand will better align the billing by the IESO of energy delivered to C&ND Hydro's wholesale metering points and reduce variances due to estimating billing. The move to monthly billing will also reduce the lag between when the utility pays the IESO and when it receives payment from its customers. While many larger demand industrial customers may already be on monthly demand, smart metering and TOU pricing will affect a significant portion of demand.

All of this is in addition to existing factors supporting a review of the methodology. The Board has required larger distributors like Hydro One Networks Inc. and Toronto Hydro-Electric Systems Limited to undertake lead-lag studies in recent applications, and updated studies have resulted in reduced working capital requirements. Other distributors, like London Hydro Inc.[8], have been directed to conduct and file lead-lag studies for their next cost of service rebasing applications, while distributors of similar size to C&ND Hydro such as Kitchener-Wilmot, have agreed to conduct a study of their own for their next rebasing application. In the event that the Board conducts a generic lead-lag study in advance of C&ND Hydro's next rebasing application, C&ND Hydro should either adopt the results of this study or conduct its own study in support of its WCA proposal in its next cost of service application.

## Cost of Capital

### *Background*

In the original Application, C&ND Hydro proposed its Cost of Capital treatment in accordance with the Board's Cost of Capital guidelines then in effect, as documented in the *Report of the Board on Cost of Capital and 2nd Generation Incentive Regulation Mechanism for Ontario's Electricity Distributors* (the "2006 Report"), issued December 20, 2006.

The Board subsequently revised and documented its guideline Cost of Capital methodology in the *Report of the Board on the Cost of Capital for Ontario's Regulated Utilities* (the "2009 Report"), issued December 11, 2009, under Board File No. EB-2009-0084. The 2009 Report is a guideline, but departures from the methodology in the 2009 Report are expected to be adequately supported. While the 2009 Report was issued subsequent to the filing of this application, the 2009 Report states that the revised guidelines apply to applications for rates effective in 2010 or later and determined through review of Cost of Service applications. Thus the 2009 Report supersedes the guidelines documented in the 2006 Report and is now applicable to C&ND Hydro's application.

In Exhibit 5 of its application, C&ND Hydro has proposed its requested Cost of Capital. This is summarized in the following table.

[8] Decision with Reasons, Board File No. EB-2008-0235, August 21, 2009, pp. 33-34.

| Cost of Capital Parameter | C&ND Hydro's Proposal |
|---|---|
| Capital Structure | 60.0% debt (composed of 56.0% long-term debt and 4.0% short-term debt) and 40.0% equity |
| Short-Term Debt | 1.33%, but to be updated in accordance with section 2.2.2 of the 2006 Board Report. |
| Long-Term Debt | 5.20%, reflecting the weighted average of the actual rate (4.99%) on debts owed to Sun Life and 7.62% as the deemed rate relating to the promissory note due to its shareholder, the Corporation of the Township of North Dumfries. The deemed long-term debt rate would be updated in accordance with section 2.2.1 of the 2006 Board Report. |
| Return on Equity | 8.01%, but to be updated in accordance with the methodology in Appendix B of the 2006 Board Report. |
| Return on Preference Shares | Not applicable |
| Weighted Average Cost of Capital | 6.17% as proposed, but subject to change as the short-term and long-term debt rates and ROE are updated per the Board Report at the time of the 2006 Board's Decision. |

In the Revised Partial Settlement, under Issue 5 b), C&ND Hydro and the intervenors agreed that the weighted average cost of long-term debt would be 4.99%, which is the documented rate on both the debt instruments held by both Sun Life and by the Corporation of the Township of North Dumfries Hydro.

C&ND Hydro and the intervenors did not settle on the following aspects of the Cost of Capital:

- That the ROE should be determined in accordance with the methodology as documented in section 4 and Appendix B of the Board's Cost of Capital report; and
- That the short-term debt component of the deemed capital structure, set at 4%, should apply for setting the weighted average cost of capital.

In its AIC, C&ND Hydro has submitted that the guidelines in the 2009 Report should apply. C&ND Hydro notes that the deemed capital structure was set at a common 56% long-term debt, 4% short-term debt, and 40% equity in the 2006 Board Report, and this approach is unchanged in the recently issued 2009 Report. C&ND Hydro also states that its ROE should also be established in accordance with the methodology established in the 2009 Report.

### *Discussion and Submission*

C&ND Hydro has affirmed that the cost of capital parameters are to be updated in accordance with the Board's guidelines based on data available at the time of the Board's decision. Between the time of the initial application filing and now, the Board issued the 2009 Report; however, this was the culmination of an extensive consultative process Board staff submits that C&ND Hydro's proposals for Cost of Capital, as amended through discovery, comply with the guidelines documented in the 2009 Report.

## Deferral and Variance Accounts

### *Background*

C&ND Hydro has requested disposition of a number of its deferral/variance accounts. Due to historical over-collections, mostly with the RSVAs. C&ND Hydro documents an amount of ($9,314,681) (audited December 31/08 balances with carrying costs to April 30/10).

Per Item 9 of the Revised Partial Settlement, the amount to be disposed of is ($9,040,874), which is to be refunded over a period of two years.

*Account 1588 – Global Adjustment sub-account*

The only outstanding issue with respect to deferral and variance accounts pertains to the treatment of the Global Adjustment sub-account of Account 1588. The Global Adjustment sub-account contains a debit balance of $2.1 million, including interest to April 30, 2010. This is an issue that applies to all 2010 distribution rate applications, but is being addressed in each application on an individual basis. This must be so due to the individual circumstances of each distributor, particularly with respect to the ability to allow for a rate rider specific to the non-RPP customers of each customer class in its billing system, and the costs for such implementation if so directed by the Board.

C&ND Hydro has appropriately used the kWh for non-RPP customers as the allocator for the Global Adjustment sub-account of account 1588. In response to Board staff supplemental IR # 31, C&ND Hydro provided calculations of the rate riders to dispose of the deferral and variance account balances, excluding the Global Adjustment sub-account, and separate rate riders to dispose of the Global Adjustment sub-account balance. C&ND Hydro explained that it did not have estimates of 2010 non-RPP customer consumption, and used 2008 actuals as the billing determinant. C&ND Hydro

notes that it does not have the capability in its systems to exclude MUSH sector (Municipalities, Universities, Schools and Hospitals) customers if a separate rate rider for disposition of the Global Adjustment sub-account balance is established. Further C&ND Hydro states that some MUSH sector customers may have voluntarily become non-RPP customers in advance of November 2009. In such cases, where these customers contributed to the Global Adjustment variance, they should also benefit from any refund or payment through the Global Adjustment rate rider.

***Discussion and Submission***

Board Staff notes that C&ND Hydro's methodology for the proposed disposition of deferral and variance account balances is consistent with similar disposition of such costs as determined by the Board in recent decisions of other distribution rate applications.

The Board must decide whether the disposition of the balance of the Global Adjustment sub-account of Account 1588 should be subject to a separate rate rider, or, as proposed by C&ND Hydro, be included in the single rate rider per class applicable to all customers in that class along with the other account balances.

Staff submits that recovering the Global Adjustment sub-account balance solely from non-RPP customers more appropriately recovers the under-collection from those customers that were undercharged in the first place. While migration makes this an imperfect solution, this approach is, to a greater degree, more in line with the spirit of the purpose of the Global Adjustment mechanism than simply socializing the recovery. Board staff takes no issue with C&ND Hydro's responses on the applicability and practicality of excluding MUSH sector customers from any specific Global Adjustment sub-account rate rider.

Board staff understands C&ND Hydro's concerns about its ability to implement a separate rate rider specific to non-RPP customers in a class with its existing CIS and billing system. Non-support of existing systems, as well as age and capabilities, have been cited as major reasons justifying the Applicant's urgent need for replacement of its CIS and billing systems. The need for several and separate rate riders and adders was not necessarily foreseen when many of these systems were designed.

One possible approach would be to defer disposition of the Account 1588 Global Adjustment sub-account for C&ND Hydro for purposes of setting 2010 distribution rates.

In its next application for rates (2011, under 3rd Generation IRM), C&ND Hydro could apply for disposition of the account balance. Presumably at that time, the new CIS and billing systems will be in place, and C&ND Hydro could ensure that the new systems have the capability to handle several rate riders and rate adders and also be able to handle sub-classes of customers such as non-RPP customers within each class. As the systems are presumably under development at this time, it should be possible to build this flexibility into the new system at little additional cost. Board staff submits that C&ND Hydro should address the practicality of this approach in its reply submission.

Board staff notes that this suggestion differs from that proposed for other distributors, but also submits that excluding the Global Adjustment Sub-account balance may be both practical and equitable at this time. C&ND Hydro's current systems cannot currently handle the rate rider for non-RPP customers, and there would be manual effort and costs to do so. As Board staff suggests, presumably the new system will have sufficient capabilities and at marginal incremental cost. Staff notes that concerns about the growth in the balance of the sub-account may relate mostly to 2009. Deferring disposition until 2011 when the system can, presumably, handle a rate rider specific to non-RPP customers would more equitably ensure that any balance owing or owed is collected from or returned to the customers to whom the charge applies in a practical and low-cost method. While refunding or collecting as quickly as possible is desirable to avoid inter-generational inequities, the overall D/V balance to be disposed would increase to a credit of over $11 million which would assist in further mitigating revenue requirement increases over the next two years.

In addition to establishing a separate rate rider for disposition of the Global Adjustment sub-account, the Board must decide the time period over which the rate riders should apply. In the Revised Partial Settlement accepted by the Board, the agreement is that the rate riders to dispose of deferral and variance account overcollection should be effective for a period of 24 months, changed from the original proposal of one year. Board staff submits that, should the Board order the disposition of the Global Adjustment sub-account at this time by way of a separate rate rider, the same time period should be used for applying the Global Adjustment-specific rate rider.

Board staff submits that C&ND Hydro should provide a detailed spreadsheet showing the rate rider calculations to comply with the Board's decisions, as part of C&ND Hydro's draft Rate Order submission.

## Harmonized Sales Tax

### *Background and Submission*

Staff notes that the provincial sales tax ("PST") and goods and services tax ("GST") will be harmonized effective July 1, 2010 pursuant to Bill 218 which received Royal Assent on December 15, 2009. Unlike the GST, the PST is currently included as an OM&A expense and is also included in capital expenditures. When the GST and PST are harmonized, corporations will realize a reduction in OM&A expenses and capital expenditures that has not been reflected in the current application for 2010 rates.

C&ND Hydro stated that it has not made any adjustments to its 2010 OM&A and capital expenditure forecasts to reflect the elimination of the 8% PST costs starting on July 1, 2010. In response to an interrogatory,[9] C&ND Hydro stated that it believes that the HST issue is a generic one that would apply to all distributors, and that the effects are unknown at this time. C&ND Hydro has stated that there will be additional costs, some probably of a one-time nature but others ongoing due to the change for ongoing accounting. Further, C&ND Hydro submits that it may not be possible to track all costs and savings that may result from the tax harmonization. C&ND Hydro thus does not believe that accurate accounting can be done and hence does not support the use of a deferral and variance account.

As an alternative, C&ND Hydro submitted that a $0.10 reduction in the monthly service charge for all customers be applied universally to all electricity distributors, whether under cost or service rebasing or IRM. C&ND Hydro submits that the impacts on capital expenditures are immaterial due to the general long amortization periods over which investments (and equally savings) would be recoverable.

Cautions from C&ND Hydro and other distributors about the administrative burden and costs of harmonization are at odds with the provincial and Federal governments' pronouncements regarding the stimulative and competitive results of harmonization. While the costs and savings are not clear at this point, Board staff submits that tracking of these is warranted at this point and that, per government pronouncements, the potential savings for corporations like C&ND Hydro could be significant. Board staff does not support the $0.10 reduction in monthly service charge for all customers, applied either industry-wide or for individual distributors. There is no evidence for assessing the reasonableness of this estimate, which has the potential to be either a windfall or a

[9] Response to Board staff supplemental IR # 42

shortfall to the distributor and its shareholder(s). Second, an even quantitative reduction like $0.10 is different, percentage-wise, for residential versus Intermediate or Large Users, which have markedly different monthly service charges. Board staff submits that a reduction such as C&ND Hydro proposes would not likely be appropriate from a cost allocation perspective. While C&ND Hydro has focussed on increased costs, Board staff notes that there will be effects, such as Input Tax Credits, that are part of this harmonization that will benefit businesses. Also, over time, Board staff submits that harmonization of taxes should simplify accounting and administration, as there will be one common set of tax rules.

Board staff acknowledges the perspective that this is a generic issue that has arisen recently and that affects the whole industry. At the same time, the Board must decide in this hearing on just and reasonable rates to recover C&ND Hydro's necessary and prudent costs of operating its distribution operations in a safe, reliable and high quality manner.

This is a known legislated event that is likely to impact on those costs. C&ND Hydro has not provided a forecast of PST savings for the test year. In the absence of such evidence, the Board may wish to consider establishing a deferral account to track any savings that may arise so that these savings could be returned to customers in the future.

- All of which is respectfully submitted -