Ontario Energy Board

Commission de l'énergie de l'Ontario

EB-2008-0272

IN THE MATTER OF AN APPLICATION BY

HYDRO ONE NETWORKS INC.

TRANSMISSION REVENUE REQUIREMENT AND RATES
2009 and 2010

DECISION WITH REASONS

May 28, 2009

EB-2008-0272

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

AND IN THE MATTER OF an Application by Hydro One Networks Inc. for an Order or Orders approving or fixing just and reasonable rates and other charges for the transmission of electricity commencing July 1, 2009.

BEFORE: Cynthia Chaplin
Presiding Member

Paul Vlahos
Member

Ken Quesnelle
Member

DECISION WITH REASONS

May 28, 2009

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1. INTRODUCTION

1.1 THE APPLICATION

Hydro One Networks Inc. ("Hydro One") filed an application dated September 30, 2008, with the Ontario Energy Board (the "Board") under section 78 of the *Ontario Energy Board Act, 1998*; S.O. c.15, (Sched. B) (the "Act"), for an order or orders approving the revenue requirement for the test years 2009 and 2010, customer rates for the transmission of electricity to be implemented on July 1, 2009, and other matters related to the fixing of just and reasonable rates for the transmission of electricity. The Board assigned file number EB-2008-0272 to the application. Updates to certain parts of the application, reflecting 2008 actual results, were filed on February 13, 2009.

1.2 PROCEDURAL MATTERS

A draft Issues List was provided to parties with Procedural Order No. 1 on November 14, 2008. Submissions were received on the draft Issues List from a number of parties. The final Issues List was released with the Issues Decision and Procedural Order No. 2 on December 1, 2008, and is attached as Appendix 1.

Pollution Probe filed a motion seeking to vary the Board's Issues Decision to include Customer Demand Management Programs for transmission-connected customers as an issue in the proceeding. The proposed issue was "Are the proposed conservation and demand management programs, targets and spending levels appropriate?" The Motion was heard on January 9, 2009. The Board denied the motion in an oral decision delivered upon completion of the Motion hearing. The transcript of the Motion hearing is available on the public record.

On February 3, 2009, a Settlement Conference was held. The Settlement Conference did not result in any issues being settled. All issues were referred to the oral proceeding.

1.3 UNIFORM TRANSMISSION RATES

In this Decision the Board is approving the revenue requirements and charge determinants for Hydro One Transmission which will form the basis for Hydro One's portion of the Ontario Uniform Transmission Rates. The Ontario Uniform Transmission Rates and the revenue shares of each of the other transmitters in the transmission rates pool (Great Lakes Power Inc., Five Nations Energy Inc., and Canadian Niagara Power Inc.) will be established in a subsequent proceeding.

1.4 THE HEARING

The hearing took place on February 19, 20, 23, 24, 25, 26 and March 2, 3, 5 and 6, 2009. Copies of the evidence, exhibits, arguments, and transcripts of the proceeding are available for review at the Board's offices. Appendix 2 contains the list of witnesses and the list of active parties.

Final written submissions were filed by Board staff and the intervenors. Hydro One's reply submission was filed on April 8, 2009.

The full record is available at the Board's offices. The Board has summarized the record only to the extent necessary to provide context for its findings.

2. GENERAL ISSUES

The Board wishes to address three general issues related to Hydro One's application: Board directions in past decisions, the current economic situation, and letters of comment.

2.1 BOARD DIRECTIONS IN PAST DECISIONS

The first issue on the Issues List for this proceeding is "Has Hydro One responded appropriately to all relevant Board directions from previous proceedings?" Hydro One included in its evidence a comprehensive list of previous Board directions. For purposes of this Decision, the Board will address the directions and the adequacy of Hydro One's response under the specific issue related to the direction.

2.2 THE CURRENT ECONOMIC SITUATION

Hydro One's evidence pre-dated the economic turmoil that Ontario has been experiencing in the last six months. Most intervenors made submissions to the effect that Hydro One had not taken adequate account of the economic situation and that significant spending restrictions were warranted under the current economic circumstances. Hydro One strongly rejected these arguments.

Hydro One submitted that if it were to update its application, the effect would be to increase rates, in large part due to the decline in the load forecast. Hydro One, however, decided that it was not appropriate to do so, partially in light of the economic situation.

Many intervenors submitted that Hydro One should have reduced its planned spending in light of the current global economic situation and that therefore the Board should disallow many of Hydro One's projected costs. Hydro One responded that it would be inappropriate for the Board to do so. In Hydro One's view, the transmission system exists for its customers and it is important to customers that the transmission system is managed so that the service is safe and reliable.

The Board agrees with intervenors that in periods of economic downturn increased electricity rates may compound the financial stress being felt by customers. However, the Board does not agree that it is appropriate to constrain the relief sought by utilities solely on the basis of current economic conditions. The Board agrees with Hydro One that its spending programs are long-term in nature and planning for their execution should not be driven by economic cycles.

In establishing just and reasonable rates the Board considers the impacts of those rates on customers. Only those programs which are necessary for the development, maintenance and safe operation of the applicant's system are justified in establishing the revenue requirement underpinning those rates. Another tenet of rate making is to avoid rate shock through the smoothing of the applicant's spending programs in appropriate cases. An adverse consequence of reducing the applicant's spending to match an economic downturn would be to reduce the economic efficiency of asset optimization plans and to introduce inappropriate volatility in spending.

The effect that higher electricity rates may have on customers, given the current economic situation, heightens the importance of the Board's scrutiny of the applicant's spending and may focus attention on the smoothing of spending. It will also involve a consideration of which spending may be appropriately deferred. However, the Board does not agree that it is appropriate to arbitrarily reduce spending in direct response to the economic downturn. These factors have been taken into consideration by the Board in specific findings on the various areas of the application.

2.3 LETTERS OF COMMENT

The Board has received a number of Letters of Comment in response to the published notice of Hydro One's application. The Board reviews each of these letters because they come from the very consumers whose interests the Board is charged with protecting. While the Board will not address the specifics of these letters individually, and in many cases the concerns expressed are not directly related to this transmission rate proceeding, the Board has considered the concerns expressed by these consumers in its deliberations.

3. LOAD FORECAST

Hydro One develops a forecast of hourly demand by customer delivery point for purposes of developing the charge determinant forecasts for the network pool, line connection pool and the transformation connection pool. Hydro One uses both econometric models (monthly and annual) and end-use models (loads by customer sector) to forecast the transmission system load. Customer load forecasts are based on econometric models and customer surveys, most recently a survey of all customers over 5 MW in the spring of 2008. For large utility customers each customer is modeled individually using the econometric approach. The load forecast included with the application was prepared and released in May 2008 and was based on economic and forecast information that was available in April 2008.

The forecast is presented on a weather normalized basis, using conditions based on the average of the last 31 years. In normalizing weather for each delivery point, Hydro One examined load and weather conditions for that delivery point over the last four years and applied a correction factor.

The effects of embedded generation and conservation and demand management (CDM) are also removed from the forecast. The reductions for 2009 and 2010 are 1620 MW and 2407 MW, respectively. The level of the reductions is based on the government's 2007 CDM target and the incremental CDM forecast for the following years in the OPA's August 2007 Integrated Power System Plan ("IPSP").

Finally, Hydro One as part of an ongoing process of reviewing increased volatility in the energy to peak ratio in recent years made an assessment that an additional 430 MW should be added to the peak forecast in 2008.

The following table sets out Hydro One's forecast and rate category charge determinants.

Load Forecast and Charge Determinants
(MW)

	Ontario Demand	Hydro One Rate Categories (Charge Determinants)		
		Network Connection	Line Connection	Transformation Connection
2009	21,391	20,842	20,100	17,376
2010	20,734	20,199	19,555	16,905

In its decision in EB-2006-0501 the Board issued three directions related to the load forecast:

- It was expected that Hydro One’s CDM adjustment in its next forecast would be based on a more rigorous analysis.
- Hydro One was directed to conduct a study of the differences between its forecast and the IESO’s forecast.
- Hydro One was directed to conduct a study comparing its weather normalization methodology with those of other utilities.

CDM Impact

VECC submitted that while Hydro One’s CDM adjustment continues to be based solely on the OPA’s CDM projections, the Board expected the CDM adjustment in this proceeding to be based on a more rigorous analysis, including an assessment of the impacts of specific programs. Hydro One responded that it had followed the Board’s direction by adjusting the 2008 to 2010 forecasts on the basis of the OPA’s CDM forecasts for 2008 to 2010, which include demand response program expectations.

Comparison with the IESO Forecast

Hydro One reported that the difference between its forecast and the IESO forecast is primarily explained by the treatment of CDM and embedded generation. VECC expressed satisfaction with Hydro One’s response. AMPCO observed that when comparing the forecasts with actual results the IESO forecast was equally below and above the actual whereas the Hydro One forecast was consistently below the actual.

Weather Normalization

VECC submitted that Hydro One's study was too narrow in scope in that it focused on the number of years used in weather normalization and did not address the other steps and processes involved in weather normalization. VECC concluded that Hydro One had not fully responded to the Board's directive. AMPCO also expressed dissatisfaction with Hydro One's response to the Board's directive and argued that the Board should direct Hydro One to retain an independent expert to develop a "best fit" weather normalization methodology for assessing Ontario peak demand.

Hydro One responded that no further review of its weather normalization methodology is required because the study which was conducted was thorough and supports the continued use of Hydro One's current methodology. Hydro One noted that its forecasts do not vary significantly from weather corrected results.

Load Forecast

VECC concluded that Hydro One's forecast should be used for rate setting purposes for the following reasons:

- Current economic conditions suggest the forecast should be lowered, but the forecast also likely overstates the impact of demand management.
- There are no details on the record as to an appropriate updated forecast and no other forecasts (e.g. operating expenses) underlying the revenue requirement forecast have been updated.

AMPCO submitted that Hydro One has consistently under-forecast load for the years 2002 through 2007, and, as a result, the Network Charge Rate has been set too high and Hydro One has over-collected revenue. AMPCO did not argue that the load forecast should be adjusted; rather it argued that its "High 5" rate design proposal (discussed later) would remove this risk because it does not depend on a load forecast. AMPCO also submitted that the Board should consider other mechanisms (beyond AMPCO's rate design proposal) to reduce forecast error risk, but made no specific proposal.

Hydro One responded that the forecast methodology used in this application is the same as that reviewed and approved in EB-2006-0501 with one modification. This adjustment, an increase to the peak forecast, is designed to capture "evolving trends related to weather, changes in industrial processes and CDM actions from customers."[1] Hydro One noted that this adjustment raises the forecast, thereby lowering rates.

Board Findings

The Board accepts Hydro One's forecast for purposes of setting rates. No party argued that the forecast should be adjusted upwards. Indeed, it was generally acknowledged that the forecast may well be overstated given the change in economic circumstances since the forecast was developed.

The Board is satisfied with Hydro One's approach to the CDM adjustment. The Board finds that it is appropriate for Hydro One to base its adjustment on the OPA's information and analysis. The Board does not believe it would be worthwhile for Hydro One to conduct a separate analysis of CDM impacts.

Similarly, the Board is satisfied with Hydro One's response to the Board's directive regarding a study comparing the IESO's forecast methodology. The differences in the two methodologies have been adequately explained.

Finally, the Board is satisfied with Hydro One's response to the Board's directive regarding a study comparing weather normalization methodologies. The Board finds that the study was sufficiently comprehensive and that only marginal benefit would be gained from further examination of this issue.

[1] Hydro One, Reply Argument, p. 14.

4. OTHER REVENUE

This chapter addresses the issues of export revenue and external revenues.

4.1 EXPORT REVENUE

Hydro One earns revenues through its export transmission service ("ETS"), and the amount earned reduces the revenue requirement for the Network Pool. The export revenue forecast is based on export projections in the IESO's 2008-2010 Business Plan. Hydro One has not proposed to change the export transmission tariff of $1/MWh. In the Board-approved settlement agreement in Hydro One's recent rate case, EB-2006-0501, the IESO agreed to conduct a study of the export transmission tariff involving neighbouring jurisdictions and market participants.

Forecast Revenue

Hydro One forecast export revenues of $12 million for both 2009 and 2010. The export revenues for the years 2006, 2007 and 2008 were $13.2 million, $14.1 million and $24.6 million, respectively.

Board staff noted that the IESO 2008-2010 Business Plan, which is the basis for the export revenue forecast, shows virtually flat export revenues for the period 2007-2010. Board staff suggested that the forecast be increased by $2-$3 million to be more in line with historic averages.

BOMA/LPMA also argued that the export revenue forecast should be increased. In BOMA/LPMA's view, the $12 million forecast was unreasonable given actual experience and should be raised to $24 million. BOMA/LPMA also submitted that a variance account should be established, in recognition that the revenue increase in 2008 might be temporary or it might be part of trend and in recognition that the ETS tariff might be changed. BOMA/LPMA argued that a variance account would protect ratepayers and Hydro One. CME adopted BOMA/LPMA's submissions.

SEC compared the IESO's budgeted figures for 2007 and 2008 of $11.2 million and $10.9 million, respectively, to the actual levels in those years, $14.1 million and $24.6 million, and concluded that the IESO's business plan was not a reliable predictor of

Hydro One's export revenues. SEC argued that the forecast should be raised to $17.3 million, the average for the years 2006-2008.

VECC submitted that the revenue forecast should be raised to $19.4 million, which is the average over the last two years. VECC also submitted that it would be reasonable to establish a variance account for this item given the volatility in these revenues. Such an account could also track any difference that arises from a change in the ETS tariff given Hydro One's commitment to file a revised tariff for 2010. This would avoid having to adjust the 2010 revenue requirement for a change in the ETS tariff.

Hydro One responded that the results for 2008 were anomalous and cited supporting analysis by the IESO in its 2009-2011 Business Plan. Hydro One also pointed out that based on the IESO 2009-2011 Business Plan (which was filed in a separate proceeding), Hydro One's export revenue for 2009 and 2010 would be $6.7 million and $7.2 million, respectively, well below Hydro One's forecast of $12 million. Hydro One responded that it is not proposing a variance account to track differences between actual and forecast export revenue, except to the extent those differences are related to the changes arising from the IESO study.

The April 18, 2007 Settlement Agreement and the IESO study

Under the terms of the Board-approved settlement agreement in Hydro One's recent proceeding (EB-2006-0501), the IESO agreed to produce a study of the export transmission tariff, focussing on arrangements with other jurisdictions for an Export Transmission Service with the intention of eliminating the tariff. The study was to be completed by June 2009.

The Settlement Proposal regarding the export transmission rates was filed with the Board on April 11, 2007 and accepted in the Board's Settlement Proposal Decision of April 18, 2007. The settlement, as approved by the Board, states:

> The parties have agreed that the status quo ETS Tariff of $1/MWh should be maintained until the 2010 transmission rate setting process. In supporting the settlement the parties are supportive of the IESO undertaking a study of an appropriate ETS Tariff to be completed prior to the 2010 transmission rate re-setting process and through negotiation with neighbouring jurisdictions pursue acceptable reciprocal arrangements with the intention to eliminate all ETS Tariffs. It is understood that any change to the ETS tariff must be approved by the OEB

as part of a rate setting process which Hydro One will initiate as part of the 2010 transmission rate re-setting process.

AMPCO submitted that Hydro One had not honoured its commitment because it does not intend to seek an adjustment of the ETS tariff for 2010 rates. AMPCO recommended that the Board order Hydro One to bring the IESO report to the Board and to make recommendations for an appropriate ETS tariff for 2010 in the expectation that a revised rate might well be significantly higher. In AMPCO's view, "To allow Hydro One to defer this issue for another year or more would undermine the integrity of the settlement process and continue the current cross-subsidy."[2]

VECC characterized Hydro One's approach as follows:

- The Board would initiate a process to review and approve the IESO recommendations before any Hydro One filing on the matter.
- Any changes to the rate would be initiated as part of the 2011-2012 proceeding and not for 2010 rates.
- A deferral account could hold parties harmless in the interim.

VECC submitted that this approach was contrary to the Settlement Agreement. In VECC's view, Hydro One is responsible for bringing forward a proposal based on the IESO's work, and there is no reason to delay to 2011 because the IESO study is expected to be on time and will include consultations with other jurisdictions.

VECC submitted that a new ETS tariff should be set for 2010 and noted that the 2010 revenue requirement could be updated to reflect such revised rates at the same time it is updated for return on equity and cost of debt. VECC concluded that "the Board should direct Hydro One Networks to honour the terms of the Settlement Agreement and file a proposal for export tariffs as part of the 2010 transmission rate-resetting process."[3]

Hydro One maintained that the IESO is committed to providing its report by June 2009 and that Hydro One remains committed to having a new ETS tariff approved by the Board once the IESO has completed its study. Hydro One also reported that the IESO has indicated that if the Board considers new contracts appropriate (including possible

[2] AMPCO, argument, p. 35.
[3] VECC argument, p. 8.

elimination of the tariff), the IESO would then enter into formal negotiations with other jurisdictions.

Board Findings

This revenue source provides an important offset to the revenue requirement to be collected from Ontario consumers. However, the level of this revenue is beyond Hydro One's control and therefore there is no opportunity to create an incentive mechanism whereby Hydro One could be encouraged to increase these revenues.

What remains is the requirement to forecast the revenue accurately so as to ensure Ontario consumers receive the full benefit. The historical evidence suggests that the forecast for 2009 and 2010 is too low. However, the events of 2008, and the resulting level of export revenues, may well have been anomalous. The Board concludes that Hydro One has an incentive to be conservative in its forecast so as to protect itself from under-recovery. While the Board believes that it is appropriate for customers to get the full benefit of these revenues, the Board also believes that it would be inappropriate to expose Hydro One to the risk of an overly generous revenue forecast.

The Board concludes that it is appropriate to establish a variance account to capture any difference between the forecast and actual revenues and that the account should be symmetrical. As a result, the Board finds that it is not necessary to adjust the forecast.

With respect to the IESO study, the Board agrees with intervenors that the results of the IESO study should be reviewed and any tariff changes implemented as expeditiously as practical. It may not be necessary to wait for Hydro One's 2011-2012 application to consider this matter. The Board directs Hydro One to put forward a proposal to the Board within 60 days of the release of the IESO study. The Board can consider at that time whether it should review Hydro One's proposal in the context of 2010 or 2011 rates.

4.2 EXTERNAL REVENUES

Hydro One earns external revenues by providing services to third parties through secondary land-use, station maintenance and engineering services. There is also other external work which provides a source of revenue such as royalties received for use of Hydro One resources by third party customers as well as revenues associated with telecommunications and tele-protection systems for Ontario Hydro's successor companies. The projected revenue is $18.6 million for 2009 and $18.0 million for 2010. These revenues are treated as an offset to the revenue requirement.

4.2.1 Station Maintenance and Engineering and Construction

Hydro One earns revenue by providing specialized services to third parties in the areas of station maintenance and engineering and construction. The station maintenance work includes activities such as repair of electrical equipment, calibration and the provision of metering services. The engineering and construction service includes a large component of work done for Ontario Power Generation Inc. This work includes the installation/removal of major power equipment, control cabling, dam maintenance, and work within generator switchyards. Hydro One also provides services to other transmission companies through its design and construction work. Hydro One performs these activities as part of its operations in running its transmission business.

BOMA/LPMA provided the following table setting out the net revenues from these activities for the years 2005 to 2010:

Station Maintenance and Engineering and Construction
($ Millions)

$ Million	2005 Actual	2006 Actual	2007 Actual	2008 Actual	2009 Forecast	2010 Forecast
Gross Revenue	19.5	19.7	18.2	21.9	4.9	4.4
Cost of Sales	15.7	16.6	14.5	20.5	4.1	3.7
Net Revenue	**3.8**	**3.1**	**3.7**	**1.4**	**0.8**	**0.7**

Hydro One indicated that the forecast is lower than the historical actual because of increasing internal workloads and a decision to reduce external work to a minimum.

BOMA/LPMA submitted that the forecast for net revenue from these activities should be maintained at the same level as in 2008, $1.4 million, because Hydro One has not provided compelling evidence to support the level of reduction in the forecast. CME adopted BOMA/LPMA's submissions.

VECC submitted that although Hydro One may be striving to reduce its activities in these areas, industry work continues to arise requiring the skills of Hydro One staff. VECC concluded that revenues should be raised to $12.8 million for station maintenance and $7.2 million for engineering and construction, noting that the margin would be approximately 15%. This adjustment is approximately the same level advocated by BOMA/LPMA.

Hydro One reiterated that given the growing internal labour requirements, minimal external work will be conducted in the test years and submitted that the Board should accept the lower forecast.

Board Findings

This is not an activity which Hydro One should be incented to undertake, and given the requirements for internal work it is not an activity which Hydro One should be actively pursuing. However, even though the amounts are not large, the Board concludes that customers should receive the full benefit of these revenues and Hydro One should not be at risk for its forecast. The Board has determined, therefore, that as with export revenues, ratepayers' interests are best protected by establishing a variance account to ensure that the full extent of these revenues is to the benefit of ratepayers while at the same time protecting Hydro One. No change will be made to the forecast revenues.

4.2.2 Secondary Land Use

Hydro One earns revenue by allowing external parties to utilize parts of its transmission corridor lands for compatible land use purposes. The program involves licensing, leasing and the granting of easements for land rights within the corridor lands. The revenues are earned though rental payments and in the case of easements, lump sum payments made to Hydro One. Examples include parking lots, parks and trails, agricultural use, and municipal infrastructure such as roadways and pipeline mains.

Hydro One forecast secondary land use revenues of $11 million for 2009 and 2010. This is substantially lower than the actual revenues in 2008 which were $22 million. Hydro One indicated that the revenues in 2006-2008 were unusually high due to one-time events. Hydro One did not forecast any one-time events for the test period.

BOMA/LPMA submitted that either a variance account should be established to capture one-time revenues beyond the forecast base level or the forecasts for 2009 and 2010 should be increased to $16.4 million, which is the average level of revenue for 2005-2008. CME adopted BOMA/LPMA's submissions.

VECC also submitted that the forecast should be revised to include the effect of likely one-time events, noting that such events have occurred in three of the last four years. VECC submitted that either the forecast should be increased to $17.9 million (the average for 2006-2008) and the Board should establish a variance account to track the difference, or the forecast should be increased to $14.6 million without a variance account. VECC indicated it had no preference, but suggested that the second option might be simpler from an administrative perspective.

Hydro One responded that the 2009 and 2010 forecast is more in line with 2005, which is appropriate because one-time events have inflated the revenues in 2006, 2007 and 2008. Hydro One concluded that it would be inappropriate to included unknown one-time events in the forecast as there is no information upon which to forecast such revenue.

Board Findings

Hydro One has little control over these revenues, and the historical level of revenues has been influenced significantly by one-time, and therefore unpredictable, events. As with export revenues and station maintenance and engineering and construction, the Board concludes that customers should receive the full benefit of secondary land use revenues and Hydro One should not be at risk for its forecast. The Board has determined, therefore, that as with export revenues and station maintenance and engineering and construction, ratepayers' interests are best protected by establishing a variance account. This will ensure that the full extent of these revenues is to the benefit of ratepayers while at the same time protecting Hydro One. No change will be made to the forecast revenues.

5. OPERATIONS, MAINTENANCE AND ADMINISTRATION EXPENSE

5.1 INTRODUCTION

The table below sets out Hydro One's historic, bridge and test year O&MA expenses.

OM&A Expenses

($ millions)

	2005	2006	2007		2008 (Bridge)		2009 (Test)	2010 (Test)
			Approved	Actual	Approved	Actual	Forecast	Forecast
Sustaining	166.3	179.0	200.1	205.9	200.9	187.5	226.5	240.1
Development	6.7	8.1	8.0	8.4	8.1	9.2	13.9	16.3
Operations	38.3	42.9	45.8	49.7	46.2	47.6	52.3	53.7
Shared Services and Other Costs	59.9	76.3	67.4	86.4	57.1	64.7	71.6	66.4
Property Taxes & Rights Payments	70.5	68.6	72.8	62.5	75.1	64.8	70.9	73.1
TOTAL	**341.7**	**374.9**	**394.1**	**412.9**	**387.4**	**373.8**	**435.2**	**449.6**
Year over Year % Change								
Sustaining		7.6%		15.0%		-8.9%	20.8%	6.0%
Development		20.9%		3.7%		9.5%	51.1%	17.3%
Shared Services and Other Costs		27.4%		13.2%		-25.1%	10.7%	-7.3%
TOTAL		**9.7%**		**10.1%**		**-9.5%**	**16.4%**	**3.3%**

OM&A expenses are projected to increase by 16% in 2009 over 2008 and by 3% in 2010 over 2009. Hydro One stated that the test year expenditures are required to address the increasing maintenance requirements of an aging and expanding transmission system. The largest increase is in the sustaining category, and within that category the largest increases are related to power equipment and ancillary services.

5.2 OVERALL OM&A

AMPCO, CCC, BOMA/LPMA, CME, SEC and VECC each argued for overall spending reductions based on trend analysis of historic spending and the consumer price index.

Hydro One stated that the proposed increases are attributable to spending on specific programs as explained in the evidence, in particular power equipment and ancillary systems.

Board Findings

The Board does not believe that a disallowance based on trend projections is appropriate is this case. While trend projections are useful as a potential trigger for an examination of changing circumstances, they cannot be used alone to justify a particular level of spending. In this case there is sufficient evidence for the Board to assess matters on a more specific basis.

Hydro One has provided evidence that, to a degree, a correlation exists between asset maintenance costs and the age of the assets. The applicant submitted that demographic information was primarily an indication of probability that an asset would be a candidate for a maintenance program. There was no challenge to this premise in this proceeding and the Board accepts it.

Given that the growth of the transmission system has not occurred on a constant basis, it stands to reason that there will be groups of common asset vintages that are more heavily populated than others. The Board therefore considers it acceptable that there will be fluctuations in maintenance costs over time.

For this reason the Board considers it preferable to assess the spending programs in the context of the planned activities and the justification for those planned activities.

5.3 SUSTAINING OM&A

Sustaining OM&A consists of expenditures required to maintain transmission facilities at appropriate levels of reliability and service quality, and to satisfy legislative, regulatory, environmental and safety requirements. There are three categories within sustaining OM&A:

- Stations – which funds the work required to maintain assets within transmission stations including power transformers, circuit breakers and ancillary systems;
- Lines – which funds the work required to maintain 28,000 circuit kilometers of overhead transmission lines and 270 circuit kilometers of underground transmission lines; and
- Engineering and Environmental Support – which funds the work related to managing transmission assets including management of records and drawings, and services that provide technical expertise not available within Hydro One.

Overall, sustaining OM&A is forecast to increase by 21% in 2009 over actual spending in 2008. Hydro One stated that the increased expenditures are required to meet the increased maintenance and refurbishment requirements of the large number of assets that will enter their mid-life to end of life regions in the test year period. The historic, bridge and test year expenditures are summarized in the table below.

Sustaining OM&A
($ millions)

	Historic			**Bridge**	**Test**	
	2005	**2006**	**2007**	**2008**	**2009**	**2010**
Stations	118.1	126.9	150.0	133.9	167.7	181.2
Lines	41.5	45.0	47.0	43.5	48.7	48.8
Engineering and Environmental	6.7	7.2	8.9	10.1	10.2	10.2
TOTAL	**166.3**	**179.0**	**205.9**	**187.5**	**226.5**	**240.1**

In the decision in EB-2006-0501, the Board found some of the evidentiary record to be inadequate or incomplete. The Board directed Hydro One to work with intervenors to develop the type of and format for data reflecting asset condition. The Board directed Hydro One to provide asset aging data, including data by value and importance of the type of asset, in its next transmission rate proceeding. In response to this direction, Hydro One filed summaries of meetings with stakeholders, a summary of its business planning process, power equipment age distribution and an Asset Condition Assessment completed by Hatch International Inc.

Energy Probe analyzed the power equipment age distribution evidence and the Asset Condition Assessment. Energy Probe observed that in the period 2005 to 2007, the number of transformers entering the 20-30 year age class appeared to decline while spending on sustaining OM&A rose. Energy Probe also observed that the Health Index has improved, such that the health of 96% of power transformers is currently "good" or "very good". Energy Probe submitted that the data suggest that OM&A spending on power transformers should be less than the 2006 spending. Energy Probe's analysis and conclusion on circuit breakers was similar. Several other parties supported Energy Probe's submission to the effect that Hydro One's aging assets rationale does not justify significant increases in OM&A over historic levels.

In addition to asset demographics, SEC analyzed whether the level of OM&A spending is related to a growing system. SEC provided an analysis of sustaining, development and operations ("SDO") OM&A expenditure per kilometer line and per TWh for the period 2003 to 2010. SEC's analysis indicated that OM&A spending on a per unit basis is increasing. SDO OM&A was $6,481/km in 2003 and projected to be $10,779/km in 2010. SEC commented that Hydro One's evidence does not justify the large increase in spending that it is seeking. SEC took the position that the explanations describe the increased work plan but do not explain the need for the spending increases.

VECC commented that Hydro One did not follow through on the Board's direction regarding asset condition, noting that information had to be elicited through interrogatories and the oral hearing. VECC noted that when parties attempted to reconcile trends in asset demographics with trends in expenses, Hydro One replied that this was too simplistic and that asset condition assessments needed to be considered. VECC further noted that parties' attempts to correlate the latter were met with the response that performance trends needed to be considered, but this information was not provided. VECC submitted that the data that has been filed does not assist in understanding how the applicant makes its prioritization decisions that result in the maintenance programs contained in the application.

In its submission, Hydro One cited the gap in reliability performance between Hydro One and other Canadian Electrical Association ("CEA") utilities. Hydro One is particularly concerned about the outage frequency and duration associated with the 500 kV transformers which show an increasing gap in reliability performance relative to CEA levels.

Hydro One concurred with the parties' observations about asset demographics. Hydro One maintained that its investment decisions are made based on actual asset condition, which includes a consideration of age as well as performance. Hydro One referred to the 500 kV transformer refurbishment trend as an example of prudence in refurbishing assets: there were no refurbishments in 2005 or 2006 and one in 2007; four were planned for 2008; and 14 are planned for the two year test period.

Hydro One cited witness testimony that redundancy built into the transmission system may mask deteriorating performance of equipment. Hydro One stated that the frequency of interruption trend for the breaker and transformer assets is significantly worse than the CEA average and this is unacceptable to Hydro One.

Board Findings

As stated above, the Board previously provided direction to Hydro One with the objective of having an improved evidentiary record related to asset condition in this application. Hydro One responded to this direction and additional data has been filed.

Hydro One responded to arguments that the demographic data filed does not support the maintenance proposals by stating that the age data alone is only determinative of what assets are likely candidates for maintenance programs and that actual asset condition must be considered.

While Hydro One's response may be consistent with the evidence on its investment plan process itself, there is a lack of supporting evidence on the other determinative factors purported to be part of that process. The company's investment plan process indicates that asset condition, reliability requirements, customer requirements, safety requirements and environmental criteria are also considered. However, very little in the way of supporting evidence was provided related to these factors.

VECC submitted

> that both the Board and other parties require more information regarding the workings of Hydro One Networks' planning process including the basis for the "minimum spending level", the prioritization of project/work activities and the residual risk associated with the alternative levels of spending considered by Hydro One Networks.[4]

[4] VECC, Argument, p. 17.

Hydro One affirmed in its reply submission its position that the minimum spending level represents a spending level which avoids unacceptable risk to meeting safety, regulatory or legal requirements over the planning horizon. The evidence indicates Hydro One has exceeded this “minimum level” by $49 million in 2009 and $45.7 million in 2010. The Board is of the view that Hydro One has satisfactorily explained its planning processes, use of the “minimum spending” concept, their risk analysis and system optimization objectives. The Board accepts Hydro One’s evidence in these areas.

However, the Board finds that Hydro One’s evidence as it relates to the factors driving the spending levels has been insufficient. In addition to the demographic data that was filed, Hydro One should have filed more real-life data samples related to the determinative factors referenced in the company’s investment plan process. This need not have been a reproduction of all the company’s documentation related to its internal decision-making but rather an illustrative cross-sectional sampling related to the determinative factors and pertaining to various asset groupings.

Hydro One claimed that it has provided ample justification for its spending plans and that VECC’s request for even more information on each iteration of the process crosses the line into micromanagement of Hydro One's affairs and is unduly intrusive. The Board is of the view that Hydro One has made strides to improve the record in this application relative to its previous application and has attempted to follow the directions included in the last decision. However, this application lacked key evidence to substantiate some of the applicant’s claims. The Board has no reason to question Hydro One’s objectives in the execution of its business planning, asset management protocols and other processes designed to ensure the optimum use of its assets. However, it is not enough to submit that the processes are complex and intricate and expect to satisfy the Board that the processes perform as designed.

The applicant has proposed a total spending level of $226.5 million in 2009 and $240.1 million in 2010. The evidence which Hydro One has provided does not support this level of expenditure. Due to the weakness of the supporting evidence in this area, the Board will disallow $15 million of the proposed spending in each of the test years to reflect the lack of substantiation for the full proposed amount. The allowed expenditure exceeds Hydro One’s claimed “minimum level” by $34 million in 2009 and $30.7 million in 2010.

The lack of substantiating evidence on the need for sustaining maintenance calls into question the accuracy of Hydro One's deemed "minimum level" of spending. The Board relies on it only as an indication that the allowance provided is well above what Hydro One has deemed to be lowest sustainable over the planning horizon. This is not to be construed as an acceptance of the "minimum level" for any other purpose.

5.4 DEVELOPMENT OM&A

Development OM&A provides funds for R&D on emerging technologies and for standards development activity. The latter includes response to changes to requirements and standards as set by the Transmission System Code, Electrical Safety Authority, NERC[5] and NPCC.[6] The historic, bridge and test year expenditures and summarized in the table below.

Development OM&A
($ millions)

	Historic			Bridge	Test	
	2005	**2006**	**2007**	**2008**	**2009**	**2010**
Research & Development	1.1	4.0	4.4	2.7	6.0	9.2
Standards Development	5.6	4.1	4.0	6.5	7.9	7.1
TOTAL	**6.7**	**8.1**	**8.4**	**9.2**	**13.9**	**16.3**

CCC submitted that the $30 million expense (2009 and 2010 combined) in the category of development OM&A is discretionary and should not be permitted in a recession. Further, CCC submitted that Hydro One has not made the case for why it, rather than the OPA, needs to spend money in this category.

SEC stated that although the R&D budget increases by $3.2 million in 2010 over 2009, Hydro One did not have a list of projects for 2010. SEC concluded that the increases sought by Hydro One are unreasonable.

[5] North American Electric Reliability Corporation
[6] Northeast Power Coordinating Council, Inc.

In reply, Hydro One agreed that spending associated with R&D is increasing significantly. Hydro One maintained that it identified emerging issues, challenges and specific projects and initiatives in response to interrogatories to justify this increase.

Board Findings

The Board does not agree with CCC's submission that development expenses should be considered discretionary and therefore not permitted in a recession. Previously in this Decision the Board addressed the appropriateness of reviewing an applicant's spending proposals with a view to mitigating rate impacts due to financial pressures brought on by economic recessions. The Board views development spending as being part and parcel of management's responsibility to operate and maintain a viable transmission system. Many of the cost drivers in this area are related to the development of required standards for the safe and reliable operation of the system or for improvements thereof. Others such as contributions to University curriculum development and program support require a consistent level of commitment to be of value.

By its very nature research and development cannot withstand the same level of scrutiny normally brought to bear in the prudence review of other programs with more definitive and predictable outcomes.

The Board accepts Hydro One's submission that it has identified emerging issues and is of the view that the electricity environment is experiencing rapid technological changes that necessitate an increased focus on R&D. However, the proposed increases in R&D are substantial, and the Board is not convinced that the full amount is warranted.

There may be new and additional cost drivers placing upward pressure on R&D costs, but it is not reasonable to simply consider all these new costs to be incremental to the existing costs. The Board expects that as a shift in focus to new types of spending occurs in R&D, Hydro One will have the ability to reprioritize its spending. The Board does not consider the funding requirement beyond the proposed 2009 level to have been substantiated sufficiently by Hydro One. SEC noted that the 2010 spending plan did not have a defined budget. The Board finds that the increase of $3.2 million proposed for the 2010 (over 2009) will not be allowed.

5.5 SHARED SERVICES AND OTHER OM&A

A centralized shared services model is used to deliver common services to Hydro One Networks Inc. and its affiliates. These shared services include Asset Management, Information Technology, and Common Corporate Functions and Services ("CCFS"). CCFS services include corporate management, finance, human resources, corporate communications, legal, regulatory affairs, corporate security, and internal audit.

VECC noted that total costs associated with CCFS, Asset Management and Information Technology increase by 28% between 2007 and 2009. VECC submitted that the increases are excessive and suggested that the Board should consider the appropriateness of a number of items: the capitalization of a portion of General Counsel costs; the $3 million proposed for IFRS implementation; and the costs related to smart metering and conservation that appear to be more relevant to the distribution business.

Similarly, CCC submitted that most of the proposed budget for corporate communications, $6.9 million in 2009 and $6.8 million in 2010, should be allocated to the distribution business. CCC noted that most of the evidence refers to smart meters and conservation.

In reply, Hydro One noted that in 2008 a portion of General Counsel costs was removed from OM&A and charged to the capital project budget for the Bruce to Milton project. Hydro One stated that no capital projects requiring a high level of activity from General Counsel have been identified for the test years.

Hydro One submitted that the costs related to IFRS implementation are prudent as IFRS conversion is required for closing balances effective December 31, 2009. In response to the submissions on cost allocation, Hydro One stated that it used the Rudden study to allocate costs to transmission and distribution. Hydro One noted that corporate communications assists with environmental assessments and First Nations Relations for section 92 applications.

Board Findings

The Board accepts Hydro One's submission on the anomaly which occurred in 2008 regarding the allocation of a portion of the General Counsel's costs.

As for the cost allocation matters, the Board accepts Hydro One's evidence on the matter. The Board accepts the third party assessment that the allocation is in line with the methodology previously approved by the Board.

5.6 COMPENSATION

Hydro One projects that payroll for 2009 will be $589.2 million and $619.9 million for 2010. This reflects the combined compensation costs for the transmission and distribution businesses. A portion of the compensation cost is included in OM&A and the rest in capital. Hydro One stated that due to the nature of its integrated transmission and distribution workforce, separate workforce and compensation data for the transmission business is not available.

Employee Count and Compensation
(Hydro One Networks Inc.)

	2005	2006	2007	2008	2009 Forecast	2010 Forecast
Employee Headcount at Year End						
Regular	3,904	4,018	4,312	4,888	5,070	5,199
Non-Regular	1,174	1,283	1,581	1,993	1,850	1,873
Total	**5,078**	**5,301**	**5,893**	**6,881**	**6,920**	**7,072**
Compensation Cost ($ millions)	**$397.9**	**$459.3**	**$495.5**	**$569.0**	**$589.2**	**$619.9**

Compensation Cost includes base salary, overtime pay, benefits (other than costs for pensions and other post-employment benefits) and other compensation

In the decision in EB-2006-0501, the Board directed Hydro One to file a study providing useful and reliable information concerning Hydro One's compensation costs and how they compare to those of other regulated transmission and/or distribution utilities in North America. The study was also to include empirical evidence on the relative productivity of the Hydro One workforce in comparison with other utilities.

As part of its application, Hydro One filed a compensation and productivity study prepared by Mercer (Canada) Limited and Oliver Wyman (the "Mercer Study"). The compensation portion of the study concluded that on a weighted average basis for the positions reviewed, Hydro One's compensation is approximately 17% above the market median. Hydro One stated that its compensation levels are driven by legacy collective agreements, legacy pension and benefit programs and the need for competitive salaries.

The productivity portion of the study measured four indicators: compensation per MWh sold; compensation divided by gross asset value; compensation per kilometer of line; and compensation per square kilometer of service territory. The study concluded that Hydro One performed better than median on all indicators except service territory. Hydro One claimed that the productivity results balance Hydro One's compensation being above the market median.

In response to an undertaking, Hydro One estimated that the impact of moving to the benchmarked median compensation would be a total decrease of $81.6 million.[7] The impact would be to reduce the transmission revenue requirement by $13 million.

Energy Probe submitted that the Mercer Study is flawed, in particular the conclusions based on the compensation per MWh and compensation per square kilometer of service territory. Energy Probe claimed that most of the peer group used in the study transmits and distributes electricity all the way to end use customers, while Hydro One transmits electricity for most of the province, but only distributes electricity to one-third of the province's end use customers. As the distribution compensation attributable to Ontario local distribution companies is not included in the costs, Energy Probe's view is that the Mercer Study understates the indicator in comparison with the peer group. Energy Probe concluded that the study did not support Hydro One's position that its productivity offset its compensation levels, and submitted that the study should be given no weight by the Board.

Energy Probe's analysis and position was supported by many parties, including Board staff. Board staff noted that Hydro One was made a successor company of Ontario Hydro on April 1, 1999 and submitted that the importance of legacy collective agreements diminishes with every passing year. Further, although Hydro One is facing a large number of retirements, Board staff stated that the comparators in the Mercer Study are facing similar circumstances. Board staff submitted that the Board needs to consider whether the total compensation Hydro One pays to employees in the test years is unreasonably high based on the evidence, i.e. the Mercer Study.

[7] Undertaking J3.5

Board staff suggested that the Board consider a reduction of $13 million related to compensation. Recognizing the imprecision of benchmarking studies, staff suggested that the Board could consider a reduction of half that amount, i.e. $6 to $7 million. A third alternative proposed would be to base the reduction on the percentage of PWU positions that are not specifically related to the transmission and distribution of electricity. The suggested reduction through this option would be $2 million.

CME stated that material increases in compensation in the midst of a recession are unreasonable. CME questioned Hydro One's plan for net staff additions of 191 at a cost of $30 million over the test years.

SEC submitted that Hydro One's revenue requirement should be reduced by $13 million in both 2009 and 2010 to account for unreasonable labour costs.

SEP submitted that the Board should not refuse to allow a company to recover costs unless the Board is satisfied that there is compelling evidence to show that a company has acted imprudently in entering these contracts.

Only one party, the PWU, questioned the findings of the compensation portion of the study. The PWU questioned the appropriateness of the peer group and the exclusion of overtime and outsourcing in the review. The PWU also noted that the compensation section of the study is by position while the productivity review is by organization. The PWU submitted that if the Board concluded that the studies are flawed, the Board should reject the results and not use them for any part of the decision.

VECC took the position that it would not be useful for the Board to direct Hydro One to pursue productivity comparisons. VECC is concerned that the data would not materially improve the results. VECC's opinion is that the Board should direct Hydro One to develop benchmarks of its own productivity to be tracked over time.

Board staff and VECC submitted that the Board should direct Hydro One to develop estimates of FTE's and compensation related to Transmission OM&A and Transmission capital for its next rate filing.

While the Mercer Study concluded that Hydro One compensation was 17% above market median, the company maintained that it has made progress in reducing overall per capita compensation. Hydro One stated that the evidence demonstrates that average PWU wages per employee have increased an average of 0.1% per year between 2004 and 2010, and that the PWU wages have decreased by an average of 1.1% per year between 2006 and 2010. Hydro One also pointed to lower compensation and benefits paid to recently hired and future Society represented and MCP staff.

Hydro One stated that it is cognizant of the limitations of the productivity section of the Mercer Study. Hydro One claimed that Oliver Wyman provided clarification on the productivity indicators which Hydro One believes the parties have disregarded. For example, the study looked at both transmission and distribution MWh sold by the company.

Board Findings

Hydro One and SEP argued that the Board should not refuse to allow a company to recover costs unless the Board is satisfied that there is compelling evidence to show that a company has acted imprudently in entering these contracts.

The Board does not question this argument but finds it necessary to place the argument into the context of the “contract” that is at issue in this case. The presumption of a company’s prudence exists in the absence of information suggesting otherwise. The information that leads to a challenge of the prudence in this case is the comparative analysis related to the compensation levels of other similar businesses.

Hydro One’s response to the challenge is a claim that its higher compensation levels are acceptable because of its higher productivity levels. The testing of the evidence providing support for that claim has been the focus of this issue in the proceeding. The Board accepts the evidence regarding the compensation comparisons. The Board finds that this portion of the study is persuasive and notes that Hydro One accepts the results as well.

The Board differentiates collective agreement contracts from other goods and service related contracts in the context of a review of prudence. In the typical scenario of contracting for goods and services the company can go to the market place and solicit offers from multiple service providers. If the tendering parties are at arm’s length from the company the Board can rely on typical market forces and profit incentives to determine that the costs incurred in association with the contract are prudent.

The Board cannot rely on typical market forces to test the prudence of entering into a collective agreement. With a collective agreement there is a single source supplier and the nature of the relationship cannot be considered to be arm's length in the same manner as stand alone independent goods and service providers. The Board's examination cannot include an analysis of the myriad of compromises and trade-offs associated with collective bargaining. The subjectivity related to that exercise would render it meaningless if not inoperable.

In the Board's view, once a legitimate challenge to the prudence of the terms of the collective agreement has been made, the only appropriate and likely the only practical manner in which the Board can test the prudence is through the type of comparative analysis filed in this application.

Many of the intervenors found fault with the productivity portion of the Mercer Study for one reason or another. The Mercer Study may be illustrative of the challenges associated with performing comparative analysis of this sort. However, Hydro One has relied on the report to substantiate its claim that its compensation costs that are over and above the median level of the compensation paid by its comparators is offset by its higher than median productivity ranking among those same comparators. The Board does not accept this claim.

The Board does not accept that the productivity portion of the Mercer Study can be relied on to draw any conclusions on productivity. All of the key performance indicators have inherent weaknesses due to the fact that none of the data that was collected from the comparators was originally captured with the intent that it would also be used to perform comparative analysis with other companies. There is no standardized industry-wide method of capturing this particular data for comparison purposes. This results in approximations and assumptions having to be made in order to perform the analysis.

The performance indicator that was the primary driver for Hydro One's relatively high ranking was the compensation cost per MWh. Of the four performance measures utilized in the report the Board considers this one to be particularly problematic. There is no evidence supporting the purported correlation of the MWh sold and productivity. MWh is a combination measurement of a quantum of load and time duration that the load was placed on the system. In essence the MWh sold measurement is a measure of the system utilization. It has not been demonstrated how the productivity efforts of a transmission company can be assessed by comparing the utilization factor of its system to that of others.

In the context of this application, Hydro One's projections indicate that an increase in costs will occur through the test period. It has also stated that it will likely experience a substantial reduction in MWh sold due to the economic downturn. The Board would not accept a calculation of the projected cost per MWh sold through the test period based on these two assumptions to be predictive of a decline in Hydro One's productivity. In the Board's view the productivity efforts of Hydro One are intended to maintain the system in a state that is ready for use at the design capacities for which it was built and therefore costs per MWh sold cannot be used as an indication of productivity.

The Board has not been able to draw a conclusion on Hydro One's response to Energy Probe's argument regarding the absence of all the local distribution companies' distribution costs in the costs per MWh calculation. It is not clear from the response how the points raised by Energy Probe were either considered in the calculation or discounted outright. In any event, having declined to accept the proposition that costs per MWh sold can be used as a productivity indicator, the Board considers the point moot.

The Board concludes that it is appropriate to disallow some compensation costs because these costs are substantially above those of other comparable companies and the company has failed to demonstrate that productivity levels offset this situation. But while the Board does not consider the productivity portion of the Mercer Study to be of determinative value in support of the application it does not draw any negative conclusions from the study either.

In determining the appropriate disallowance the Board has also considered that Hydro One has demonstrated effort and progress in managing the collective agreements that were established by the predecessor company. However, it is worth noting that the Board places little weight on the company's submission in its final argument that its average annual increase per employee has remained very low over its recent history. Hydro One has submitted evidence on the number of new hires it is training. This would seem to have the effect of lowering the average income per employee and therefore influence the analysis in the short term.

Hydro One's evidence is that the revenue requirement would be $13 million less if it were based on the median compensation level from the Mercer Study. Some parties suggested that this amount should be disallowed. The Board does not believe that a reduction of that magnitude is warranted; such a disallowance would imply that the Mercer Study was precise and/or that there are no mitigating circumstances. The Board has already indicated that while the full level of compensation has not been justified, Hydro One has made strides in controlling these costs. The Board will disallow $4 million in each of the test years; this level of adjustment goes some way toward aligning Hydro One's costs with other comparable companies. This disallowance is separate from, and additional to, any labour cost reduction that results from the disallowance of sustaining maintenance program costs made earlier in this Decision as well as any labour cost reductions that result from the Board's findings related to certain Development Capital projects covered in the Capital Expenditures section of this Decision.

The intervenors and Board staff have commented that improvements should be focused in the area of internal productivity comparisons. Hydro One provided evidence of development work on its key performance indicators that it stated will provide year over year performance comparisons. The Board does not consider the current internal performance monitoring to be sufficient to determine that performance improvements are actually being made.

Given the high proportion that compensation costs represent in the overall company costs, the Board will always be interested in having the best evidence available to make determinations of the prudence of these costs and as they relate to productivity. The Board directs Hydro One to continue its key performance indicator development and to improve on its cost allocation accounting processes with the objective of being able to demonstrate improvements in efficiency and the value for dollar associated with its compensation costs.

5.7 PROPERTY TAXES

Hydro One projected property taxes of $61.9 million in 2009 and $64.1 million in 2010. This is an increase of 3.65% in 2009 and 3.10% in 2010 for the cost of property tax, indemnity payments and rights payments.

BOMA/LPMA noted that the actual 2008 property and other taxes were $3.6 million lower than forecast. BOMA/LPMA submitted that the 3.65% increase in 2009 should be applied to the actual 2008 level. This would result in a reduction of $3.7 million in 2009 and a reduction of $3.9 million in 2010.

VECC noted that Hydro One's property tax forecast is based on the assumption that its property values will increase by 2% per year and that municipal tax rates will increase by 2% per year. VECC also noted that Hydro One's updated evidence reflected property taxes that were $2.1 million lower than originally projected due to assessment refunds and tax increases not materializing. VECC submitted that it would be reasonable for the Board to reduce the projected property taxes by at least $1 million in both 2009 and 2010.

During the hearing Hydro One stated that it is seeing increases in property assessments because the properties have not been assessed for a number of years. When probed by SEC the applicant affirmed that the 2% increase in assessments pertains to its assessments and not a relative increase as compared to other property owner's assessments. In addition to higher assessed values due to reassessments, Hydro One noted in its submission that municipal tax rates show a trend higher than the 2% projected tax increase filed. Hydro One cited the 4% increase in the City of Toronto. Hydro One expected diminishing opportunities for tax refunds and submitted that the Board should reject VECC and BOMA/LPMA's requests for reduced property taxes.

Board Findings

The Board notes that the actual 2008 property taxes were lower than had been projected at the time of the application filing. The Board notes that Hydro One projected increases in property taxes of 2% at the time of the filing. The Board accepts Hydro One's argument that other considerations may offset the rationale for the lowering of the allowance for property taxes made by VECC and BOMA/LPMA.

However, the Board notes the evidence provided that the 2% increase in assessments pertains to Hydro One's assessments alone and not a relative increase as compared to other property owner's assessments. Property assessments are used as an allocation tool in apportioning a municipality's taxes. For Hydro One to purport that the 2% increase in assessments equates in a linear fashion to a 2% increase in property taxes assumes that, on average, all other property values remained unchanged since the last assessment. Without substantiating evidence to that effect the Board rejects that claim.

The Board disallows 2% of the proposed property tax cost in each of the test years or $1.2 million for 2009 and $1.3 million for 2010.

6. CAPITAL EXPENDITURES

6.1 INTRODUCTION

Hydro One proposed a total capital expenditure budget of $944 million for 2009 and $1,074 million for 2010. This is a 34% increase between 2008 and 2009 and a 14% increase between 2009 and 2010. Historic and forecast capital expenditures are summarized in the following table:

Capital Expenditures
($ millions)

Category	2008 actual	2009	2010
Sustaining	280.4	279.9	321.6
Development	310.9	553.4	658.8
Operations	23.1	18.2	28.9
Shared Services	89.8	92.4	64.9
Total	**$704.2**	**$944.0**	**$1074.1**

Hydro One defended its budget on the basis that it is required to maintain the reliability of an aging asset base and it is required to build infrastructure to accommodate the new generation mix and access to inter-connected electricity markets.

An issue in the proceeding that received substantial attention from all parties was the extent to which planned capital programs were actually achieved in past years and the ability of Hydro One to achieve its proposed targets in the test years. The Board will address that issue first and the total level of the budget before turning to the specific components of the Sustaining and Development capital budgets.

6.2 HYDRO ONE'S ABILITY TO COMPLETE PLANNED PROGRAMS

Hydro One spent significantly less than it budgeted in 2007 and in the first half of 2008. In addition, the budgeted expenditure levels for the test years are substantially higher than historical levels.

Hydro One filed information about its Work Execution Strategy which identified the steps Hydro One has taken to increase the volume of work that it can complete in the coming years. These steps include the bundling of sustaining and development work, adoption of more standardized designs, and resource modelling that allows for the early identification of outsourcing requirements. Hydro One projected $300 million in "turnkey projects" in 2009.

Board staff noted that Hydro One would have to increase its expenditures in 2009 by 34% over the actual of 2008, and then again a further 14% in 2010. Board staff questioned whether an increased rate of achievement could be maintained and even increased in the test years. VECC noted that even though the rate of spending in the latter half of 2008 had accelerated, spending would have to increase significantly more to meet the projected levels for 2009 and 2010.

BOMA/LPMA submitted that the budget process appears to be driven by asset need, modified for work execution issues. It further submitted that Hydro One provided no evidence of a change in the methodology that would generate a forecast that would accurately reflect the issues that impact on the work execution. BOMA/LPMA concluded that a reduction in the capital expenditures of 10% is reasonable, along with associated reductions to in-service capital and working capital.

Hydro One responded that actions taken to complete the test year capital program represent new methods. Hydro One submitted that when planned contracting-out of work is excluded, the remaining capital work to be completed in 2009 and 2010, on average, is at a level similar to that achieved in 2008.

Board staff also submitted that if capital expenditures forecast were not achieved, the result would be over-collection of revenue. Board staff recommended a variance account to review the actual achievement. VECC supported Board staff's proposal for a variance account. BOMA/LPMA submitted that Hydro One has recovered the cost of capital and depreciation associated with more than $220 million in expenditures which have not been made.

Hydro One responded that the suggestion that there was an over-collection from ratepayers in 2007 and 2008 was wrong. In Hydro One's view, the parties have confused capital expenditures with in-service additions. Hydro One explained that although capital expenditures were lower than forecast, in-service additions were essentially on plan.

Board Findings

The record is clear that the planned work program for 2009 and 2010 represents a substantial increase over 2007 and 2008. The proposed program is beyond what an analysis of just the recent historical experience would suggest is achievable. However, the Board is persuaded by Hydro One's evidence that the new work methods explained in its Work Execution Strategy, and specifically its plan to substantially increase the use of outsourcing, has increased Hydro One's capacity to complete its planned work considerably. The evidence also shows that Hydro One was able to accomplish more than planned in the second half of 2008 with the result being that spending was largely on track for 2008. The table below shows recent spending rates.

Capital Budget Achievement[8]
($ millions)

	2005	2006	2007	2008		
				Jan-June	July-Dec	Total
Budget	399	389	711.6			774.4
Actual	349	402	559.5	260.2	444.0	704.2
Rate of Achievement (%)	87.5%	103%	79%	67.2%	114.7%	91.5%

The submission of BOMA/LPMA and Board staff that monies flowed from ratepayers to Hydro One to fund projects that did not occur is not completely disposed of by Hydro One's reply that the parties were confusing capital expenditures with in-service

[8] 2005 and 2006 information from Exhibit K3.8 from EB-2006-0501.

additions. The Board agrees that if capital expenditures are less than budget, there will be no revenue over-collection if the shortfall pertains only to projects with in-service dates beyond the test period. On the other hand, there will be some level of revenue over-collection if the shortfall pertains to projects with in-service dates in the test period. However, the Board accepts that any potential over-collection is short-term in nature because rate base will be corrected in Hydro One's next application. The Board will rely on its usual manner of testing and setting rate base at the next cost of service proceeding and will not order that expenditures be tracked in a variance account.

6.3 TOTAL CAPITAL EXPENDITURES

In conjunction with the general issue related to Hydro One's ability to execute the capital program, dealt with above, and the more general issue related to the economic downturn, dealt with earlier in this Decision, intervenors challenged the appropriateness of the increase in capital spending overall.

CCC submitted that Hydro One should be allowed to spend only an amount which is consistent with its historic spending, and recommended that the Board approve a 10% increase over the amount actually spent in 2008. In CCC's view, it is evident that Hydro One itself believes it can operate at funding levels substantially below those for which it seeks approval because the budget for 2009-2010 exceeds the minimum requirement.

Board Findings

Similar to the approach taken in dealing with OM&A, the Board considers it to be more appropriate to deal with the specific programs or projects in consideration of cost allowance. The Board's determinations have been made upon consideration of the detailed plans for sustaining capital and development capital.

6.4 SUSTAINING CAPITAL

Sustaining capital expenditures are those investments required to replace or refurbish components to ensure that existing transmission system facilities function as originally designed. Hydro One manages its sustaining capital within two program categories: Stations and Lines. Hydro One noted that sustaining capital is almost unchanged between 2008 and 2009 and in 2010 the increase of 15% is largely attributed to

Stations work. Historical and proposed levels of expenditure are shown in the table below:

Sustaining Capital
($ millions)

	Historic years			Bridge	Test Years	
	2005	**2006**	**2007**	**2008**	**2009**	**2010**
Stations	120.4	126.9	142.7	223.9	208.8	247.6
Lines	48.6	51.6	67.2	56.5	71.2	74.0
Total	**168.9**	**178.5**	**210.0**	**280.4**	**279.9**	**321.6**

Energy Probe supported Hydro One's proposed increase in sustaining capital related to power transformer and circuit breaker replacement programs (included in Stations) because, in its view, the trend indicates a significant increase in the number of both requiring replacement over the next ten years. VECC submitted that the budget for lines is reasonable, based on the evidence regarding the condition of the assets and the increased failure rates. VECC did express reservations about Hydro One's ability to accomplish this work in conjunction with its aggressive development capital plan.

AMPCO argued that there are no apparent trends in the evidence provided by Hydro One that suggest any deterioration in either system or delivery point reliability over the past decade. AMPCO suggested that sustaining activities could be held to current levels without incurring undue risk in the short to medium term. AMPCO recommended that the Board constrain Hydro One's budget to the average of the historical and bridge years.

Hydro One responded that reduced capital spending can contribute to higher OM&A costs.

Board Findings

The Board does not accept AMPCO's view that historic reliability trends should be determinative of the appropriateness of the replacement of key assets. Hydro One has submitted evidence on its use of diagnostic indicators such as visual inspections, Dissolved Gas in Oil (DGA) tests and transformer windings resistance tests to predict failures. The intent of these programs is to improve system reliability through the identification of problem assets prior to their failure. If the programs achieved the maximum results possible there would be no reliability degradation attributable to asset failures. Given Hydro One's use of leading indicators to avoid asset failures, the record of a reliable system does not necessarily indicate that system components are in sound working condition.

The sustaining capital program is not increasing substantially from 2008 to 2009, and the Board finds that the need for the15% increase in 2010 related to Stations assets has been clearly demonstrated in this application. The Board is satisfied that Hydro One has substantiated the need for its proposed sustaining capital for both test years.

6.5 DEVELOPMENT CAPITAL

Development capital includes funding for projects related to new or upgraded transmission facilities. Hydro One is seeking approval for development capital of $553.4 million in 2009 and $658.8 million in 2010. In addition, Hydro One is seeking the Board's opinion on projects totalling $101 million in the test period, which are expected to require approval in a future proceeding.

Hydro One classified its development budget in a number of ways. The table below, taken from the evidence, sets out the requested development budget by investment type.

Development Capital
($ millions)

	Historic			Bridge	Test	
Investment Type	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Inter Area Network Transfer capability	37.3	68.0	81.6	152.8	396.5	509.6
Local Area Supply Adequacy	66.3	34.8	105.5	91.4	101.3	50.8
Local Customer Connection	37.2	52.8	63.7	53.6	66.9	171.6
Generation Customer Connection	3.4	37.5	55.8	29.3	11.9	32.3
Performance Enhancement and Risk Mitigation	3.5	12.4	2.5	2.9	7.2	14.2
Smart Grid	0	0	0	0	3.5	3.4
Gross Capital Total	**147.7**	**205.5**	**309.1**	**330.0**	**587.3**	**781.9**
Capital Contributions as per TSC	(13.1)	(26.1)	(36.6)	(19.1)	(33.9)	(123.1)
Net Capital Total	**134.6**	**179.4**	**272.6**	**310.9**	**553.4**	**658.8**

Hydro One explained that the Inter Area Network Transfer Capability projects are needed to accommodate changing generation patterns in the province and that this investment type is responsible for most of the increase in development capital.

Hydro One also classified the projects according to when and how the projects would be considered for inclusion in rate base. There are four categories of projects, summarized below.

> **Category 1** projects have already received a project-specific Board approval, and the actual costs will be included in rate base when the projects go in-service.
>
> **Category 2** projects are those that do not require an approval under section 92 or any other Board proceeding (other than a rate proceeding). These projects are forecast to be completed in the test period, and Hydro One is seeking Board approval for these projects, with inclusion in rate base when they go in-service.
>
> **Category 3** projects are projects which have specific spending in the test years, but are not forecast to be added to rate base in the test period. For these projects Hydro One is seeking guidance from the Board on the appropriateness of the need, solution and recoverability of the costs.

Category 4 projects will be subject to future approval of the Board through Section 92 applications. Hydro One did not make any specific request regarding these projects.

PWU supported Hydro One's application. It noted that the largest share of the proposed development capital is for Inter Area Network Transfer Capability (72% for 2009 and 77% for 2010), half of which is for the Bruce to Milton project, which is already approved.

The Board will address the following issues:

- The role of the OPA recommendations
- Category 2 projects
- Toronto short-circuit constraints
- Category 3 projects

The Board does not need to address Category 1 or Category 4 projects. Category 1 projects have already been approved by the Board through a section 92 process, and Category 4 projects will be subject to future Board approval through a section 92 process.

6.5.1 The Role of OPA Recommendations

The need for some of the projects included in the development capital program has been substantiated on the basis of recommendations from the OPA. This has raised a fundamental issue in connection with the consideration of the development capital program. The issue concerns the OPA recommendations relied on by Hydro One in seeking approval of the projects and the weight that the Board should place on OPA recommendations.

VECC submitted that for the projects that are characterised as "Pre-IPSP", and that are not subject to section 92 approval, it is imperative that the OPA clearly and formally support both the need and the planned in-service date for the projects.

CCC went further and asserted that the Board must resolve certain questions as a necessary precondition to deciding the application. CCC submitted that the Board is being asked to delegate its authority to determine just and reasonable rates to the OPA and that Hydro One has not led evidence that the expenditures it proposes for transmission links to OPA-approved projects are prudent. CCC referred to the Board's document *Filing Requirements for Transmission and Distribution Applications*, dated November 14, 2006, and, in particular, section 5.3.1, which indicates that it is not sufficient for the applicant to state that the customer or agency has established the need for the project; the Board must be able to test that assertion.

SEC submitted that Hydro One should be required to provide evidence from the OPA setting out either an economic justification for each project or a Ministerial order in respect of the project.

Hydro One replied that it is the Board which makes the final decision as to whether a specific project is prudent and the need justified, not the OPA. Hydro One maintained that the Board will make its decision as to project need through its review and approval of the OPA's IPSP, through the evidence presented in either this or a subsequent rate application, or through the approval of a specific transmission line application as part of a Section 92 application.

Hydro One noted that 11 of the 14 Network projects are proceeding on the basis of recommendations received from the OPA. Of these 11 projects, 6 already have a formal OPA recommendation, and Hydro One expects to receive the OPA's recommendation for the remaining 5. The Investment Summary Documents confirm that the proposed work will not proceed until a formal letter of recommendation is received from the OPA. Hydro One disagreed that it should include detailed evidence from the OPA on the integrated generation and transmission projects as part of its pre-filed evidence; in Hydro One's view, the OPA recommendations are an extension of government policy. Hydro One submitted that its role is to provide cost effective transmission solutions to the OPA for its consideration in evaluating the cost effectiveness of its various plans. Hydro One accepted the OPA's recommendation as justification to proceed with the transmission component of the project because of the OPA's legislated mandate.

Board Findings

The Board recognizes that prior to the approval of the first IPSP (or some other form of transmission plan approval) there is a need to continue the work of planning and developing the province's transmission system.

Part of the OPA's mandate, as established in the *Electricity Act, 1998* is to conduct independent transmission planning and to engage in activities that support the goal of ensuring adequate, reliable and secure electricity supply in Ontario. The Board expects that as the OPA exercises its mandate as the legislated provincial power system planner it will form opinions as to what is needed pertaining to transmission assets.

For purposes of this case, the OPA has forwarded its opinion, in the form of recommendations that pertain to transmission development work, to Hydro One, the predominant transmission system owner in the province. Hydro One filed these recommendations with the Board. However, the OPA did not participate directly in this hearing and was not examined on the recommendations on which Hydro One sought to rely.

The specific issue in this proceeding pertains to the importance the applicant has placed on the OPA recommendations and by extension what consideration the Board should afford the OPA's recommendations as they have been conveyed to the Board through Hydro One.

The Board agrees with CCC that the weight that Hydro One has afforded the letters from the OPA in making its case for the development capital portion of its application does not align with the expectations outlined in the *Filing Requirements*. Section 5.3.1 clearly indicates that evidence related to the need for a project is required and can be supported, where appropriate, by evidence of the IESO and/or the OPA.

As stated above, the Board recognizes that prior to the approval of the IPSP, or some other form of transmission plan, the work of planning and development needs to continue. However, the Board must continue to review applications within the legislative and regulatory parameters established to ensure that decisions are made in the public interest. The material filed by Hydro One which contained the OPA recommendations, although helpful, is not in the Board's view sufficient to approve the associated capital investments requested by Hydro One.

The recent application by Hydro One for Leave to Construct the Bruce to Milton transmission facility is an example of a project application that was supported by the OPA. OPA witnesses actively participated in that proceeding, and the OPA's analysis of the system requirement was central to the establishment of the need and the cost effectiveness of the proposed solution. The fact that the project triggered a section 92 review and was significantly larger than the projects that are at issue here are not the distinguishing factors that necessitated the OPA's support. The necessity and economic prudence of the Bruce to Milton transmission line had to be established and it was, in part, the OPA's analysis that did so. A similar approach would have been appropriate in this case.

Hydro One, in its reply, stated that it is the Board which makes the final decision as to whether a specific project is prudent and the need justified, and that it will do so either through the IPSP approval process, a section 92 process or upon the evidence presented in either this or a subsequent rate application.

This is an application that will set just and reasonable rates to provide the revenues that, among other things, pay for the applicant's capital development needs. Hydro One submitted that the Board has sufficient evidence to assess the prudence and need of the specific projects in its application. As stated above, the Board does not consider that a written recommendation from the OPA alone fulfills the requirement to substantiate the necessity or economic prudence of any given project. The Board will address this matter further in its findings on the specific Category 2 projects.

6.5.2 Category 2 Projects

The Category 2 projects under consideration are listed in the following table:

	Project Description	Net Total Cost $m
Inter Area Network Transfer Capability Projects[9]		
D3	Seven 230kV Capacitor Banks in S.Ont.	56.5
D4	BSPS modification for Bruce Area	5.8
D5	Cherywood X Clairville Unbundle 500kV	107.3
D6	Static Var Compensator at Lakehead TS	22.5
D7	NE Transmission Reinforcement, SVCs at Porcupine and Kirkland Lake	108.6
D8	Series Caps at Nobel SS	47.2
D9	100MVAR Shunt Capacitor at Algoma	9.7
D10	Two 75MVAR Shunt Caps at Mississagi	10.3
Connection projects[10]		
D23	Kingston Gardener: Add Transformer Capacity	8.5
D24	Holland TS new 230/44kV TS & Line connection	26.2
D25	Goreway TS: Build and connect second 230/27.6kV DESN	14.8
D26	Vansickle TS Increase capacity for new load	4.7
D27	Churchill Meadow TS New 230/44kV TS & Line connection	21.3
D28	Glendale TS Increase capacity	3.2
D 29	Dunnville TS: Increase capacity	0.8

Board Findings

Projects D3 and D4

Of the 8 Inter-area Network Transfer Capability projects, 2 are directly related to the Bruce to Milton Transmission project. Projects D3, the installation of capacitor banks and D4, protection system modifications, were characterized in the Bruce to Milton Leave to Construct application as “interim measures” that were required in advance of the expected in-service date of the proposed 500kV transmission facility. The interim measures are intended to increase transfer capabilities in the Bruce area and Southwestern Ontario as well as increase generation and load rejection coverage in the Bruce area. While the interim measures themselves were not the subject of the

[9] ExhD1/Tab3/Sched3/p33
[10] ExhD1/Tab3/Sched3/P35

approval request from Hydro One in that case, the need for increased transfer capability in the Bruce area was ultimately determined and evidence was produced supporting the notion that a residual value of the “interim measures” existed beyond the installation of the Bruce to Milton Transmission line.

The Board finds that these two projects are justified on the basis of their relationship to the approved Bruce to Milton Transmission facility.

Project D5 (Unbundle the 500 kV circuits between Cherrywood and Claireville)

Project D5, the unbundling of 500 kV circuits between Claireville and Cherrywood Transmission Stations, is characterized as being partially discretionary and partially non-discretionary with the largest portion, $80.5 million of the $107 million total cost, being discretionary. The project is intended to increase the capacity of the system to accept power transfers from east of Cherrywood. This will avoid the costs of congestion estimated by the IESO to be in the range of $4 million to $5 million per year. Hydro One produced a net present value analysis of the benefits of the project and concluded that the value of the project is between $83 million and $104 million.

Hydro One also submitted that the benefits will likely be higher given that additional sources of generation, such as the nearly 200 MW in planned generation on Wolfe Island, would add to the cost of congestion.

Board staff noted that Hydro One used a real social discount rate of 4% when conducting economic evaluations of certain Network projects and that this had not been approved by the Board. Board staff submitted that Hydro One should file evidence in its next rate case which demonstrates a sound methodology for establishing an appropriate social discount rate. VECC adopted the submissions of Board staff but submitted that the Board should direct Hydro One to also conduct sensitivity analysis in respect of the social discount rate.

Hydro One submitted that if it uses a social discount rate for the purpose of evaluating any Network capital projects in the future, it will use a rate consistent with what the OPA is using at the time. Hydro One submitted that it should not be the entity which leads evidence to establish an appropriate social discount rate.

As with any evidence upon which the applicant relies, irrespective of the source, it is the applicant's responsibility to defend it in support of its application. The filing requirements covered earlier in this decision are clear on this point.

While the 4% rate used by Hydro One in support of this project has not been tested in this proceeding, the Board will approve this project and the cost consequences. The Board notes that the benefit analysis produced a range of benefits that at the lowest point exceed the cost of the discretionary portion of the project. It is possible that the actual benefits will be higher than the lowest point of the range. The Board accepts Hydro One's submission that the benefits will likely be higher than estimated given that the actual congestion relief will be higher than originally assumed. In the Board's view these two factors, specific to this project, offset the concerns raised regarding the robustness of the social discount rate used.

The Board expects Hydro One to defend any evidence used in support of its applications and therefore it is not necessary to specifically direct it to do so in its next rate case.

Project D6 (Static Var Compensator (SVC) replacement at Lakehead TS)

Project D6, SVC replacement at Lakehead TS, involves the installation of a replacement 230kV SVC. The Board accepts the non-discretionary characterization of this project and also accepts the applicant's explanation that a more thorough and recent analysis of the scope of the required work has led to a substantially higher estimated cost than had been supplied in its last rate application. The Board approves this project and allows the associated costs.

Projects D7, D8, D9 and D10

Projects D7, D8, D9 and D10 are each intended to increase transmission system capacity by reducing congestion. The aggregate cost of these projects is about $175 million. Project D7, NE Transmission Reinforcement, SVCs at Porcupine and Kirkland Lake and D8, Series Caps at Nobel SS are intended to relieve congestion by 700 MW. Projects D9 and D10, when combined with project D11 (for which approval has not been sought in this application), are intended to reduce congestion by 130 MW. Hydro One has not received a recommendation from the OPA with regard to projects D9, D10 and D11. It does not intend to proceed with the projects until it receives the OPA recommendation.

The analysis supplied in support of project D5, the unbundling of the 500 kV circuits between Claireville TS and Cherrywood TS to relieve congestion, demonstrated that the benefits accrued from the avoidance of congestion outweigh the cost of the project. Hydro One has not provided similar analysis for these four projects.

There may be strong indications of the requirement to commence activities in these areas, but based on the record in this proceeding the Board is not able to assess the prudence of the activities proposed by the applicant. The Board requires evidence that the transmission solutions proposed are prudent projects to achieve the cited congestion relief. As an example, the economic analysis that was supplied in support of the Claireville to Cherrywood project is lacking for these four projects. The applicant should note that for that project the Board concluded that due to other factors there was a probability that the benefits would be higher than currently indicated and that that compensated for the lack of evidence supporting the social discount rate used. The normal expectation would be that the selection of the social discount rate would be substantiated with supporting evidence.

The Board will not approve these four projects at this time because of the evidence has not been sufficient. The only evidence provided was a letter of recommendation from the OPA which the Board has already explained is not sufficient. No supporting evidence or analysis was provided.

The Board recognizes that Hydro One's application was predicated on its position regarding the role of the OPA and specifically the significance of the OPA recommendations related to these projects. As indicated earlier, the Board does not accept Hydro One's position, and as a result requires the type of analysis described in the *Filing Requirements for Transmission and Distribution Applications*.

The Board will keep this part of the proceeding open and will provide Hydro One with the opportunity to provide additional evidence on these projects for purposes of setting 2010 rates. Hydro One should file this evidence no later than November 30, 2009. The Board will ensure a streamlined process to consider any new evidence on these projects. If necessary, the Board will declare the 2010 rates interim at the appropriate time in order that the rate impacts of these projects can be included in the event the Board approves the projects.

Projects D23, D24, D25, D26, D27

These five projects are customer driven Load Connection Projects and according to the applicant's testimony are all proceeding under the terms of executed customer cost recovery agreements. The Board approves these projects and allows the associated costs.

Projects D28 and D29

These two Load Connection projects, for which the applicant seeks approval in this proceeding, were challenged by AMPCO. The two projects were scheduled to come into service in late 2010 in the pre-filed evidence, but the applicant supplemented the evidence in cross-examination by stating that the two projects did not have executed customer agreements yet and may not go forward. The Board does not approve these projects.

6.5.3 Toronto Short-Circuit Constraints

Pollution Probe submitted that the Board should order Hydro One to complete a detailed preliminary plan and budget, within the next 6 months, to eliminate Toronto's short-circuit constraints to allow more distributed generation. In Pollution Probe's view, this project is necessary in order to allow expansion of distributed generation, and to avoid the need for a "Third Line".

Hydro One replied that it is in the process of producing a plan and priorities for dealing with the short circuit issues in Toronto and will have it completed by the end of 2009. Hydro One submitted that this is the earliest by which this work can be achieved.

Board Findings

The Board is satisfied with Hydro One's response to Pollution Probe's submission. The Board expects that Hydro One will move expeditiously to obtain any approvals it requires to implement the plan.

6.5.4 Category 3 Projects

Hydro One has sought guidance from the Board for projects that it classified as Category 3. These projects have specific spending in the test years, but will not be in-service in the test years. Hydro One is seeking guidance from the OEB on the appropriateness of the need, solution and recoverability of the cost.

Several intervenors submitted that the Board should not provide any comment as to the appropriateness of spending that has not been fully scrutinized. VECC submitted that the Board should decline to provide an opinion for projects with in-service dates beyond 2010, as that is not the focus of this hearing.

Board Findings

The Board recognizes that the electricity sector is experiencing rapid change resulting in increased investment activity. The investments in new technologies and methodologies to increase system capacity are required to accommodate a fundamental alteration of the transmission system functionality. An appropriate level of regulatory certainty must be maintained despite the rapidly evolving electricity environment. In the absence of regulatory certainty, there is an elevated risk that needed investments will not occur. However, these matters are generic to the industry as a whole and more appropriately dealt with in a policy development forum established for that purpose.

The recent statement from the OEB Chair regarding the regulatory framework for approval of investments states that "electricity utilities may need greater regulatory certainty prior to making significant capital investments."[11] The Board expects that Hydro One will avail itself of the opportunity to contribute to that important policy development. It would be premature for the Board in this decision to provide any form of pre-approval for these projects.

[11] Statement from the Chair, April 3, 2009

7. COST OF CAPITAL

7.1 INTRODUCTION

Hydro One proposed a capital structure and cost rates for 2009 and 2010 which in its view are in accordance with the Board's policy on cost of capital. The following three issues arose in the course of the hearing:

- What financial data should be used to update the cost of equity and cost of debt for 2009 and 2010?
- Should the actual amount and cost of debt issued in 2008 be reflected in the proposed amount and cost of debt for 2009 and 2010?
- What cost should be applied to the portion of long term debt which exceeds actual embedded debt?
- Are the Treasury OM&A costs included in the cost of debt reasonable?

Each issue is addressed below.

7.2 FINANCIAL DATA

Hydro One proposed that its cost of capital parameters for 2009 (return on equity, the cost rate for the deemed short-term debt, and the cost rate for the deemed portion of the long-term debt) should be set using the March 2009 Consensus Forecast and March 2009 Bank of Canada data. The cost parameters for 2010 would be set using the September 2009 Consensus Forecast and September Bank of Canada data.

BOMA/LPMA supported Hydro One's proposal noting that the Board's report clearly states that the ROE would be based on data three months in advance of the effective date of the rate change. BOMA/LPMA suggested that the Board should issue a letter (similar to the Board's February letter) setting out the cost of capital parameters for Hydro One when the March data is available and should issue another letter with the cost of capital parameters for 2010 when the September data is available.

CME proposed that the Board's cost of capital parameters for LDCs rebasing in 2009, issued on February 24, 2009, should be used for Hydro One's 2009 and 2010 rates. Hydro One responded that this would be contrary to the Board's own guidelines. Hydro One also submitted that its proposal was appropriate given the uncertainty that the return on equity might change as a result of the Board's recently announced review of ROE and interest rates. Hydro One submitted that either the Board can issue letters with the new cost of capital parameters once the March and September 2009 data is available or Hydro One can reflect the cost parameters in its subsequent rate order.

Board Findings

The Board finds that it is appropriate to use the cost of capital parameters released by the Board in February 2009, rather than using an update, for purposes of establishing Hydro One's cost of capital for 2009. These cost parameters are being applied to all of the 2009 cost of service applications by electric LDCs. The Board concludes that it is appropriate to treat Hydro One in a consistent manner. Even though Hydro One's rates are being implemented July 1, 2009, which is somewhat later than May 1, 2009, both the LDCs and Hydro One will have rates based on, and for, a 2009 test year.

For 2010, the Board agrees with Hydro One that September 2009 data should be used to update the cost of capital parameters. The 2010 year is a separate test year in Hydro One's application; it is not part of an IRM period. It is therefore appropriate to update the cost of short-term debt and return on equity. The Board will issue a letter to Hydro One setting out Hydro One's 2010 cost of capital parameters in due course. The Board expects that this will be treated as a mechanistic update.

7.3 COST OF EMBEDDED LONG-TERM DEBT

Hydro One's proposed cost of embedded long-term debt for 2009 and 2010 includes forecast costs for long-term debt to be issued in 2008, 2009 and 2010. The actual cost of debt issued in 2008 was lower than forecast, but the amount of debt issued was higher. Hydro One had forecast a debt rate of 5.47% for $191.1 million in debt and a 30 year term. $300 million in debt was issued in total, and the terms were for only two and five years. The weighed average cost was 4.78%. Hydro One took the position that its 2009 and 2010 forecast cost of embedded long-term debt should not be changed to reflect the debt issued in 2008.

BOMA/LPMA accepted Hydro One's proposal that the forecast cost of debt to be issued in 2009 and 2010 should not be updated, noting the limited impact such a change would have. BOMA/LPMA submitted, however, that the actual debt issued in 2008 should be used to determine the cost of embedded debt for 2009 and 2010. This would result in a decrease in actual weighted debt rate and a reduction in the level of 30 year debt forecast to be issued in 2009.

Hydro One responded that updating the cost of capital for the actual debt issuance and cost rates for 2008 would be selective updating and therefore inappropriate. Hydro One asserted that any cost decreases in 2008 (due to debt being issued at lower cost than forecast) would be more than offset by higher rates for debt issued in the test years.

Board Findings

Hydro One has confirmed that the full debt issue amount ($300 million) issued in 2008 has been mapped to the transmission business. The Board finds that Hydro One should update the 2009 and 2010 average cost of embedded debt to reflect the cost of actual debt issued in 2008. The Board does not agree with Hydro One that such an update represents "selective updating." This is not an update to incorporate a revised forecast; this is an update to incorporate actual data regarding the debt issued in the bridge year.

BOMA/LPMA has argued that consequential changes should be made to the level of debt forecast to be issued in 2009 and 2010. The Board does not agree; such an approach would result in selective updating by adjusting forecast levels. Hydro One shall update its average cost of embedded debt for 2009 and 2010 by incorporating the actual principal amount and cost rate for debt issued in 2008 and retaining the forecast principal amounts and cost rates for debt forecast to be issued in 2009 and 2010.

7.4 COST RATE FOR DEEMED COMPONENT OF LONG-TERM DEBT

Hydro One's level of embedded debt is less than the level of debt implied by the Board's deemed capital structure. As a result, an amount of "deemed" long-term debt is used to bring the long-term debt component to 56% of total capitalization. The level of deemed long-term debt is $205.8 million in 2009 and $0.3 million in 2010. Hydro One proposed to apply the Board's deemed long-term debt rate to this deemed debt.

BOMA/LPMA submitted that Hydro One's proposal is not consistent with the Board's policy because the deemed debt rate is only applied to affiliate debt or variable rate debt, neither of which Hydro One has. BOMA/LPMA and VECC submitted that for distributors in their 2008 and 2009 rebasing applications the weighted average cost of debt has been used to determine the total cost of debt in the capital structure.

BOMA/LPMA concluded that this approach should be used by Hydro One but noted that there would be very little impact in 2010 given the low level of deemed debt. CME adopted BOMA/LPMA's submissions.

SEC submitted that under the Board's policy, the deemed long term rate would only apply to new affiliate debt (if the contracted rate is higher than the deemed rate) or affiliate debt that is callable on demand. In SEC's view, neither situation applies to Hydro One's debt. SEC concluded that the cost rate for all of Hydro One's debt should be the average cost of its long-term debt, 5.9%, and as a result the cost of the deemed long-term debt would be $12.14 million as opposed to the proposed $15.68 million.

Hydro One responded that its proposal to include deemed long-term debt in its capital structure at the Board's deemed long-term debt rate is consistent with the two prior decisions for Hydro One (EB-2006-0501 for transmission and EB-2007-0681 for distribution).

Board Findings

It is Hydro One's view that its proposal to include deemed long-term debt in its capital structure at the Board's deemed long-term debt rate is consistent with two prior decisions for Hydro One (EB-2006-0501 for transmission and EB-2007-0681 for distribution). The Board notes that in the two referenced proceedings the overall cost difference between the two approaches was considerably smaller than in the current case (because of the relative levels of embedded debt and the relative levels of the Board's deemed long-term debt rate) and in neither decision was this matter specifically dealt with as an issue. It is appropriate to address the issue now so that the treatment of Hydro One is consistent with the treatment of distributors.

The Board agrees with intervenors that it is not appropriate to apply the Board's deemed long-term debt *rate* to the notional or deemed long-term debt. The two are quite separate concepts. The deemed long-term debt rate is clearly intended to apply in the absence of an appropriate market determined cost of debt, such as affiliate and variable rate debt situations. For companies with embedded debt, it is the cost of this embedded debt which should be applied to any additional notional (or deemed) debt that is required to match the capital structure to the Board's deemed capital structure. This is consistent with the treatment given to LDCs that have undergone rebasing in 2008 and 2009.

Hydro One's cost of capital shall be adjusted to use its weighted average cost of embedded debt for purposes of determining the cost to be applied to the notional or deemed long-term debt.

7.5 TREASURY OM&A COSTS

Hydro One forecast treasury OM&A costs of $1.9 million and $2.0 million for 2009 and 2010, respectively. These amounts are reflected in the cost of long-term debt. The increase between 2008 and 2009 is 26%; the increase between 2008 and 2010 is 33%.

BOMA/LPMA submitted that the Treasury costs should be reduced by $0.4 million in 2009 and 2010 because costs that are primarily wage costs should not be increasing by more than 26%. CME supported this submission. Hydro One responded that the increase was due to higher staff levels, not just wage levels, given the expectation that the borrowing program will increase significantly in the test period.

Board Findings

The Board accepts Hydro One's explanation that the increase is due both to wage increases and staff increases. No specific adjustment will be made to this item.

8. DEFERRAL/VARIANCE ACCOUNTS

8.1 INTRODUCTION

The Settlement Proposal in EB-2006-0501, which was approved by the Board, included three deferral/variance accounts. Hydro One has now requested that the forecast June 30, 2009 balances for these three accounts be disposed of in this proceeding. Each of the accounts has a negative balance (credit to customers). The total balance is $18.3 million, including interest, and consists of the following:

Deferral/Variance Accounts
Balances as of June 30, 2009

Account	Account Number	$Million
Tax Rate Changes	1592	(13.9)
OEB Cost Assessment Differential	1508	(4.2)
Pension Cost Differential	2405	(0.2)
Total		**(18.3)**

Hydro One proposed that the $18.3 million credit to customers be disposed of over a four year period to maintain consistency with previous Board treatment and to smooth customer impact. Specifically, Hydro One requested approval to reduce the annual revenue requirements over a four-year period.

8.2 DISPOSITION AND CONTINUATION OF EXISTING ACCOUNTS

Parties that commented on the Hydro One's proposal recommended a disposition period of eighteen months to three years. Hydro One stated that it was not opposed to a shorter disposition period.

BOMA/LPMA requested Hydro One's clarification on two matters regarding the 2009 regulatory asset refund amount: a reconciliation of the $4.7 million refund shown in one exhibit with the $2.3 million shown in another exhibit; and confirmation that there has not been an underestimation of the 2009 revenue requirement of $4.4 million. With respect to the first matter, Hydro One noted that the $4.7 million represents a 12 month period refund of the total $18.3 million amortized over 48 months, whereas the $2.3 million represents the refund from July 1, 2009 to December 2009. With respect to the second matter, Hydro One referred to certain exhibits in the evidence and confirmed that its 2009 revenue requirement has not been understated.

No party was opposed to the proposed continuation of the three accounts. BOMA/LPMA, however, submitted that the Board should make it clear that the Tax Rate Changes account should track not only changes resulting from a legislated change in income tax rates, CCA charges and capital tax changes, but also any changes resulting from the harmonization of the provincial sales tax (PST) with the goods and services tax (GST). The Applicant did not comment on this submission by BOMA/LPMA.

Board Findings

The Board finds that it is preferable to dispose of the balances in these accounts over an 18-month period starting with the July 1, 2009 implementation date for the new rates and ending December 31, 2010. This matches with the period of the 2009 and 2010 test years.

The Board approves the continuation of Accounts 1592, 1508, 2405. With respect to BOMA/LPMA's submission that the impacts of the proposed legislation to harmonize PST and GST also be captured in the Tax Rate Changes account (Account 1592), the Board notes Hydro One acknowledged during cross-examination that this account would capture the impacts of tax rate changes that may arise from the harmonization of PST and GST.

8.3 PROPOSED NEW ACCOUNTS

Hydro One requested the establishment of two new accounts: a Transmission System Code and Cost Responsibility Changes Account and the IPSP and Other Preliminary Planning Costs Account.

8.3.1 Transmission System Code and Cost Responsibility Changes Account

This account was included in the EB-2006-0501 Settlement Agreement, which was approved by the Board. However, Hydro One did not incur any costs related to changes in connection procedures, so the account was not “opened”. According to Hydro One, the need for this account still exists. Hydro One noted that the Board’s review of the Code’s provisions for assigning cost responsibility for enabler lines may involve transmitters making investments as part of the Transmitter Designation process, and the mechanism for recovery of such costs is not yet clear.

Board Findings

The Board notes that no party was opposed to the establishment of this account. The Board finds the request reasonable and approves the proposed account.

8.3.2 IPSP and Other Preliminary Planning Costs Account

The purpose of this account is to record Hydro One’s costs of preliminary work to advance 18 transmission related projects identified by the OPA in the IPSP and for the proposed Darlington “B” generating station. The estimated expenditures associated with these activities are $47.9 million, of which $19.2 million will be incurred during the 2009 and 2010 test years.

Board staff stated that the account appears to be justified but invited Hydro One to address how the account would meet the Board’s articulated criteria of causation, materiality, inability of management control, and prudence. Hydro One responded that its request meets every one of the Board’s stated criteria.

VECC submitted that there is a reasonable expectation that the pre-engineering work related to Darlington “B” generating station will be spent and the expenses will eventually be capitalized, and therefore there is no need for a deferral account. With respect to the other work, VECC argued that Hydro One has not demonstrated need or urgency. VECC also noted that undertaking such preliminary work would give Hydro One an advantage in any competition with other transmitters for the work.

AMPCO argued against the proposal for the following reasons:

- Of the 18 projects, four are enabler lines which are the subject of the Board's initiative in EB-2008-0003[12] and one is the Manitoba Ontario line. Therefore, at a minimum, five projects may be contestable. The account would give Hydro One an unfair competitive advantage.
- For the four projects defined as contingency plans to backstop the OPA's plans for gas generation procurement, Hydro One should instead seek funding from the OPA as part of the procurement cost.
- Hydro One should be seeking recovery of planning costs associated with Darlington "B" up front from OPG as there may be a contribution involved in the future. Moreover, Hydro One has not provided any evidence that the need remains for this project on its original timeline.
- The timing of the various IPSP projects has been kept flexible by the OPA with the understanding that events could force adjustments and therefore the account is not needed.

CME supported the arguments advanced by AMPCO regarding the pre-engineering costs. CME emphasized that these expenditures are essentially capital expenditures in the making. CCC argued that it would be premature to effectively authorize spending on projects which may not appear in the revised IPSP, and for which there has been no proof that they are prudent.

Hydro One responded that accounting policies preclude treating these costs as capital expenditures, as suggested by some intervenors, and that the alternative is to treat them as expenses for the year in which they occur. The deferral account would protect ratepayers from the immediate expensing of these costs. Hydro One noted that if the proposed account is not approved, the Board should increase OM&A by $8.0 million in 2009 and $11.2 million in 2010.

With respect to intervenors' arguments that the account would provide a competitive advantage, Hydro One noted that other entities are at liberty to undertake pre-engineering work and the proposed deferral account does not prevent other entities from doing so.

Board Findings

Except for Board staff, there is general opposition by ratepayer intervenors to the establishment of this account.

[12] Ontario Energy Board Consultation on Transmission Connection Cost Responsibility

Accounting principles dictate that expenditures for preliminary and planning work related to projects are to be capitalized. If the projects do not materialize, the pre-engineering expenditures cannot be capitalized, which poses a risk in this case for Hydro One. It is this risk that the company seeks to minimize by seeking Board authorization for the proposed account.

The Board does have criteria that must be reasonably met in order for the Board to authorize the establishment of a deferral account. Hydro One argued that it has met the Board's four criteria. For some of the criteria, the assessment is qualitative and there is a considerable degree of judgment involved on the Board's part.

An important consideration in this specific request is that Hydro One's activities are clearly driven by current Ontario energy policy. Hydro One itself is not the driver behind these expenditures; as the largest transmission utility in the Province, it is responding to the policy drive by the Ontario government to meet certain objectives regarding new generation. Although project plans have not unfolded as originally conceived, there are clear expectations of the largest transmission utility that the planning work for these projects must continue.

There is no prejudice to those stakeholders arguing against the proposed account since the matter does not end with the establishment of a deferral account. Stakeholders will have the opportunity to scrutinize the prudence of any costs in the account. As the Board has articulated in numerous documents, the recording of costs in a Board-authorized deferral account is not a guarantee for recovery. The risk for the utility does not dissipate, at least not with respect to this account. Board authority to establish the proposed account would simply constitute recognition by the Board that there are legitimate reasons for this matter to be reviewed at a later time on more concrete information and evidence. Concerns by certain intervenors about the account providing a competitive advantage to Hydro One is in the realm of speculation.

As Hydro One points out, the alternative would have been a request for these expenditures to be treated as OM&A costs and expensed in the test years. This would have been a more difficult assessment to make for both the intervenors and the Board, as it would involve considerations and conclusions based on incomplete and inadequate information. Deferral of these costs protects the ratepayers from determinations that may be proved wrong.

The Board authorizes the establishment of the IPSP and Other Preliminary Planning Costs Account.

8.4 OTHER VARIANCE/DEFERRAL ACCOUNTS

Elsewhere in this Decision, the Board has directed the establishment of the following variance accounts: Export Revenues; Station Maintenance and Engineering Construction; and Secondary Land Use.

9. COST ALLOCATION

For the purpose of costing and pricing transmission services, the transmission system and its assets are classed into three pools: The Network Pool; The Line Connection Pool; and the Transformation Connection Pool. The charges for transmission services are derived per Delivery Point, typically a transformer station transferring from above 50 kV to below 50 kV. One Delivery Point may serve more than one transmission customer. Transmission customers are distributors and large consumers receiving service directly from the transmitter.

The current cost allocation methodology does not charge Line Connection service rates to customers whose delivery point is located at a Network Station. As part of the Settlement Agreement approved by the Board in EB-2006-0501, Hydro One agreed to conduct an internal study on connection facilities terminating at Network Stations and the associated connection charges. Hydro One reviewed the impact of imposing such Line Connection Charges for this set of Delivery Points and filed the study with its application. The study indicated that of the total 522 Delivery Points, 45 Delivery Points do not pay Line Connection charges. Of these 45 Delivery Points, 29 serve Hydro One Distribution.

For purposes of the study, Hydro One performed an allocation step whereby a “rough estimate” average cost of $1.25 million per transformer station was assumed. If the cost allocation methodology were to change to charge Line Connection service rates to customers whose 45 Delivery Points are located at a Network Stations, based on the $1.25 million estimate there would be a $56 million cost allocation shift from the Network pool to the Line Connection pool. The gross book value for the Network pool would decrease by 1.2% and the gross book value for the Line Connection pool would increase by 4.2%. The transmission bill impacts would range between 2.6% and 330% for large consumers and between 1.9% and 23% for distributors. Hydro One did not communicate the results of the study to the 10 non-Hydro One Distribution customers who are served by the remaining 16 Delivery Points.

Hydro One did not propose to change the current methodology in allocating costs or setting charge determinants.

Board staff noted that the $1.25 million per transformer station cost is a rough estimate and, while the study is good for illustrative purposes, it is not of the accuracy normally required by the Board to contemplate ordering any change from the current methodology. Board staff submitted that Hydro One should be directed to revise its study using a detailed asset value assessment for the 45 Delivery Points. Board staff also suggested that Hydro One be directed to communicate the results of the revised study to the customers that would be impacted by any changes in allocation.

VECC was the only intervenor to comment on this issue. VECC acknowledged that there may be some inequities as there are different connection arrangements and different customer-owned facilities required. However, VECC agreed with Hydro One that the study's approach that all load customers would be assessed a Line Connection charge is inconsistent with the rationale of having a Line Connections rate pool in the first place. VECC noted that determining the connection cost for the 45 Delivery Points that are located at a Networks Station requires Hydro One to make a number of interpretive assumptions, which suggests that the study may be trying to identify costs when none really exist. VECC agreed with Hydro One's conclusions that the current methodology should not be changed.

Hydro One submitted that the large range of impacts under the alternative scenario studied is not due to the change in cost allocation but rather the result of the change in charge determinants applied to the Delivery Points billing parameters. Further study on this issue will only fine tune the magnitude of the cost allocation, but the charge determinants would not change.

Board Findings

The Board considers that determining the connection cost for the 45 delivery points that are located at a Networks Station requires Hydro One Networks to make a number of interpretive assumptions. If a change from the current methodology is to be contemplated, it would be important to involve the affected transmission customers in developing those assumptions.

The Board notes Hydro One's evidence that the large range of impacts seen under the alternative scenario studied is not due to the change in cost allocation but rather the result of the change in charge determinants applied to the Delivery Points' billing parameter. The Board agrees that a further study on this issue is unnecessary as it will only fine tune the magnitude of the cost allocation, but the charge determinants would not change.

The Board notes the conclusion of Hydro One's study that there will be large transmission bill impacts on several customers, and at the same time there would be a relatively minor shift of asset values between the two pools.

For the above reasons, the Board accepts Hydro One's current methodology in which no costs are allocated to the 45 delivery points located at a Network Station and will not require Hydro One at this point to carry out any further analysis on this matter.

10. CHARGE DETERMINANTS

Network Charges comprise about 6% of a customer's transmission bill and are currently levied on a customer's monthly demand. The customer's demand is defined as the higher of:

1. the customers demand at the time of the monthly coincident peak demand, and
2. 85% of the customer's maximum non-coincident demand between 7:00 am and 7:00 pm on weekdays that are not holidays.

AMPCO argued that the existing structure provided insufficient incentives to avoid system peaks, especially the highest peaks, for the following reasons:

- A customer's charge determinant is still determined by its non-coincident peak.
- There is an incentive to reduce peak usage when it is of limited benefit to the system (typically peaks in the shoulder months which are much lower than summer or winter peaks).
- The system only takes account of one peak per month, when more than one of the year's highest peak days may occur in the same month.

AMPCO presented evidence in support of an alternative rate design under which a fixed monthly network charge would be calculated for each customer based on that customer's demand during the hour of peak demand during the 5 highest peak days of the previous year. This was called the "High 5 Proposal". Under this proposal the customer's Network Charge remains the same for each month of the year, but the customer has an incentive to shift usage away from likely peaks in order to reduce the charge applicable for the following year. AMPCO proposed that the new rate design be implemented for 2010 rates, based on 2009 data. In AMPCO's view, this would provide sufficient time to address practical implementation issues.

AMPCO took the position that its rate design proposal addresses the shortcomings of the current rate design and would promote efficient load management and encourage peak shifting and conservation. AMPCO noted that its proposal was similar to rate design structures on PJM Interconnection member LDCs and the ERCOT system in Texas.

AMPCO identified two types of benefits from its proposal: the ability to defer or avoid transmission system upgrades and reductions in commodity prices in the market at peak times. AMPCO provided no specific evidence for the first benefit, but provided expert testimony in support of the second.

AMPCO sponsored expert econometric evidence by Dr. Sen on the impact of price changes and electricity consumption shifts from peak to off-peak in various industrial sectors. While the results varied, Dr. Sen reported that the estimates of demand elasticity were statistically significant. The elasticity estimates were then applied to a derived transmission “shadow price” (related to the potential transmission cost savings of the proposed rate design) to estimate the change in consumption due to the change in rate design. The change in consumption was then used to estimate net commodity cost savings for Ontario in the range of $11 million. AMPCO used this analysis to support its conclusion that the High 5 Proposal would benefit all customers noting that the $11 million in savings is far greater than the estimate $1 million shift in transmission costs.

AMPCO also presented testimony by Mr. MacDonald, of Gerdau Ameristeel, who reported how his company had responded to similar rate structures in New Jersey and Texas in order to achieve significant transmission cost savings. He testified that the company’s Ontario facilities would respond the same way if the High 5 Proposal were implemented.

AMPCO also noted that because the proposal uses historical usage and results in a constant fixed monthly charge, it would provide revenue and cost predictability to Hydro One and its customers and eliminate Hydro One’s tendency to under-forecast load and therefore over-collect revenue.

AMPCO maintained that its proposal would also encourage LDCs to shift load away from peak and even if the LDCs had difficulty doing so, their customers would still see net benefits from the substantial reduction in commodity costs at peak, on the order of $9 million.

AMPCO concluded that although extensive stakeholdering should not be required, the proposal is a substantial change and therefore the proposal could be deferred for one year and implemented in 2011 in order for customers to receive notice and for Hydro One to make the necessary changes and work with the IESO and the OPA where necessary.

Pollution Probe supported AMPCO's proposal, noting that the proposal is consistent with the energy policies of the government of Ontario.

CME also supported AMPCO's proposal. CME noted that if the proposal were implemented, costs would be shifted to LDC customers and in turn to CME members which are customers of LDCs. However, in CME's view, it "makes sense to implement the methodology if the Board is satisfied that those burdened with its costs will benefit from electricity commodity cost savings in excess of those costs".[13] CME suggested an implementation deadline of January 1, 2011, subject to Hydro One producing evidence by December 31, 2009 showing that the adverse impacts result in no net benefits. CME also suggested that the Board direct Hydro One to collaborate with AMPCO and other stakeholder to establish a monitoring and reporting mechanism to demonstrate the extent of electricity cost savings.

Board staff questioned whether the proposal would lead to real incremental load shifting given the already existing commodity price signals to shift load, the relatively small proportion network transmission charges are of the total bill, and the OPA's already existing demand response programs. Board staff also expressed concern about potential unfairness between transmission-connected industrial customers and LDC customers and LDC-connected industrial customers given the inability of LDCs to pass on transmission pricing signals to their end-use customers. Board staff concluded that there needs to be a more thorough assessment of the cost shifting and rate impacts and consultation with the IESO and the OPA and other transmitters.

CCC submitted that it would be premature to implement the AMPCO proposal without a full consideration of the precise impact on all consumers. CCC concluded that if the Board saw merit in AMPCO's proposal, then the Board should require Hydro One to report on the impact on all categories of consumers as part of its next application.

BOMA/LPMA also submitted that more review is required to explore several issues:

- The impact on other customers, particularly distributors and their customers
- An examination of potential distribution rate changes so that all customers have the same opportunity to reduce their transmission costs
- A review of how distributors allocate their transmission costs

[13] CME Argument, p. 37.

SEC submitted that while demand response is appropriately one goal in designing rates, it is not the only goal. In SEC's view, the first goal is full cost recovery, and the second is fairness in cost recovery (costs being average costs, not marginal costs). SEC characterized AMPCO's proposal as marginal cost pricing, which in SEC's view, is contrary to established rate design principles, namely that customers share the average costs of the system. SEC concluded, however, that given the importance of demand response, the Board should follow up on the AMPCO proposal with more in depth analysis of the likely impact of the proposal and whether it can be structured in a way which is consistent with rate design principles.

VECC submitted that AMPCO's proposal should be rejected. With respect to investment for peak demand, VECC observed that most inter-area investment over the next five years is being driven by new generation, and therefore peak use that is not the same as system peak, and Local Area Supply investments are being driven by local peak demand growth, not regional or system peak. In VECC view, AMPCO's proposal could encourage shifts from system peak to times that are more critical from a local perspective and therefore the current rate design provides a better signal throughout the entire peak period.

VECC also submitted that Dr. Sen's analysis cannot be used to understand the load shifting implications of AMPCO's proposal because the analysis looked at the impact of increasing the average price during a 12-hour peak on the average use in the peak period and adjacent off-peak period. VECC submitted that if AMPCO's suggestion is correct that customers will only have to manage their peaks for 2-4 hours per day to avoid the system peak, there is likely to be significant shifting within the peak period which may aggravate local conditions.

VECC also expressed a variety of concerns about Dr. Sen's analysis and its application to derive estimated commodity cost savings. These concerns related to the reliability of the statistical results, the estimate of the transmission shadow price, and the extent of the assumed load reduction. VECC concluded that AMPCO's estimates of cost savings were likely significantly overstated.

VECC concluded that there are uncertainties around the degree of load shifting and commodity price reductions that will occur and that by focussing on the five peak days, the proposal is inconsistent with current transmission cost drivers and generally accepted principles for establishing fair rates.

The EDA also submitted that AMPCO's proposal should be rejected for the following reasons:

- The proposal would have limited impact on the system because LDC load drives system peak, LDCs have limited ability to peak shift, and distribution rates are not based on transmission system peaks.
- The current rate design does encourage conservation and ensures that customers share in the embedded costs of the system.
- The benefits of the proposal are not proven. Only one customer testified that it would implement the costly peak-chasing program. Most customers will shift in direct response to peak commodity prices, providing a "free ride" for transmission cost benefits under the proposal.
- The distributive impacts of the proposal are unknown. It is not certain that the customers that bear the costs of the load shifting will also benefit from the claimed reductions in peak commodity costs.

Hydro One responded that there is no clear consensus among the intervenors and therefore it does not propose to change the charge determinants and submitted that the Board should reject AMPCO's proposal. Hydro One expressed concern about the magnitude of the rate impacts and submitted that AMPCO's estimate of a $900,000 cost shift does not capture the baseline impacts resulting from changing the methodology. Hydro One also echoed a number of the same concerns as VECC regarding Dr. Sen's analysis and its application. Hydro One also questioned whether the commodity price impact analysis recommended by CME could be conducted. Hydro One concluded:

> ...Hydro One requests that the Board approve its proposal to maintain the status quo pending further evaluation of AMPCO's proposal if so requested by the Board to permit the Board, stakeholders and Hydro One to evaluate the rate impacts of any change to the Network charge determinants.[14]

Board Findings

The Board finds that, overall, AMPCO's proposal has merit. System peak is a significant cost driver in the electricity commodity market and also is of relevance for transmission system planning. The Board agrees with SEC that the proposal represents a departure from standard rate design but that the potential benefits may be significant and demand response is an important consideration. The Board also agrees

[14] Hydro One, Reply Argument, p. 54.

with SEC that the AMPCO's proposal should not be implemented without further analysis.

The Board does not accept that AMPCO's quantitative analysis represents a convincing assessment of the likely benefits of the rate design proposal. First, the econometric analysis measured the demand response between periods of time that were relatively close together, whereas AMPCO applied those results to estimate the impact of changes in demand for a transmission shadow price, which is an implied price, not a directly observed price. Second, the transmission shadow price represents a saving that can only be realized in the year following the year in which the load shifting takes place. Third, the estimated load shifting is in turn used to estimate the impact on commodity prices.

The Board, however, found the testimony by Mr. MacDonald of Gerdau Ameristeel to be compelling evidence as to the expected reaction to such a rate design. His company has responded to similar rate structures in other jurisdictions and would do so in Ontario as well.

The Board finds that the evidence supports a conclusion that the proposed rate design would lead to some level of load shifting and some consequent impact on commodity prices. However, the Board has limited confidence that the level of load shifting or the level of net commodity savings is as high as AMPCO has estimated.

While the Board accepts that not all customers would respond the same way as Gerdau Ameristeel, the fact that at least some would respond by load shifting leads the Board to conclude that the proposal should be given further consideration. What is uncertain is the magnitude of the shift, the benefits of the shift, and the resulting impact on other customers.

The Board will therefore direct Hydro One to come forward at its next application with:

1. further analysis of AMPCO's proposal; and,
2. a suitable proposal for implementation for the Board's consideration in the event the Board decides to change the charge determinant.

In its further analysis, Hydro One should address the various criticisms which have been made about the AMPCO's analysis (and its expert's analysis) and should attempt to conduct some sensitivity analysis around the potential impacts on commodity prices.

The Board also expects Hydro One to provide a comprehensive analysis of the transmission rate impacts for customers as well as an assessment of any potential adverse impacts on local conditions due to load shifting as described by VECC. Hydro One should also consult with the OPA and the IESO as to any interactions with other demand response programs.

Hydro One has suggested it would not be possible to monitor such a program and measure its effect on commodity prices. The Board believes that it should be possible to do so to some extent and directs Hydro One to include this as part of its analysis.

The Board also expects Hydro One keep stakeholders informed as to its work in the area and to seek their input and involvement where appropriate.

11. IMPLEMENTATION MATTERS AND COST AWARDS

11.1 IMPLEMENTATION

Transmission rates in Ontario have been established on a uniform basis for all transmitters in Ontario since April 30, 2002. The revenue requirements for each of the three rate pools for each of the four transmitters are added to calculate the total transmission revenue requirement for each pool. The totals for each pool are divided by the charge determinant applicable for the pool to derive the uniform transmission rate. The current Ontario Transmission Rate Schedules, effective since January 1, 2009, are shown below.

Service Rate	Monthly Rate ($ per kW)
Network	2.57
Line Connection	0.70
Transformation Connection	1.62

In addition, the Ontario Transmission Rate Schedules include the Export Transmission Service Rate ($1.00 per MWh).

The transmission revenues collected by the IESO are allocated by the IESO to each of the four transmitters on the basis of revenue allocators approved by the Board. The revenue allocators are calculated by taking the percentage of the revenue for each transmitter and dividing it by the total combined revenue of all the transmitters. The current Revenue Allocators, effective since January 1, 2009, are shown below.

Transmitter	Network	Line Connection	Transformation Connection
Five Nations Inc.	0.00439	0.00439	0.00439
Canadian Niagara Power Inc.	0.00391	0.00391	0.00391
Great Lakes Power Ltd.	0.02948	0.02948	0.02948
Hydro One Networks Inc.	0.96222	0.96222	0.96222
Total	**1.00000**	**1.00000**	**1.00000**

Hydro One applied for a transmission revenue requirement of $1,232 million for the 2009 test year and $1,341 million for the 2010 test year. The Board has made a number of findings that will affect these amounts. The Board's findings will change both the charges for the three pools and the revenue allocators for each of the transmitters.

The Board directs Hydro One to file with the Board and all intervenors of record, a draft exhibit showing the final revenue requirement to reflect the Board's findings in this Decision.

In addition, at the same time, Hydro One shall file an exhibit showing the calculation of the uniform transmission rates, and revenue shares resulting from this Decision. This exhibit will be used in the Uniform Transmission Rates proceeding to follow this Decision to establish the Ontario Uniform Transmission Rates.

Hydro One shall file these exhibits within 10 days of the issuance of this Decision. Hydro One should provide a clear explanation of all calculations and assumptions used in deriving the amounts used in these exhibits. Intervenors shall have 10 calendar days to respond to the Company's exhibit. The Company should respond as soon as possible to any comments by intervenors, but not later than 7 days after the deadline for comments from intervenors.

11.2 COST AWARDS

A number of intervenors were deemed eligible for cost awards in this proceeding. On November 28, 2008, Procedural Order No. 1 was issued with the finding that the following parties were eligible for a cost award: Association of Major Power Consumers in Ontario, Building Owners and Managers Association, Consumers Council of Canada, Canadian Manufacturers and Exporters, Energy Probe, London Property Managers Association, Pollution Probe, Schools Energy Coalition, and Vulnerable Energy Consumers Coalition. In addition, on January 13, 2009, the Board found that Mr. Lewis Balogh would be eligible for an award for limited costs.

Parties eligible for costs shall submit their claims on or before **Friday July 3, 2009**. The cost claim must be filed with the Board and one copy is to be served on Hydro One. The cost claims must conform to the Board's practice Direction on Cost Awards.

Hydro One should review the cost claims. Objections must be filed with the Board and one copy must be served on the party against whose claim the objection is made, by **Friday July 10, 2009**.

The party whose cost claim was objected to will have until **Friday July 17, 2009** to respond. Again, a copy of the submission must be filed with the Board and one copy is to be served on Hydro One.

Hydro One shall pay the Board's costs upon receipt of the Board's invoice.

DATED at Toronto May 28, 2009.

ONTARIO ENERGY BOARD

Original signed by

Cynthia Chaplin
Presiding Member

Original signed by

Paul Vlahos
Member

Original signed by

Ken Quesnelle
Member

APPENDIX 1

HYDRO ONE NETWORKS INC TRANSMISSION RATE HEARING

EB-2008-0272

FINAL ISSUES LIST

1. GENERAL

1.1 Has Hydro One responded appropriately to all relevant Board directions from previous proceedings?

2. LOAD FORECAST and REVENUE FORECAST

2.1 Is the load forecast and methodology appropriate and have the impacts of Conservation and Demand Management initiatives been suitably reflected?

2.2 Are Other Revenue (including export revenue) forecasts appropriate?

3. OM&A

3.1 Are the proposed spending levels for Sustaining and Development OM&A in 2009 and 2010 appropriate, including consideration of factors such as of system reliability and asset condition?

3.2 Are the proposed spending levels for Shared Services and Other O&M in 2009 and 2010 appropriate?

3.3 Are the compensation levels proposed for 2009 and 2010 appropriate?

3.4 Is Hydro One Networks' proposed transmission overhead capitalization rate appropriate?"

3.5 Are the amounts proposed to be included in the 2009 and 2010 revenue requirements for income and other taxes appropriate?

3.6 Is Hydro One Networks' proposed depreciation expense for 2009 and 2010 appropriate?

4. CAPITAL EXPENDITURES and RATE BASE

4.1 Are the proposed 2009 and 2010 Sustaining and Development and Operations capital expenditures appropriate, including consideration of factors such as system reliability and asset condition?

4.2 Are the proposed 2009 and 2010 levels of Shared Services and Other Capital expenditures appropriate?

4.3 Are the amounts proposed for rate base in 2009 and 2010 appropriate?

4.4 Is the forecast of long term debt for 2008-2010 appropriate?

5. DEFERRAL/VARIANCE ACCOUNTS

5.1 Are the proposed amounts and disposition for each of the deferral and variance accounts appropriate?

5.2 Is the proposed continuation of the deferral/variance accounts appropriate?

5.3 Are the proposed new Deferral/Variance Accounts appropriate?

6. COST ALLOCATION

6.1. Would it be appropriate to make changes to cost allocation in response to the study submitted on line connection costs for customers directly connected to networks stations?

6.2 Has Hydro One Networks' cost allocation methodology been applied appropriately?

7. CHARGE DETERMINANTS

7.1 Is the proposal to continue with the status quo charge determinants for Network and Connection service appropriate?

APPENDIX 2

LIST OF APPEARANCES AND WITNESSES

APPEARANCES	
Hydro One	Donald Rogers
	Allan Cowan
	Michael Engelberg
	Anita Varjacic
Board Counsel and Staff	Michael Millar
	Violet Binette
	Chris Cincar
	Neil McKay
	Nabih Mikhail
	Edik Zwarenstein
Association of Major Power Consumers (“AMPCO”)	David Crocker
	Wayne Clark
	Shelley Grice
	Andrew Lord
Canadian Manufacturers and Exporters (“CME”)	Peter Thompson
	Basil Alexander
Consumers Council of Canada (“CCC”)	Robert Warren
Electricity Distributors Association (“EDA”)	Kelly Friedman
	D. Pasumarthy
Energy Probe	Peter Faye
	David MacIntosh
Independent Electricity Supply Operator (“IESO”)	Carl Burrel
	Glenn Zacher
Building Owners and Managers Association of the Greater Toronto Area and London Property Management Association (“BOMA/LPMA”)	Randy Aiken
Intervenor	Lewis Balogh
Pollution Probe	Murray Klippenstein
Power Workers Union (“PWU”)	Richard Stephenson

	Bayu Kidane
School Energy Coalition ("SEC")	John DeVellis
Society of Energy Professionals ("SEP")	Jeffrey Andrew
	James Hayes
	Michelle Byck-Johnston
	Richard Long
Vulnerable Energy Consumers' Coalition ("VECC")	Michael Buonaguro
WITNESSES	

The following employees appeared as witnesses on behalf of Hydro One

Alan Cowan	Director, Major Applications
Stan But	Manager , Economics & Load Forecasting
Don Currie	Sustainment Manager, Station Sustainment
David Curtis	Director, Asset Management Process & Policies
Greg Van Dusen	Director, Business Integration
Mark Graham	Director, Supply Connections and Director, Investment Policy and Agreements, Asset Management
Ian Innis	Senior Manager, Regulatory Finance, Corporate Finance
Keith McDonell	Labour Relations Consultant and Team Lead
Barry Reynolds	Director-Work Program Optimization
Michael Roger	Manager Distribution and Transmission Pricing
John Sabiston	Transmission Planning Manager – West System Investment
Charles Sauter	Director of Projects, E&CS
Andy Stenning	Director, Station Maintenance

The following witnesses appeared on behalf of AMPCO

Wayne Clark	President, SanZoe Consulting
Darren MacDonald	Director of Energy, Gerdau Ameristeel Corporation
Dr. Anindaya Sen	Associate Professor of Economics, University of Waterloo
Adam White	President & CEO, AITIA Analytics Inc.