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File 10329

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HONORARY COUNSEL lan G. Scott, Q.C., O.C. (1934 - 2006) April 17, 2009

Ms. Kirsten Walli Board Secretary Ontario Energy Board P.O. Box 2319 27th Floor, 2300 Yonge Street Toronto ON M4P 1E4

Ms. Walli:

Re: PWU Comments on the Board's Consultation Concerning the Cost of Capital in Current Economic and Financial Market Conditions Board File No. :EB-2009-0084

The Power Workers' Union ("PWU") represents a large portion of the employees working in Ontario's electricity industry. Attached please find a list of PWU employers.

The PWU is committed to participating in regulatory consultations and proceedings to contribute to the development of regulatory direction and policy that ensures on going service reliability, quality and safety. To this end, attached please find the PWU's comments on the Cost of Capital in Current Economic and Financial Market Conditions (EB-2009-0084).

We hope you will find the PWU's comments useful.

Yours very truly, PALIARE RODAND ROSENBERG ROTHSTEIN LLP Richard P. Stephenson

RPS:jr

List of PWU Employers

Atomic Energy of Canada Limited (Chalk River Laboratories) BPC District Energy Investments Limited Partnership Brant County Power Incorporated **Brighton Beach Power Limited** Brookfield Power - Lake Superior Power Brookfield Power – Mississagi Power Trust Bruce Power Inc. **Coor Nuclear Services** Corporation of the City of Dryden - Dryden Municipal Telephone Corporation of the County of Brant, The Coulter Water Meter Service Inc. CRU Solutions Inc. Ecaliber (Canada) **Electrical Safety Authority EPCOR Calstock Power Plant EPCOR Kapuskasing Power Plant EPCOR Nipigon Power Plant EPCOR Tunis Power Plant Erie Thames Services and Powerlines** ES Fox Great Lakes Power Limited Grimsby Power Incorporated Halton Hills Hydro Inc. Hydro One Inc. Independent Electricity System Operator Inerai LP Innisfil Hydro Distribution Systems Limited Kenora Hydro Electric Corporation Ltd. Kincardine Cable TV Ltd. Kinectrics Inc. Kitchener-Wilmot Hydro Inc. London Hydro Corporation Middlesex Power Distribution Corporation Milton Hydro Distribution Inc. New Horizon System Solutions Newmarket Hvdro Ltd. Norfolk Power Distribution Inc. Nuclear Safety Solutions Nuclear Waste Management Organization Ontario Power Generation Inc. **Orangeville Hydro Limited** Portlands Energy Centre PowerStream – Barrie Hydro PUC Services Sioux Lookout Hydro Inc. Sodexho Canada Ltd. TransAlta Energy Corporation - O.H.S.C. Ottawa

Vertex Customer Management (Canada) Limited Whitby Hydro Energy Services Corporation

Doc. No. 720158

THE COST OF CAPITAL IN CURRENT ECONOMIC AND FINANCIAL MARKET CONDITIONS

(EB-2009-0084)

COMMENTS OF THE POWER WORKERS' UNION ("PWU")

1. BACKGROUND

On December 20, 2006 the Ontario Energy Board (the "OEB" or "Board") released its report on Cost of Capital and 2nd Generation Incentive Regulation for Ontario's electricity distributors (the "Report"). The Report, which was a result of extensive consultation with stakeholders, set out the Board's approach to cost of capital and 2nd Generation IRM and presented guidelines for distributors to use in preparing their rate applications.

With respect to Cost of Capital, the Report carried the Board's determination that it would deem a single capital structure, a split of 60% debt and 40% equity, for all distributors for rate-making purposes and also documented the methodologies and formulae the Board would use to determine the Cost of Capital parameters: the Return on Equity ("ROE") and the deemed Long-Term and Short-Term debt rates. The Report also outlined the implementation schedule for Cost of Capital. Accordingly, distributors would have their debt rates and ROEs adjusted as part of the rate rebasing process beginning in 2008 and they will have their capital structure adjusted as part of rate adjustments between 2008 and 2010.

Since then, the Board has issued cost of capital parameter updates for 2008 and 2009 cost of service applications on March 7, 2008 and February 24, 2009,

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respectively. The updates include parameter values of the ROE and the deemed Long-Term and Short-Term debt rates for use by distributors in the respective years. The following table compares the parameter values issued by the Board for 2008 and 2009 assuming May 1, 2008 and May 1, 2009 implementation dates for rate changes, respectively:

| Parameter | 2008 | 2009 |
|----------------------|-------|-------|
| Return on Equity | 8.57% | 8.01% |
| Long-Term Debt Rate | 6.10% | 7.62% |
| Short-Term Debt Rate | 4.47% | 1.33% |

In a letter dated March 16, 2009 the Board initiated a consultation process to help it to determine whether current economic and financial market conditions warrant an adjustment to any of the Cost of Capital parameter values set out in the Board's letter of February 24, 2009. The Board's March 16, 2009 letter noted the decline in the spread between ROE and the Long-Term debt rate from 247 basis points in 2008 to just 39 points in 2009 and also noted the deterioration in economic and financial market conditions during 2008 and 2009. The Board is seeking comment on whether these circumstances warrant an adjustment to any or all of the values produced by the application of its established formulaic methodology. The Board made it clear that "the objective of the consultation is not to reconsider the Board's established methodology, but rather to test whether the values produced, and the relationships among them, are reasonable in the context of the current economic and financial market conditions"¹. The Board's intent is to consider the comments received in determining whether it is necessary to make adjustments to any of the cost of capital parameter values calculated by the Board's formulaic approaches for the 2009 rate year. If the Board determines it necessary to make adjustments, a mechanism to adjust

¹ Board's Letter, March 16, 2009, Page 2

rates in 2009 will be established. The Board expects to make its determination by early June, 2009.

2. **POWER WORKERS' UNION'S COMMENTS**

- 2.1 Comments on Board's Specific Questions
- 1. How do the current economic and financial conditions affect the variables (i.e., Government of Canada and Corporate bond yields, bankers' acceptance rate, etc) used by the Board's Cost of Capital methodology?

The current economic recession and the turmoil in the financial market affect the variables used by the Board's Cost of Capital methodology, namely the Government of Canada and Corporate bond yields as well as the bankers' acceptance rate, in multiple and complex ways.

With respect to the Government of Canada bond yields, it is important to note that they were already declining even before the full fledged economic recession set in, arguably in late 2007 in the US and later in Canada. Tables 1 and 2 in Appendix A to this submission show the 10-year and the long-term Canada bond yields data since January 2006 respectively. As seen from these tables it is clear that not only have the 10-year and long-term Canada bond yields been declining, but the yields for the last months of 2008 and the first three months of 2009 have been artificially low. It appears that the turmoil in stock markets, corporate scandals, the increase in business risk level and economic pessimism made investors more concerned with potential losses on alternative investments than with safe but low-yielding government bonds. As the demand for government bonds increased and bond prices rallied, long-term government bond yields started to hit record lows. Nevertheless, it appears that investors both in the US

and Canada continued the flight to government bonds to ensure the safety of their investments.

The impact of the recession on corporate bond yields can be portrayed as follows. The recession has made investors increasingly risk adverse and they have concluded that corporate bonds are risky. As a result, they are demanding higher returns to offset the additional credit risk of holding corporate bonds. At the same time, the need to attract investors forces businesses to issue new notes and bonds at lower prices. This situation widens the spread between the Government of Canada and Corporate bond yields. The PWU notes that the Cost of Capital parameter values determined by the Board for 2009 show, as indicated earlier, that the Long-Term debt rate has increased to 7.62% from the 2008 level of 6.10%. As the Board noted, the spread between ROE and the Long-Term debt rate has narrowed to 39 basis points in 2009 compared to 247 basis points in 2008 because ROE is down and Long-Term debt rate is up. It is clear that ROE is lower because the Government of Canada bond yield is lower. However, the Long-Term debt rate is up in spite of the lower Government of Canada bond yield. Given the Board's formula used in updating the Long-Term debt rate, it is clear that one of the reasons why it is higher is the widening gap between the corporate bond yields and the Government of Canada bond yields.

Similarly, the successive cuts in interest rates by central banks to lower the cost of borrowing and stimulate the economy have lowered the cost of funding by banks resulting in a significant decline in bankers' acceptance rate. Tables 3 and 4 of Appendix A, show that the 3-month bankers' acceptance rates and the 3-month Treasury bills declined significantly throughout 2008 and 2009. Since the Board's determination of Short-Term debt rate is based on the 3-month Bankers' acceptance rate plus a spread of 25 basis points, it is clear that the current economic situation is affecting the variables and hence the values produced by the Board's Cost of Capital methodology.

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2. In the context of the current economic and financial conditions, are the values produced by the Board's Cost of Capital methodology and the relationships between them reasonable? Why, or why not?

2.1. If the values are not reasonable, what are the implications, if any, to a distributor?

The reasonableness of the values produced by the Board's Cost of Capital methodology and the relationships between them can be viewed at two levels. First, reasonableness can be assessed in terms of the Board's determined values for 2009 compared to the previous year and the implications in the context of the current economic and financial conditions. Second, reasonableness can and should also be considered in terms of what the values mean to individual distributors who find themselves in different situations in terms of such attributes as size and level of business risk, etc.

At a general level, the first consideration is the shrinking of the spread between ROE and the Long-Term debt rate to 39 basis points in 2009 from the 247 basis points in 2008. The relationship between the two values appears to be unreasonable and unfair, at least from the point of view of investors, because equity is supposed to be compensated for at a higher rate since it entails more risk than debt in that debt interest and repayment obligations have precedence and must be met irrespective of the profitability of the business.

A second consideration is the Board-determined value for Short-Term debt rate, which is 1.33%, is significantly lower than the 4.47% for 2008. As indicated earlier, the Board-determined value for Short-Term debt rate reflects the sustained decline in the bankers' acceptance rate that significantly offsets the spread of 25 basis points used by the Board to calculate the Short-Term debt rate. Given that many distributors use Short-Term debt to finance their operations

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and that Short-Term debt rates are generally less expensive than Long-Term debt rates, one might expect Short-Term debt to be particularly useful at times of low interest rates. The question for the distributors, however, is whether there is any reasonable likelihood that they will actually be able to obtain Short-Term debt financing they require to finance their operations at rates approximating such low deemed rates.

As indicated earlier, one way that businesses attract capital in the face of the capital flight to competing and safer investments is by incenting lenders through the issuance of bonds or notes either at higher interest rates or at a significant discount to mature at the principal amount. In this respect, from the view point of the distributor, the 1.33% Short-Term debt rate could have the impact of limiting their financial flexibility and ability to meet their short-term financial needs. In addition, the fact that distributors are forced to issue notes at lower prices or higher yields in order to attract capital means that there is a very high probability that distributors will be paying out more in debt than they are collecting in electricity rates that are determined on the basis of the Board-determined cost of capital numbers. This will have an adverse impact on the economic and financial stability of the distributors. To conclude, since the time the Board determined the applicable formulae, there has been a substantial shift in the economy that was entirely unanticipated. This has significantly increased the debt and equity risk premium and the current formulae fail to accurately reflect this increased level of risk.

3. What adjustments, if any, should be made to the Cost of Capital parameter values to compensate or correct for the current economic and financial conditions?

At the centre of the foregoing discussion on the impact of the current economic and financial situation on the reasonableness of cost of capital values determined by the Board is the investors' and lenders' perceived risk of providing capital to

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the distributor in the context of the current economic and financial situation. It is natural, however, to assume that this perceived risk does and should vary from distributor to distributor. This variation, for example, includes among other things, a distributor's size, level of load concentration risk, balance sheet (e.g. the level of embedded debt), and level of planned work program.

At this point, it is important to recall that prior to the Board's 2006 Report on Cost of Capital which advised a move from size-related capital structures to a common single capital structure, the Board heard the concerns many distributors had with the move to a single capital structure. According to some, size was "an important measure of risk that must continue to be reflected in the cost of capital and that small distributors face greater business risk than large distributors when a significant fraction of their load is from a single customer or when there is load concentration in a limited number of sectors. The distributors expressed their concerns that for a small distributor, a downturn in a given sector could result in consumers and local businesses moving away, while larger distributors may operate in more diversified local economies and hence be better protected from a sector downturn."² The Board however, determined that utility size no longer represented an accurate proxy for risk. The PWU suggests that issues related to size and load concentration should be considered by the Board in forming its view about the reasonableness of the Board-produced parameter values in the face of business risks faced by individual distributors.

Given that the Board's intent in the current initiative is to consider possible adjustments or corrections to the Cost of Capital parameter values without reviewing the methodology itself, the PWU submits that the Board has two options. The first is a global corrective measure with respect to the cost of capital values. While the PWU is not putting forward specific numerical values as to the level of adjustment needed, the PWU envisages that the Board has many options including:

² Report of the Board on Cost of capital and 2nd Generation IRM, December 20, 2006, Pages 6-7

- a. allowing distributors to retain the ROE level approved for the previous year;
- b. an upward adjustment to the equity risk premium implicit in the current formulaic methodology; and,
- c. an upward adjustment to the value of the spread used to calculate Short-Term debt rate.

The PWU's preference, however, is for the Board to make a determination such that whatever adjustments are made, are to the extent possible, not arbitrary. In this respect, the PWU assumes that there might be distributors who are particularly vulnerable to the current situation including the increased level of risk due to the economic downturn. The PWU anticipates that distributors will be filing comments that will help the Board determine whether it should opt for a simple global adjustment to the different values or to the variables that produce them, or whether it should and can choose a case-by-case consideration given the specificity of this initiative to the 2009 values only and the Board's desire to avoid a review of the methodology itself.

4. Going forward, should the Board change the timing of its Cost of Capital determination, for instance, by advancing that determination to November?

The PWU notes that the Board made determination of the cost of capital values for 2008 in February of 2008 and for 2009, it made the determination in March of 2009. The PWU assumes that the Board is seeking comment on whether there is benefit to moving the timing of the determination of the Cost of Capital values applicable to, for example, the 2009 rate year to November of the previous year, i.e., 2008. The PWU is of the view that the proposed timing is more or less close to the timing of the filing of rate applications to be effective in May of next year. In that regard, it might help some distributors to incorporate the Board-determined values in their applications, avoiding the need to update their forecasts, which is the case under the current policy, at least for some applicants. On the other hand, the proposed change would require a change to the Board's policy articulated in its Report which states that the updating of the ROE, and deemed Long-Term and Short-Term debt rates will be based on data available three full months in advance of the effective date of the rates. Similarly, it does not appear to be clear how such a change would help the Board or the distributors to address problems of forecast caused by unanticipated changes in the market and the economy as is currently the case. In this respect, the PWU's view is that no material incremental benefit would be achieved from doing so in comparison with the current timing of the Board's determination of the Cost of Capital values.

5. Are there other key issues that should be considered if the Board were to adjust any or all of the Cost of Capital parameter values produced by the application of its established formulaic methodology?

The PWU is of the view that the Board should consider a number of factors in considering an adjustment to any or all of the parameter values produced by the established formulaic methodology.

First, the Board should consider the principle of fair ROE, particularly with the view to enabling distributors to maintain their financial integrity and attract capital on reasonable terms. The Board should also consider the increasing need of many distributors for resources as a result of increased work programs, which has a direct impact on service reliability, quality and safety.

Second, the Board should exercise its judgment in achieving fairness both from the viewpoint of ratepayers and from the viewpoint of investors.

Third, the Board should take into account developments in other Canadian jurisdictions that have adopted formulaic cost of capital methodologies. The relevance of the recent experiences in other jurisdictions is that they reveal the limitations of formulaic methodologies in accurately capturing changes that over

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time impact the operation and financial health of individual distributors. In this respect, the recent decision by the National Energy Board (the "NEB" or "Board") to grant a variance from its decision in RH-2-94 (which adopted a formula for adjusting the ROE on an annual basis) in its determination on Cost of Capital for Trans Québec & Maritimes (TQM)'s 2007 and 2008 rates is a good example.³ It is important to note that the NEB had stated in the RH-2-94 Decision that it would be prepared to consider a reassessment of capital structures in the event of a significant change in business risk, in corporate structure or in corporate financial fundamentals⁴. In granting the variance, the Board stated:

...the Board is of the view that there have been significant changes since 1994 in the financial markets as well as in general economic conditions. More specifically, Canadian financial markets have experienced greater globalization, the decline in the ratio of government debt to GDP has put downward pressure on Government of Canada bond yields, and the Canada/US exchange rate has appreciated and subsequently fallen. In the Board's view, one of the most significant changes since 1994 is the increased globalization of financial markets which translates into a higher level of competition for capital. When taken together, the Board is of the view that these changes cast doubt on some of the fundamentals underlying the RH-2-94 Formula as it relates to TQM....

The RH-2-94 Formula relies on a single variable which is the long Canada bond yield. In the Board's view, changes that could potentially affect TQM's cost of capital may not be captured by the long Canada bond yields and hence, may not be accounted for by the results of the RH-2-94 Formula. Further, the changes discussed above regarding the new business environment are examples of changes that, since 1994, may not have been captured by the RH-2-94 Formula. Over time, these omissions have the potential to grow and raise further doubt as to the applicability of the RH-2-94 Formula result for TQM for 2007 and 2008⁵.

Accordingly, the NEB accepted the TQM proposed market-based After-Tax Weighted Average Cost of Capital ("ATWACC") methodology, which it said better utilized financial market information, and approved a total weighted average after-tax return that is nearly 1% higher than what would have been the case under the existing methodology. The NEB also approved the stated total return without identifying a capital structure noting that the approach is more

³ National Energy Board, Reasons for Decision in the Matter of Trans Québec & Maritimes

Pipelines Inc.: Cost of Capital for 2007 and 2008, RH-1-2008, March 2009.

⁴ RH-2-94 Reasons for Decision, Page 32

⁵ RH-1-2008, Pages 16-17

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aligned with the way capital budgeting decision making takes place in the business world. The PWU recognizes that there are differences between electricity distributors in Ontario and TQM in terms of the business environment they are operating in and the risks they are facing. Nevertheless, the NEB's rationale for varying its RH-2-94 decision and its recognition of the limitations of its established ROE formula are worth the Board's consideration in the current consultation.

Similarly, the Alberta Utilities Commission ("AUC" or "Commission"), in its Decision 2008-051⁶, reviewed on a generic basis, the ROE formula and the common equity ratios adopted in its Decision 2004-052. The Commission heard from utilities that changes have taken place since Decision 2004-052 including: capital market changes relating to the presence of unusual market conditions that began with the sub-prime problems; slowed economic growth; lower levels of government debt as a percentage of GDP which has resulted in artificially low Canada bond yields; and globalization and integration of capital markets. According to the utilities, these are changes that are "not reflected in the equity risk premium calculation currently embedded in the current ROE adjustment formula, except to the extent it may be reflected in government interest rate adjustments"⁷: After hearing from both sides, the Commission found that there is a reasonable basis to review the ROE level and the adjustment mechanism as well as utility capital structures in a generic proceeding.

The PWU notes that the OEB's *Draft Guidelines on a Formula-based Return on Common Equity for Regulated Utilities* issued in March 1997 stated that:

The actual quantification of the elements within the formula should be done as described earlier, where a comparison of the long term Government of Canada bond yield between the previous and the forecast year is done. The Board is of the view that an adjustment to the utility-specific risk premiums should be done only when there is a clear indication that relative risks have

⁶ Alberta Utilities Commission, Decision 2008-051, Generic Cost of Capital – Preliminary Questions Proceeding, June 18, 2008

⁷ Decision 2008-051, Page 4

changed. The Board also believes that the capital structures should be reviewed only when there is a significant change in financial, business or corporate fundamentals.⁸

On the other hand, the Board, in its 2006 Cost of Capital Report, indicated that it did not anticipate reviewing the cost of capital policy issue again in the context of third generation incentive regulation.⁹ The PWU also recognizes that the Board's current initiative is specific just to the 2009 Cost of Capital parameter values. However, there is no certainty with respect to how long the current economic and financial market conditions will prevail and impact the Cost of Capital parameter values. In this respect, the Board should not only mitigate the adverse impacts caused by the limitations of the current formula specific to the 2009 cost of capital values, but should also be open to the periodic review of the methodology as dictated by circumstances.

⁸ Ontario Energy Board, Draft Guidelines on a Formula-based Return on Common Equity for Regulated Utilities, March 1997, Page 32

⁹ Report of the Board on Cost of Capital and 2nd Generation IRM, December 20, 2006, Page 22

APPENDIX A

Table 1: Government of Canada benchmark bond yields, 10 year

Bank of Canada: MONTHLY Series:

| Low | 12/2008 | 2.69 |
|---------|-----------------|------|
| Average | 01/2006 03/2009 | 3.94 |
| High | 06/2006 | 4.63 |
| 01/2006 | 4.11 | |
| 02/2006 | 4.10 | |
| 03/2006 | 4.23 | |
| 04/2006 | 4.52 | |
| 05/2006 | 4.45 | |
| 06/2006 | 4.63 | |
| 07/2006 | 4.38 | |
| 08/2006 | 4.12 | |
| 09/2006 | 3.98 | |
| 10/2006 | 4.17 | |
| 11/2006 | 3.94 | |
| 12/2006 | 4.05 | |
| 01/2007 | 4.17 | |
| 02/2007 | 4.03 | |

| 04/2007 | 4.15 | |
|---------|------|---------------------------------------|
| 05/2007 | 4.48 | |
| 06/2007 | 4.62 | |
| 07/2007 | 4.58 | |
| 08/2007 | 4.38 | |
| 09/2007 | 4.41 | |
| 10/2007 | 4.31 | |
| 11/2007 | 4.07 | |
| 12/2007 | 4.09 | · · · · · · · · · · · · · · · · · · · |
| 01/2008 | 3.88 | |
| 02/2008 | 3.81 | |
| 03/2008 | 3.46 | ····· |
| 04/2008 | 3.58 | |
| 05/2008 | 3.68 | |
| 06/2008 | 3.71 | |
| 07/2008 | 3.81 | |
| 08/2008 | 3.52 | |
| 09/2008 | 3.66 | |
| 10/2008 | 3.74 | |
| 11/2008 | 3.36 | |
| 12/2008 | 2.69 | |
| 01/2009 | 2.97 | |
| 02/2009 | 2.95 | |
| 03/2009 | 2.96 | |

Table 2: Government of Canada benchmark bond yields, long-term

MONTHLY Series:

| Wil225348 Covernment of Canada benchmark bond yields, long-term | | |
|---|-------------------|---------------------------------------|
| Low | 12/2008 | 3.45 |
| Average | 01/2006 - 03/2009 | 4.18 |
| High | 06/2006 | 4.67 |
| 01/2006 | 4.20 | |
| 02/2006 | 4.15 | |
| 03/2006 | 4.23 | ····· |
| 04/2006 | 4.57 | |
| 05/2006 | 4.50 | |
| 06/2006 | 4.67 | |
| 07/2006 | 4.45 | |
| 08/2006 | 4.20 | |
| 09/2006 | 4.07 | |
| 10/2006 | 4.24 | |
| 11/2006 | 4.02 | |
| 12/2006 | 4.10 | |
| 01/2007 | 4.22 | · · · · · · · · · · · · · · · · · · · |
| 02/2007 | 4.09 | |
| 03/2007 | 4.21 | |
| 04/2007 | 4.20 | |
| 05/2007 | 4.39 | |

| 06/2007 | 4.56 | |
|---------|------|--|
| 07/2007 | 4.49 | |
| 08/2007 | 4.44 | |
| 09/2007 | 4.50 | |
| 10/2007 | 4.38 | |
| 11/2007 | 4.23 | |
| 12/2007 | 4.18 | |
| 01/2008 | 4.19 | |
| 02/2008 | 4.18 | |
| 03/2008 | 3.96 | |
| 04/2008 | 4.08 | |
| 05/2008 | 4.12 | |
| 06/2008 | 4.05 | |
| 07/2008 | 4.16 | |
| 08/2008 | 4.01 | |
| 09/2008 | 4.13 | |
| 10/2008 | 4.27 | |
| 11/2008 | 3.94 | |
| 12/2008 | 3.45 | |
| 01/2009 | 3.72 | |
| 02/2009 | 3.69 | |
| 03/2009 | 3.74 | |

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Table 3: Bankers' acceptances – 3 month

MONTHLY Series:

| V/11272572 | 7 Bankers' acceptances – 3 month | |
|------------|----------------------------------|----------|
| Low | 03/2009 | 0.51 |
| Average | 01/2006 - 03/2009 | 3.70 |
| High | 09/2007 | 4.88 |
| 01/2006 | 3.66 | |
| 02/2006 | 3.83 | |
| 03/2006 | 3.98 | |
| 04/2006 | 4.17 | |
| 05/2006 | 4.34 | <u>t</u> |
| 06/2006 | 4.46 | |
| 07/2006 | 4.32 | |
| 08/2006 | 4.32 | |
| 09/2006 | 4.32 | |
| 10/2006 | 4.33 | |
| 11/2006 | 4.29 | |
| 12/2006 | 4.31 | |
| 01/2007 | 4.32 | |
| 02/2007 | 4.31 | |
| 03/2007 | 4.31 | |
| 04/2007 | 4.33 | |
| 05/2007 | 4.41 | |
| 06/2007 | 4.58 | |

| 07/2007 | 4.68 | |
|---------|---------|--|
| 08/2007 | 4.88 | |
| 09/2007 | 4.88 | |
| 10/2007 | 4.65 | |
| 11/2007 | 4.75 | |
| 12/2007 | 4.75 | |
| 01/2008 | 3.97 | |
| 02/2008 | 3.83 | |
| 03/2008 | 3.58 | |
| 04/2008 | 3.20 | |
| 05/2008 | 3.10 | |
| 06/2008 | 3.20 | |
| 07/2008 | 3.21 | |
| 08/2008 | 3.22 | |
| 09/2008 | 3.39 | |
| 10/2008 | 2.63 | |
| 11/2008 | 2.20 | |
| 12/2008 | 1.41 | |
| 01/2009 | 1.02 | |
| 02/2009 | 0.75 | |
| 03/2009 | 0.51 | |
| | <u></u> | |

Table 4: Treasury Bills - 3 month

MONTHLY Series:

| V122531: Treasury Bills - 3 month | | |
|-----------------------------------|-------------------|--|
| Low | 03/2009 | 0.39 |
| Average | 01/2006 - 03/2009 | 3.27 |
| High | 07/2007 | 4.57 |
| 01/2006 | 3.47 | |
| 02/2006 | 3.72 | |
| 03/2006 | 3.86 | |
| 04/2006 | 4.03 | |
| 05/2006 | 4.18 | |
| 06/2006 | 4.32 | |
| 07/2006 | 4.15 | |
| 08/2006 | 4.13 | |
| 09/2006 | 4.15 | |
| 10/2006 | 4.16 | |
| 11/2006 | 4.18 | |
| 12/2006 | 4.16 | |
| 01/2007 | 4.17 | ······································ |
| 02/2007 | 4.19 | |
| 03/2007 | 4.16 | <u> </u> |
| 04/2007 | 4.16 | <u> </u> |
| 05/2007 | 4.29 | |
| 06/2007 | 4.42 | |

| 07/2007 | 4.57 | |
|---------|------|--|
| 08/2007 | 3.83 | |
| 09/2007 | 3.97 | |
| 10/2007 | 3.96 | |
| 11/2007 | 3.91 | |
| 12/2007 | 3.86 | |
| 01/2008 | 3.41 | |
| 02/2008 | 3.24 | |
| 03/2008 | 1.72 | |
| 04/2008 | 2.68 | |
| 05/2008 | 2.68 | |
| 06/2008 | 2.60 | |
| 07/2008 | 2.41 | |
| 08/2008 | 2.42 | |
| 09/2008 | 1.92 | |
| 10/2008 | 1.98 | |
| 11/2008 | 1.70 | |
| 12/2008 | 0.83 | |
| 01/2009 | 0.83 | |
| 02/2009 | 0.67 | |
| 03/2009 | 0.39 | |

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