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 Union Gas Limited for an Order or Orders approving or fixing a multi-year incentive rate mechanism to determine rates for the regulated distribution, transmission and storage of natural gas, effective January 1, 2008;

AND IN THE MATTER OF an Application by Enbridge Gas Distribution Inc. for an Order or Orders approving or fixing rates for the distribution, transmission and storage of natural gas, effective January 1, 2008;

AND IN THE MATTER OF a combined proceeding Board pursuant to section 21(1) of the *Ontario Energy Board Act*, 1998.

INTERROGATORIES OF THE LONDON PROPERTY MANAGEMENT ASSOCIATION ("LPMA"), THE WHOLESALE GAS SERVICE PURCHASERS GROUP ("WGSPG"), AND THE BUILDING OWNERS AND MANAGERS ASSOCIATION OF THE GREATER TORONOTO AREA ("BOMA")

TO BOARD STAFF

1.Ref: PEG Report, page ii

Issue Number: 3.1

Issue: How should the X factor be determined?

The evidence indicates that the sample period for the Enbridge and Union indexing work was limited to 2000 - 2005.

- a) Please update all relevant portions of the PEG Report to reflect the use of 2000 2006 data for Enbridge and Union. Please provide tables showing the Summary Price Cap Indexes, Service Group PCIs and Revenue Cap Indexes for Enbridge and Union comparing the results using the 2000 2005 data and using the 2000 2006 data. Please provide explanations for all changes.
- b) Please update all relevant portions of the PEG Report to reflect the use of 2001 2006 data for Enbridge and Union. Please provide tables showing the Summary Price Cap Indexes, Service Group PCIs and Revenue Cap Indexes for Enbridge and Union

comparing the results using the 2000 - 2005 data and using the 2001 - 2006 data. Please provide explanations for all changes.

2. Ref: PEG Report, page ii

Issue Number: 3.1

Issue: How should the X factor be determined?

The evidence indicates that the sample period for US work was 1994 - 2004.

- a) Please update all relevant portions of the PEG Report to reflect the use of the 2000-2005 sample period for the US work (If 2005 data is not available, use the sample period 1999-2004). Please provide tables showing the Summary Price Cap Indexes, Service Group PCIs and Revenue Cap Indexes for Enbridge and Union comparing the results using the sample period 1994-2004 for the U.S. work as filed and using the 2000-2005 (or 1999-2004) sample period for the U.S. work. Please provide explanations for all changes.
- b) Please explain why PEG used a sample period of 1994 2004. What are the possible implications of using a different sample periods? Does the business cycle have any impact on the results depending on the years used? Please explain.

3. Ref: PEG Report, page i

Issue Number: 1.2

Issue: What is the method for incentive regulation that the Board should approve for each

utility?

The evidence references the January 5, 2007 EB-2006-0209 Staff Discussion Paper.

- a) Did PEG provide any input into this discussion paper and/or write any parts of it? If yes, please specify.
- b) Please provide all a copy of all correspondence between PEG and Board Staff members regarding this discussion paper, including e-mails.
- c) Please provide all preliminary drafts of the report that were not issued to all parties.
- d) Did Board Staff and or PEG have any correspondence with Union Gas and or Enbridge Gas during the preparation of the Staff Discussion Paper other than that at the stakeholder meetings? If yes, please provide copies of all correspondence, including emails.

Issue Number: 4.3

Issue: If so, how should the impact of changes in average use be applied (e.g., to all customer rate classes equally, should it be differentiated by customer rate classes or some other manner)?

- a) Please provide a definition of "important service groups".
- b) Who provided the definition of "important service groups".
- c) What is the difference between "important service groups" and rate classes?

5. Ref: PEG Report, page ii

Issue Number: 1.2

Issue: What is the method for incentive regulation that the Board should approve for each

utility?

Please file a copy of the redlined version of the PEG Report that identified all changes to the June 8th draft.

6. Ref: PEG Report, page iii

Issue Number: 3.1

Issue: How should the X factor be determined?

- a) Please explain how the summary rate trend of 0.87% was calculated for Union Gas. Please provide all information and calculations used. Please provide the rate increase for each year for the period 2000-2005 upon which the trend is based.
- b) Please confirm that over the period 2001 2003 Union Gas was under a price cap during which the price caps were 1.4% in 2002, 0.0% in 2003 and -2.3% in 2003.
- c) Please confirm that for 2005, Union Gas was under a rate freeze.
- d) For each year 2000 through 2006, please provide a calculation that shows the annual cost for distribution delivery and storage services for an average sized residential, commercial and industrial customer served under Union's general service rate classes. Please show all rates used by delivery block for delivery, the storage rate and the monthly customer fixed charge as well as the annual consumption levels used in the calculations. Do not include the commodity cost or the cost of upstream transportation in the calculations.

Issue Number: 1.2

Issue: What is the method for incentive regulation that the Board should approve for each

utility?

The evidence states that the notional PCI trend is quite similar to the overall trend in their actual rates during the 2000 - 2005 period. The evidence also indicates that the trend in actual rates was 0.87% for Union, as compared to the 1.34% under the price cap index.

a) If Union's rates had increased at a trend rate of 1.34% over the 2000 through 2005 period, please provide an estimate, by year, of the incremental revenues that would have been paid to Union over this period by all customers.

b) The price cap index of 1.34% is 54% higher than the trend figure of 0.87%. Please explain how this can be considered to be "quite similar".

8. Ref: PEG Report, page 15

Issue Number: 4.2

Issue: How should the impact of changes in average use be calculated?

The evidence states that the average use factor can be based on long term trends much like that productivity differential and the input price differential.

a) Please define long term as used here in terms of the number of years of data used.

b) Please explain why changes in the average use in the short term are not more relevant.

9. Ref: PEG Report, page 21

Issue Number: 3.1

Issue: How should the X factor be determined?

Please provide all the supplemental data that was sourced from Statistics Canada.

10. Ref: PEG Report, page 22

Issue Number: 3.1

Issue: How should the X factor be determined?

a) What is the potential impact of the PEG estimates of using "rough estimates" for net salaries and wages, pension and other benefits costs for Enbridge?

- b) Please recalculate the Summary Price Cap Indexes, Service Group PCIs and Revenue Cap Indexes found in the tables in the Executive Summary if the rough estimates used for Enbridge are excluded from the analysis.
- c) Has PEG attempted to obtain the level of detail from Enbridge that it was able to obtain from Union? If so, please provide the explanation provided by Enbridge for not providing the information.

Issue Number: 3.1

Issue: How should the X factor be determined?

What is the impact on the analysis of changing the 65/35 weighting of debt and equity to the current Board approved weighting of 64/36 for each of the utilities?

12. Ref: PEG Report, page 24

Issue Number: 4.2

Issue: How should the impact of changes in average use be calculated?

The evidence states that PEG added to the weather normalized volumes used in the revenue-weighted output index estimates, provided by the companies, of their demand-side management ("DSM") savings. Please clarify what information was provided by the utilities: their DSM savings; their weather normalized volumes; and/or the revenue-weighted output index estimates.

13. Ref: PEG Report, page 24

Issue Number: 4.2

Issue: How should the impact of changes in average use be calculated?

The evidence states that the treatment of DSM savings was undertaken in the <u>hope</u> that the PCIs would not compensate the utilities for their DSM activities.

- a) Can PEG confirm that the approach taken will not result in double counting through the PCI and the Lost Revenue Adjustment Mechanism for DSM activities.
- b) If actual normalized use was used, including the impact of DSM, instead of adjusting actual normalized use for the DSM savings, in the calculation of the average use adjustment factor, would this approach eliminate any potential for double counting? Please explain.

c) Please redo the analysis using the approach suggested in part (b) above and provide the resulting PCI components for both utilities.

14. Ref: PEG Report, page 27-28

Issue Number: 3.1

Issue: How should the X factor be determined?

The evidence indicates that the shares of each billing determinant in revenue served as weights in the output quantity indexes and that both utilities provided PEG with highly detailed data on billing determinants and the corresponding revenues.

a) Please provide all such data in electronic format.

- b) Please provide all calculations used to estimates the weights used in the indexes and used in the calculation of the indexes.
- c) How was the data used adjusted to reflect any increase in the fixed monthly charges and/or demand charges over the period for which data was used? If no adjustment was made, please explain why.
- d) Have the revenue weights been adjusted to reflect the Board approved fixed charges and/or demand charges that have been approved for the fiscal 2007 base year? If not, why not?
- e) Would a change in the monthly fixed charges and/or demand charges in the base year fiscal 2007 have an impact on the calculation of the weights used in the output quantity indexes? If not, why not?
- f) If the answer to part (e) is yes, please redo the analysis and provide the analysis and results that would flow from using the current fixed/variable rates as approved by the Board for the 2007 base year.
- g) Union Gas proposes to have the flexibility to adjust the fixed and variable components of rates using different percentages. Would this flexibility have any impact on the appropriate weights to be used in calculating the indexes if these weights are changed during the IR period? Please explain.

15. Ref: PEG Report, page 27

Issue Number: 3.1

Issue: How should the X factor be determined?

The evidence states that lacking US data on the corresponding revenue shares, PEG employed instead the average of the revenue shares for Union and Enbridge.

- a) Please provide the revenue shares for each of Union and Enbridge.
- b) What is the value of applying the average of the revenue shares for Union and Enbridge to utilities that may have significantly different revenue shares?
- c) What is the sensitivity of the results if it was assumed that the weights used for the US data were 60% for residential and commercial volumes, 15% for other volumes and 25% for customers?

16. Ref: PEG Report, page 28

Issue Number: 3.2

Issue: What are the appropriate components of an X factor?

The evidence indicates that the input index for Union also includes a subindex for gas used in system operations.

- a) Does the inclusion of a subindex for gas used in system operations mean that any change in gas volumes should not be a Y or Z factor adjustment? Please explain.
- b) Does the inclusion of a subindex for gas used in system operations mean that any change in gas prices should not be a Y or Z factor adjustment? Please explain.

17. Ref: PEG Report, page 28

Issue Number: 3.1

Issue: How should the X factor be determined?

- a) Please explain the relevance of the construction worker salaries and wages index.
- b) What other labour cost indexes were considered for use? Why were these indexes not used in the final analysis?
- c) Please provide the Statistics Canada data used and reviewed for all potential labour indexes. Please identify the source of the Statistics Canada data by table number or CANSIM number.
- d) What is the impact on the analysis if the utility salary and wage trend index was used?

Issue Number: 3.1

Issue: How should the X factor be determined?

- a) Please provide the data and data source for the GDPIPI for Ontario.
- b) Were any other indexes investigated for use in place of the GDPIPI for Ontario? If yes, please provide all other indexes that were considered, along with the data, the data source and reasons for not using this information.

19. Ref: PEG Report, Tables 13a, 13b, 15a, 15b

Issue Number: 3.1

Issue: How should the X factor be determined?

The geometric decay average annual growth rates in Tables 13a and 13b are based on an average for the years 1999-2005 while the COS approach in Table 15a and 15b are based on an average for the years 1998 - 2005.

- a) Please explain the one year difference in the period used between the methodologies.
- b) Why was the total period for which data is available in these sets of tables not used to calculate the average annual growth rates?
- c) Please provide Tables 13a, 13b, 15a, 15b and the resulting Tables 14 and 16 that would result from the use of all the data shown in this tables.

20. Ref: PEG Report, page 39

Issue Number: 3.1

Issue: How should the X factor be determined?

The evidence indicates that data are not readily available that would enable the calculation of the TFP trends of other Canadian gas utilities.

- a) Does Statistics Canada publish any data related to the MFP trends of utilities and/or natural gas utilities? If yes, please provide the information published by Statistics Canada and indicate why this information was not used by PEG in their analysis.
- b) If Statistics Canada did have such information, would it provide a better estimate of the industry MFP than that provided by PEG in its analysis. Please explain your answer.
- c) Given that PEG uses a Statistics Canada measure of the MFP trend of the Canadian economy, would it be more appropriate to also use a MFP trend of the Canadian utility or

Canadian natural gas utility industry if it were available? Please explain if the answer is no.

21. Ref: PEG Report, Table 16

Issue Number: 3.1

Issue: How should the X factor be determined?

Please provide the Statistics Canada source and definition of the MFP data used in this table.

22. Ref: PEG Report

Issue Number: 3.1

Issue: How should the X factor be determined?

All of the Statistics Canada data reference in the report and shown in the various tables appears to have 1997 as the base year equal to 100. Current Statistics Canada data, including that for GDPIPI have been revised to a base year of 2002. This may mean that the data used by PEG has also since been revised by Statistics Canada.

Please update the analysis and all tables to reflect the most recent Statistics Canada data available.

23. Ref: PEG Report, page 27 - 28

Issue Number: 3.1

Issue: How should the X factor be determined?

The evidence indicates that index theory suggests that flexible weights are generally more accurate than fixed weights for calculating the revenue weights.

- a) Please explain why PEG decided to use the fixed weights.
- b) Please explain how this fixed weight has been determined. Please provide all the data and calculations and assumptions used to calculate these fixed weights.
- c) Does the fixed weight calculation take into account the higher monthly customer charges approved by the Board in the 2007 base rates? If not, please update the evidence to reflect this change.

24. Ref: PEG Report, Table 10

Issue Number:

Issue:

Please update Table 10 to reflect actual 2006 data.

25. Ref: PEG Report, page 46

Issue Number:

Issue:

- a) Please show the sensitivity of the econometric approach by removing the first year of data and re-estimating the parameters.
- b) Please show the sensitivity of the econometric approach by removing the last year of data and re-estimating the parameters.

26. Ref: PEG Report, page 46

Issue Number: 3.1

Issue: How should the X factor be determined?

- a) What would the MFP trend of the economy be if the same 2000 2005 period was used as it was for the econometric estimation of the utility specific TFP figures?
- b) Why has PEG used a different time period for the Canadian economy as compared to the time period used in the econometric approach?

27. Ref: PEG Report, page 47

Issue Number: 4.2

Issue: How should the impact of changes in average use be calculated?

- a) Please provide all the data used to normalized based on the PEG methodology.
- b) What degree days were used to normalize to?
- c) Please explain why the data used for normalization was limited to 2000 through 2005. Was data prior to 2000 provided to PEG? If so, why was it not used?

Issue Number:

Issue:

Please explain the statement that PEG sought a period ending in 2005 in which the start year had a similar real rate of return on the premise that a notable change in the real rate of return is not likely during the IR plan. Please refer to the numbers in Table 12 for this explanation as to why the 1999-2005 period was chosen.

29. Ref: PEG Report, page 57

Issue Number: 3.1

Issue: How should the X factor be determined?

- a) Please explain why PEG used 1998 as the start date for the COS capital service price indexes.
- b) Table 12 shows that the weighted average cost of capital was 6.1% in 2005, 5.8% in 1998 and 6.4% in 1997. Please explain why 1998 was used and not 1997 as the start date.
- c) Please update Tables 15a and 15b using 1997 2005 as the average. What is the impact on the change in the resulting price cap index estimations of using this period as the average?

30. Ref: PEG Report, page 61

Issue Number: 3.2

Issue: What are the appropriate components of an X factor?

- a) Did PEG take into account the historic precedent of Union's trial PBR plan that was in place in 2001 through 2003 when setting the stretch factor? If not, why not?
- b) Please confirm the following from Union's trial PBR plan as approved and implemented:

| Component/Year | <u>2001</u> | <u>2002</u> | <u>2003</u> |
|----------------|-------------|-------------|-------------|
| GDPPI | 3.9% | 2.5% | 0.2% |
| IPD | 1.1% | 1.1% | 1.1% |
| Stretched PD | 1.4% | 1.4% | 1.4% |
| Price Cap | 1.4% | 0.0% | -2.3% |

c) Please confirm that during Union's trial PBR plan there was an earnings sharing mechanism in place.

d) Please confirm the following during Union's trial PBR plan:

| ROE/Year | <u>2001</u> | <u>2002</u> | <u>2003</u> |
|-------------------|-------------|-------------|---------------|
| Approved * | 9.66% | 9.62% | 9.37% |
| Normalized Actual | 11.45% | 12.36% | <u>12.08%</u> |
| Difference | 1.79% | 2.74% | 2.71% |

^{*} Approved based on the draft guideline formula and used for earnings sharing purposes.

- e) The PEG report recommends an overall X factor of 0.52, only one-fifth of the X factor approved by the Board in RP-1999-0017. With an X factor of 2.5%, Union has able to earn a significant premium, even with an earnings sharing mechanism in place. In light of this, does PEG believe that a low X factor, as recommended, and no earnings sharing mechanism is appropriate, in light of the historical precedent of Union's trial PBR plan. Please explain fully.
- f) Please present the performance predicted by the incentive power model that would have been predicted for Union's trial PBR plan. Please provide all inputs and assumptions used in modeling the expected performance improvement.
- g) Is PEG aware of any IR plans that have a variable stretch factor that can be adjusted during the plan of a term? If yes, please provide a summary of the number and types of adjustments that are made.

31. Ref: PEG Report, page 64

Issue Number: 3.1

Issue: How should the X factor be determined?

Would it be reasonable for the Board to take an average of the GD and COS methodologies to calculate the price cap index results? If not, please explain why not.

32. Ref: PEG Report, page 64

Issue Number: 1.1

Issue: What are the implications associated with a revenue cap, a price cap and other alternative multi-year incentive ratemaking frameworks?

The evidence states that the notional PCI change for each company is similar to the trend in their actual rates during the 2000-2005 period.

- a) Please provide the Board Approved rates for all rate classes that were in place for Union for 2000.
- b) Please provide the Board Approved rates for all rate classes that were in place for Enbridge for 2000.
- c) Please provide the Board Approved rates for all rate classes that were in place for Union for 2005.
- d) Please provide the Board Approved rates for all rate classes that were in place for Enbridge for 2005.

Issue Number: 4.2

Issue: How should the impact of changes in average use be calculated?

Please provide all the data, formulae and calculations used to estimate the components of the AU factor.

34. Ref: PEG Report, page 65

Issue Number: 4.2

Issue: How should the impact of changes in average use be calculated?

- a) Please explain why there is no double counting between the ADJ factor and the AU factor.
- b) Please explain why the recommendation is for a separate PCI's for rate classes that contain residential customers and all other rate classes? Why has a calculation for each individual rate class not been done based on their specific change in average use?
- c) Union Gas has received Board approval to split the existing M2 rate class into a new M2 rate class and a new M1 rate class. M1 customers would be all the existing M2 customers that use less than 50,000 m3 per year (the same as Rate 1 for Union North). The new M2 class would consist of the remaining existing M2 customers. Please confirm that the PEG report would indicate that the ADJ factor calculated for M2 would only apply to the new M1 rate class and that the new M2 rate class would be part of the nonresidential class of customers for Union.

35. Ref: PEG Report, page 65

Issue Number: 4.2

Issue: How should the impact of changes in average use be calculated?

- a) Given the wide variation from year to year in the volume per customer, does PEG believe that this adjustment factor should be fixed for the entire term of the IR plan?
- b) Would it be more appropriate to reflect the change in the volume per customer through some process such as using a five year average of the most recent information available? If not, why not?
- c) What would be involved in updating the information each year during the term of an IR plan to reflect the most recent 5 years of information available? Please provide all the calculations, data requirements, etc. that would have to be updated if the Board were to approve an AU and/or ADJ factors that were updated on annual basis.

36. Ref: PEG Report, page 16

Issue Number: 1.2

Issue: What is the method for incentive regulation that the Board should approve for each utility?

The evidence indicates that a revenue per customer freeze results under a price cap mechanism when GDPIPI equals X.

- a) Under a price cap mechanism is a price freeze the result when the GDPIPI equals X?
- b) Would the use of a price freeze mechanism simplify a price cap mechanism in that it eliminates the need for a determination of the appropriate inflation factor to be used?
- c) Would the use of a price freeze mechanism simplify a price cap mechanism in that it eliminates the need to estimate the various components of an X factor?
- d) Would the use of a price freeze mechanism eliminate or reduce the potential for controversy associated with sample periods and data used to estimate the various components of the X factor?
- e) Is PEG aware of any approved IR plans that have been approved? If so, please provide a summary of the number and mechanisms involved (eg. rebasing timing, plan terms, rebasing methodologies, etc.) with these plans.
- f) Is a rate freeze mechanism a viable option that should be considered as potential price cap mechanism to be used by the Board? Please explain.
- g) Is a rate freeze mechanism a common approved methodology worldwide or in the United Kingdom or in the United States? Please elaborate.

Issue Number: 2.1.1

Issue: Which macroeconomic or industry specific index should be used?

The evidence indicates that the GDPIPI for final domestic demand excludes prices of exports.

- a) Does the GDPIPI for final domestic demand also exclude the prices of imports?
- b) Please confirm that the definition used by Statistics Canada for final domestic demand is as follows:

"The sum of personal expenditure on consumer goods and services, net government current expenditure on goods and services, government gross fixed capital formation and business gross fixed capital formation."

c) Are there components of the final domestic demand GDPIPI such as business gross fixed capital formation in non-residential structures and equipment that may be relevant as price index to use for some component of a utility's price cap? Please explain.

38. Ref: PEG Report, page 16

Issue Number: 2.1

Issue: What type of index should be used as the inflation factor (industry specific index or macroeconomic index)?

The evidence indicates that the majority of rate indexing plans approved worldwide do not feature industry-specific inflation measures, but rather feature measures of economywide output price inflation such as GDPIPIs.

- a) Are consumer price indexes such as the CPI more commonly used than GDPIPIs as an economy-wide measure of inflation?
- b) Does Statistics Canada compute an industry specific inflation measure for gas utilities or utilities in general? If yes, please provide this index(es) for 1990 through to the most recent information available.

39. Ref: PEG Report, page 16

Issue Number: 2.2

Issue: Should the inflation factor be based on an actual or forecast?

a) Do the majority of rate indexing plans approved worldwide feature the use of an actual or forecast measure of inflation?

- b) If an actual measure of inflation is used, is any true up incorporated into the plans for revised actuals when the price cap for a future year is calculated?
- c) If a forecast measure of inflation is used, is any true up incorporated into the plans for the forecast error when the price cap for a future year is calculated?
- d) Does PEG believe that a true up as contemplated in (b) or (c) above is appropriate? If not, please explain why.

Issue Number: 2.3

Issue: How often should the Board update the inflation factor?

a) Do the majority of rate indexing plans approved worldwide update the inflation factor on an annual basis? If not, what is the range of alternatives currently used?

41. Ref: Union Gas Evidence, Exhibit B, Tab 1, page 32

Issue Number: 3.2

Issue: What are the appropriate components of an X factor?

Union indicates that there is no justification for a stretch factor in its price cap. This proposal is based on their assertion that Union has had significant motivation to implement productivity improvements over the last 10 years.

- a) Please comment on this rationale for not including a stretch factor.
- b) Based on the information that PEG has related to price cap mechanisms that have been approved in other jurisdictions, please provide a summary of the number of plans on which it has detailed information on the calculation of the X factor and the number of those plans that do not include any stretch factor, directly or indirectly. For any approved price cap mechanism that does not include a stretch factor, please provide a brief summary of why no stretch factor was imposed.

42. Ref: Union Gas Evidence, Exhibit B, Tab 1, page 36 - 37

Issue Number: 4.2

Issue: How should the impact of changes in average use be calculated?

a) Please comment on the methodology proposed by Union in the calculation of the Adjusted AU Factor. In particular, is their use of the COS AU factor of -0.72 appropriate and is the use of the general service revenue share of 0.644 appropriate.

b) Unlike PEG, Union is not proposing any AU adjustment for rate classes that are not general service. Is this appropriate? Please explain.

43. Ref: PEG Report, page 47 & 67 and Union Gas Evidence, Exhibit B, Tab 1, page 27

Issue Number: 4.2

Issue: How should the impact of changes in average use be calculated?

Union's evidence suggests that the decline in average use is accelerating for general service customers. Union may also have use impacts relating from the addition or large gas fired generators and ethanol producers.

- a) Given the potential range of outcomes related to average use over the proposed five year term of the plan would it be advisable to update the AU and ADJ factors on an annual basis to reflect the most recent year of data available. If not, why not?
- b) Please provide the calculations and the data used to calculate the output quantity indexes with revenue and elasticity weights that resulted in the AU figures shown on page 47 of the PEG Report so that they can be replicated in the future when additional year information is available.
- c) Please provide the calculations and the data used to calculate the ADJ factors found on page 67 of the PEG Report (assuming COS capital costing) so that they can be replicated in the future when additional year information is available.