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VIA COURIER AND EMAIL

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
P.O. Box 2319
26th Floor
2300 Yonge Street
Toronto, ON
M4P 1E4

Dear Ms. Walli:

Re: Union Gas / Enbridge Gas Distribution Inc. - Incentive Rate Regulation for Natural Gas Utilities
EB-2007-0606 / EB-2007-0615

Please find enclosed VECC's interrogatories of Union Gas with respect to the above noted proceeding.

Yours truly,

Michael Buonaguro
Counsel for VECC
Encl.

VECC Interrogatories for Union Gas Limited
EB-2007-0606

VECC 1 Ref.: Union Exhibit B, Tab 1, p. 9

Issue Number: 14.1
Issue: Are there adjustments that should be made to base year revenue requirements and/or rates?

In Union's revenue requirement there are items for which the total cost has been amortized over a number of years. Some of these items will be fully amortized, i.e., the costs will be fully recovered, over the term of Union's proposed IR plan, 2008-2012.

Please provide a list of all such items embedded in Union's 2007 revenue requirement, along with their respective amounts and the year in which each item's cost will have been fully recovered.

VECC 2 Ref.: Union Exhibit B, Tab 1, p. 11 and Appendix B (EB-2005-0520, Exhibit H1, Tab 1, p. 10

Issue Number: 4.2
Issue: How should the impact of changes in average use be calculated?

Union is increasing the fixed monthly charge for its new M1 rate class by $2 per month to $16 per month, effective January 1, 2008. Union states that the monthly customer charge recovers approximately 70% of the customer-related costs (i.e., costs invariant with respect to peak day demand or throughput).

a) Please explain how Union has reflected this increase in monthly fixed charges in its average use adjustment for rate class M1.
b) Please indicate the extent to which this change will increase the recovery of customer-related costs from rate class M1 in 2008 with respect to the previous charge of $14 per month.
c) Please provide the proportion of fixed costs allocated to rate M1 that will be recovered through the fixed monthly charge of $16 in 2008.
d) Please provide the extent to which this increase in fixed monthly charges will increase the recovery of fixed costs allocated to rate class M1 in 2008 with respect to the previous charge of $14 per month.
e) Please provide the corresponding responses to parts a) to d) of this interrogatory in respect of Rate 01.
f) Please confirm that variable costs incurred decrease as throughput decreases.
g) Please confirm that if all fixed costs allocated to a rate class were recovered in fixed charges to that rate class, then an adjustment for changes in average use with respect to that rate class would not be required under a price cap. If unable to so confirm, please explain why.

VECC 3 Ref.: Union Exhibit B, Tab 1, pp 13-14 and p. 16 Updated

Issue Number: 14.1
Issue: Are there adjustments that should be made to base year revenue requirements and/or rates?

On page 16 of Updated Exhibit B, Tab 1, Union states that "[t]he current Board approved 55/45 blend consistently estimates HDDs that are too high (see Chart 1)."

Please show how the currently approved method for forecasting HDDs, the 55/45 blend, compares with the actual, the thirty-year average, and the proposed 20-year trend method by reproducing Chart 1 with the addition of the 55/45 blend.

VECC 4 Ref.: Union Exhibit B, Tab 1, p. 16

Issue Number: 8.1
Issue: What is the appropriate plan term for each utility?

Union proposes a five-year term for its IR plan on the basis that "[a five-year term] will provide Union with an incentive to implement changes that will increase productivity with longer term paybacks … ."

a) Does this rationale imply that the longer the term of the plan, the larger the set of economical investments to increase productivity (e.g., adding productivity enhancing investments with longer payback periods to the investments with shorter payback periods, the latter of which would be undertaken in a plan of shorter duration), and hence the larger the expected annual increase in productivity achieved?
b) Please identify any specific investments in enhancing productivity that Union has identified that it would undertake under a five-year price cap plan, but not under a four year plan.
c) For each of the projects identified in b), please provide the estimated implementation costs and the annual reductions in costs.

VECC 5 Ref.: Union Exhibit B, Tab 1, p. 17

Issue Number: 12.3.1
Issue: What should be the criteria for changes in rate design?

Union states that "[it] should have the ability, as it currently does under cost of service regulation, to adjust the fixed monthly charge and the variable charge on a revenue neutral basis annually. "

In the event of a proposed increase in fixed monthly charges in conjunction with a revenue neutral decrease to the volumetric charges for the low volume general service rate classes, please explain how Union proposes to adjust the X factor applied to these rate classes to reflect the diminished financial impact on Union of any decrease in average use.

VECC 6 Ref.: Union Exhibit B, Tab 1, pp 18-20

Issue Number: 1.2
Issue: What is the method for incentive regulation that the Board should approve for each utility?

Union's evidence endorses a price cap mechanism. In setting out its reasons, Union cites what it takes to be the advantages of such a mechanism over a revenue cap mechanism; in doing so, Union does not acknowledge that a revenue cap mechanism is preferable to a price cap mechanism in any respect whatsoever.

Does Union believe that a revenue cap mechanism is worse than a price cap mechanism in all respects? If not, please list those areas or considerations for which a revenue cap mechanism would be preferable to a price cap mechanism in an IR scheme.

VECC 7 Ref.: Union Exhibit B, Tab 1, pp 21-2

Issue Number: 2.1
Issue: What type of index should be used as the inflation factor (industry specific index or macroeconomic index)?

Using data from the period 1998-2007 inclusive, for the years 1999-2007 please provide (i) the annual charges for gas delivery for a typical residential customer in Union's Southern Operations Area, based on approved rates, (ii) the annual charges for gas delivery for a typical residential customer in Union's Northern Operations Area, based on approved rates, and (iii) the GDP IPI FDD Canada index series (up to 2006 in this case).

VECC 8 Ref.: Union Exhibit B, Tab 1, p. 23

Issue Number: 3.1
Issue: How should the X factor be determined?

With respect to the input price differential component of the X factor:

a) Please provide a breakdown of Union's 2007 input costs for gas delivery broken down in the following categories, capital, labour, and materials (as approved by the Board);
b) Please provide a similar breakdown for input costs of the overall economy using the most recent data available;

c) Please indicate whether Union's role with respect PEG's work on the X factor was passive (e.g., limited to only providing data and responses to PEG-generated requests) or active. If the latter, please provide details;

d) Please indicate whether Union has undertaken any efforts on its own to satisfy itself as to the reasonableness of the IPD as calculated by PEG. If so, please provide the details of Union's verification exercise; if not, please explain why not.;

VECC 9 Ref.: Union Exhibit B, Tab 1, p. 23

Issue Number: 3.1
Issue: How should the X factor be determined?

With respect to the productivity differential component of the X factor, please indicate whether Union has undertaken any efforts on its own to satisfy itself as to the reasonableness of the PD as calculated by PEG. If so, please provide the details of Union's verification exercise; if not, please explain why not.

VECC 10 Ref.: Union Exhibit B, Tab 1, p. 24

Issue Number: 4.1
Issue: Is it appropriate to include the impact of changes in average use in the annual adjustment?

Given that (i) Union's proposal is to reset the inflation factor annually, (ii) Union has historical data with respect to average use, and (iii) Union can continue to collect data on average use throughout the IR term plan, please indicate whether Union is open to updating the AU factor annually to reflect the most recent information. If not, please explain why not.

VECC 11 Ref. Union Exhibit B, Tab 1, p. 24

Issue Number: 4.2
Issue: How should the impact of changes in average use be calculated?

a) Please indicate whether Union has undertaken any efforts on its own to satisfy itself as to the reasonableness of the AU of -0.72 as calculated by PEG. If so, please provide the details of Union's verification or calculation exercise; if not, please explain why not.

b) Please provide the impact of <u>a 1% decrease in average use across all rate classes on Union's X factor</u>, i.e., what would the -0.72 figure become if the average use data on which it was based fell by 1%?.

c) With respect to the approved volumes used to determine 2007 rates, please provide the impact of a <u>1% decrease in average use by the general service rate classes</u> on (i) overall 2007 delivery volumes and (ii) 2007 delivery revenues at existing rates. For the purpose of this question, assume that all other rate classes average use remains as forecast.

d) Please provide what the change in the overall AU factor of -0.72 that is proposed for 2008, would be had there been an additional 1% decrease in average use by the general service rate classes in 2005.

e) For the general service rate classes, please provide the percentage increase in fixed charges (with an attendant revenue neutral decrease in volumetric charges) that would be required to offset the financial impact on Union of a 1% decrease in AU by these classes in 2008.

f) With respect to Union's approved 2007 rates, please provide (i) the (forecast) total throughput volumes attracting delivery margin in 2007 and (ii) the (forecast) general service rate classes' throughput volumes in 2007.

g) With respect to the rates approved for Union in 1999, 2004, and 2007, please provide the proportion of the total delivery revenue from the general service rate classes recovered through fixed monthly charges for each of these years based on the approved volume forecasts for each of these years.

VECC 12 Ref.: Union Exhibit B, Tab 1, pp 24-25 and Appendix F, p. iii and p. v

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?

Issue Number: 1.2
Issue: What is the method for incentive regulation that the Board should approve for each utility?

Union states that "[t]he rate indexing research that supported PEG's proposed price cap index ("PCI") design and overall IR framework recommendations for Union and Enbridge appear to be strong conceptually and generally consistent with the approach in other jurisdictions. Specifically, Union supports the use of industry Total Factor Productivity ("TFP") trends which are external to the company rather than company specific TFP trends."

The PEG Report (Appendix F) proposes Summary Price Cap Indexes and Revenue Cap Indexes for Union and Enbridge, both of which are supported by the same productivity indexing research. Further, PEG is silent with respect to recommending a price cap or revenue cap for either Union or Enbridge.

a) Is Union aware of any methodological errors specifically with respect to the PEG revenue cap work? If so, please identify these errors.

b) If Union has not identified any errors with respect to PEG's revenue cap work, please explain why Union would not be indifferent between PEG's price cap and revenue cap proposals for Union with respect to projected financial outcomes under each scenario.

VECC 13 Ref.: Union Exhibit B, Tab 1, pp 26-27 and Appendix G pp v-vi

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)?

On page 27, Union states that "[a]s part of the PEG Report, the proposed average use factor has been established using historical data to 2005. As a result, the utility will be at risk for the acceleration in declining average use which has been Union's most recent experience." Then on the same page, Union quotes the CGA Report (Appendix G) concluding with the sentence *"These factors could bring us to the tipping point of an accelerated declining average use."* (Emphasis added.)

a) Please provide support for Union's claim that it has recently experienced an acceleration in declining average use including any statistical evidence to that effect.
b) Please provide average use data on a rate class basis for all rate classes for the years 1998-2006 inclusive. For rate classes that Union weather normalizes, please provide this on a normalized basis using both the 55/45 blend and Union's proposed 20-year trend methodology; for rate classes that Union does not normalize, please provide this information on an actual basis.
c) Please confirm that assuming that customers in a rate class will take gas delivery service over the long run, it is impossible for the acceleration in declining average use to continue indefinitely (since consumers can not take less than 0 m^3).

VECC 14 Ref.: Union Exhibit B, Tab 1, pp 28-32

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 charts corresponding to Charts 3, 4, 5, 6, 7, 8, and 9 that show the NAC using Union's proposed 20-year trend rather than the 55-45 blend.
b) Please provide charts similar to these (i) for every other rate class not shown in Charts 3, 4, 5, 6, 7, 8, and 9 separately, and for (ii) these non-general service rate classes in aggregate.
c) At the top of page 32 Union states that "[t]he approach PEG used to calculate the total average use factor appears to Union to be reasonable." Please provide analytical support for this statement.
d) Please advise of any differences in methodology (with respect to the PEG methodology) in calculating the total average use factor that Union would have employed had it provided a total average use factor.

e) Please provide all utility data supplied to PEG with respect to calculating the Average Use Factor.

f) If the data supplied in e) is not on a rate class basis or does not include some delivery rate classes, please provide full data for the same period for all rate classes on a rate class basis.

g) Please indicate whether it is Union's view that the non-general service rate classes, in aggregate, have exhibited and are projected to exhibit constant average use. Please provide support.

h) Please provide a table showing historical average use by rate class for the same period as was used by PEG in its calculation of the total average use factor. For rate classes that Union normalizes, please show normalized use under the 55/45 blend and under Union's proposed 20-year trend; for all other rate classes please show actual average use.

VECC 15 Ref.: Union Exhibit B, Tab 1, p. 32

Issue Number: 3.2
Issue: What are the appropriate components of an X factor?

Issue Number: 10.1
Issue: Should an ESM be included in the IR plan?

Union states that in its view, "there is no justification for a stretch factor during its next IR plan term." Union continues that "[it] has not applied annually for rate adjustments. Union has experienced only 3 cost of service rate cases in the last 10 years (to set rates for 1999, 2004, and 2007). Rates were established under the trial PBR plan structure for 2001, 2002 and 2003. After the 2004 cost of service rates were implemented, Union was essentially under a rate freeze for 2005 and 2006. Union has therefore had significant motivation to implement productivity improvements over the last 10 years."

a) Please provide evidence, at a high level, of the productivity improvements that Union has achieved over the period 1999-2007 and identify the years in which these productivity improvements were made.

b) Over the nine-year period 1999-2007, Union has had one cost of service rate case every four years on average, two years of rate freezes, and three years of a PBR price cap plan that featured earnings sharing on a 50:50 basis and no "marketing flexibility" during the term of the plan that was not specifically approved by the Board at the outset of the plan. Given that Union has "had significant motivation to implement productivity improvements" in this regulatory environment, please explain why the Board should not now approve a three-year PBR price cap plan with 50:50 sharing and no discretionary marketing flexibility (or service basket approach) followed by a rebasing cost of service rate case in the fourth year and subsequently followed by a rate freeze.

VECC 16 Ref.: Union Exhibit B, Tab 1, p. 2

Issue Number: 10.1
Issue: Should an ESM be included in the IR plan?

a) Does Union agree that economists and policy makers generally recognize that in most real world policy decisions there is an equity-efficiency tradeoff that should be addressed?
b) Does Union agree that an earnings sharing mechanism can provide valuable protection for ratepayers against any initial parameter misspecifications in a multi-year incentive plan?

VECC 17 Ref.: Union Exhibit B, Tab 1, pp 36-37

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)?

Union states that "Union does not understand how the ADJ can be determined using PEG's approach without doing a productivity study by rate class. Therefore, Union recommends a simpler and more intuitive approach to calculate the X factor applicable to the general service rate classes (M2, Rate 01 and Rate 10). This would be calculated by adjusting the company wide average use factor by the combined revenue share of the general service rate classes. Further, Union recommends that there not be an average use factor adjustment for rate classes other than the general service rate classes. Using the COS method, this would result in PCIs, including the elimination of the stretch factor, for Union's service groups as outlined in Table 3." (p. 36)

a) Please elaborate fully on Union's concerns regarding PEG's ADJ calculations, indicating specifically why Union believes PEG could not calculate the ADJ without doing a productivity study by rate class.
b) Please provide Union's rationale and evidentiary support for not making an average use adjustment to any rate classes other than the general service rate classes.
c) Union's proposed Service Group PCIs differ from PEG's even after taking into account the stretch factor issue. Please indicate whether Union suspects that there is some flaw in the PEG analysis and, if so, please provide Union's explanation and analysis.
d) Please indicate whether Union would be financially indifferent between PEG's proposed service group PCIs and Union's proposals and provide an explanation for Union's response.
e) Please indicate how Union's proposed use of the 2005 general service rate classes' revenue share takes into account the (i) increase in the fixed monthly charges approved for general service classes in the 2007 approved rate order and (ii) the 2007 approved rate order.

f) Please provide details of the calculation of the 2005 revenue share of 0.644 referred to in footnote 5.

VECC 18 Ref.: Union Exhibit B, Tab 1, p. 8 and p.38

Issue Number: 14.1
Issue: Are there adjustments that should be made to base year revenue requirements and/or rates?

Please confirm that under Union's proposal, the DSM budget currently embedded in the 2007 revenue requirement will not be subject to the price cap escalator in 2008 or thereafter but rather will be outside the price cap and adjusted in accordance with the Board approved budget increases dollar for dollar.

VECC 19 Ref.: Union Exhibit B, Tab 1, pp 11-12

Issue Number: 14.1
Issue: Are there adjustments that should be made to base year revenue requirements and/or rates?

With respect to Union's proposals to eliminate the Transportation Exchange Services Account (179-69), the Other S&T Services Account (179-73), and the Other Direct Purchase Services Account (179-74) as of January 1, 2008, does Union propose to embed 100% of the forecasted margins from these three accounts in 2008 base revenue?

VECC 20 Ref.: Union Exhibit B, Tab 1, pp 39-40

Issue Number: 6.2
Issue: Should there be materiality tests, and if so, what should they be?

Union proposes a materiality threshold of $1.5 million per Z factor event for cost increases or decreases.

If the City of Oakville implemented permit fees that increased Union's costs by $0.6M in 2008 and the City of Sarnia implemented permit fees in 2010 that increased Union's costs by $0.5M in 2009, and the City of Hamilton implemented permit fees in 2011 that increased Union's costs by $0.5M, would this scenario constitute a single Z-factor event in the amount of $1.6M?

VECC 21 Ref.: Union Exhibit B, Tab 1, p. 42

Issue Number: 9.1
Issue: Should an off-ramp be included in the IR plan?

Union states that "in a properly constructed IR plan, there is no need for off-ramps."

a) Does Union believe that a properly constructed IR plan can contain a stretch factor?
b) If the Board were to approve a stretch factor of 0.50 as proposed by the PEG Report, would Union's preference be to include an off-ramp?

VECC 22 Ref.: Union Exhibit B, Tab 1, pp 43-46

Issue Number: 6.2
Issue: 11.1 What information should the Board consider and stakeholders be provided with during the IR plan?

a) Does Union intend to file cost of service type regulatory schedules, i.e., the schedules usually attached to a rate order, annually during the term of the IR plan?
b) Would Union agree to file information regarding FTEs on an annual basis during the plan?
c) Does Union intend to provide actual results for 2006 and 2007 (when available)?

VECC 23 Ref.: Ibid

Issue Number: 13.1
Issue: What information should the Board consider and stakeholders be provided with at the time of rebasing?

Please indicate whether Union is willing to provide actual utility financial results, e.g., utility returns, spending on O&M, and capital spending, during the term of its IR plan so that stakeholders can see Union's actual performance during the plan and be better prepared to assess the rebasing to be done at the end of the plan.

VECC 24 Ref.: Union Exhibit B, Tab 2, p. 6

Issue Number: 14.1
Issue: Are there adjustments that should be made to base year revenue requirements and/or rates?

Union states that "[t]he issue of heteroskedasticity/non-stationarity, which is the increasing variability over time of a variable, was also raised in the RP-2003-0063 proceeding…" Accordingly, Union did provide a Chow test for heteroskedasticity in its RP-2003-0063 pre-filed evidence.

a) Please confirm that a Chow test is used to detect a structural break and is not used typically to test for heteroskedasticity.

b) Please perform a Goldfeld-Quandt test for heteroskedasticity on the HDD data and file (i) the results of the test, including the output of the statistical software package used, and the (ii) the HDD data used.