UNION GAS LIMITED

Answer to Interrogatory from
Vulnerable Energy Consumer's Coalition ("VECC")

Reference: *Union Exhibit B, Tab 1, p. 9*

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

Question:

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.

Response:

Please see interrogatory response provided at Exhibit C13.10 a).

Witness:
Question: August 20, 2007
Answer: September 4, 2007
Docket: EB-2007-0606

UNION GAS LIMITED

Answer to Interrogatory from
Vulnerable Energy Consumer's Coalition ("VECC")

Reference: *Union Exhibit B, Tab 1, p. 11 and Appendix B*
(EB-2005-0520, Exhibit H1, Tab 1, p. 10

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

Question:

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.

Response:

a) The monthly customer charge of $16 for Rate M1 was approved as part of the EB-2005-0520 rate proceeding. Union is not proposing any changes to monthly customer charges for 2008.

b) Please see response to part a) above.

Witness:
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c) The monthly customer charge recovers approximately 76.6% of customer related costs and 52.1% of total fixed costs allocated to the M1 class.

d) Please see response to part a) above.

e) The monthly customer charge recovers approximately 57.3% of customer related costs and 39.3% of total fixed costs allocated to Rate 01.

f) Confirmed.

g) Confirmed. If all customer and capacity related costs (total fixed costs) were recovered through a monthly customer charge, then an adjustment for changes in average use would not be required under a price cap. As indicated in parts (c) and (e) above, at current approved rates the monthly customer charge recovers 52.1% of total fixed costs associated with the M1 rate class and 39.3% of total fixed costs associated with Rate 01.

Witness:
Question: August 20, 2007
Answer: September 4, 2007
Docket: EB-2007-0606

UNION GAS LIMITED

Answer to Interrogatory from
Vulnerable Energy Consumer's Coalition ("VECC")

Reference: *Union Exhibit B, Tab 1, pp 13-14 and p. 16 Updated*

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

Question:

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.

Response:

Chart 1 (attached) has been updated with data up to June 2007 and the inclusion of the currently approved Union 55:45 weather normal.

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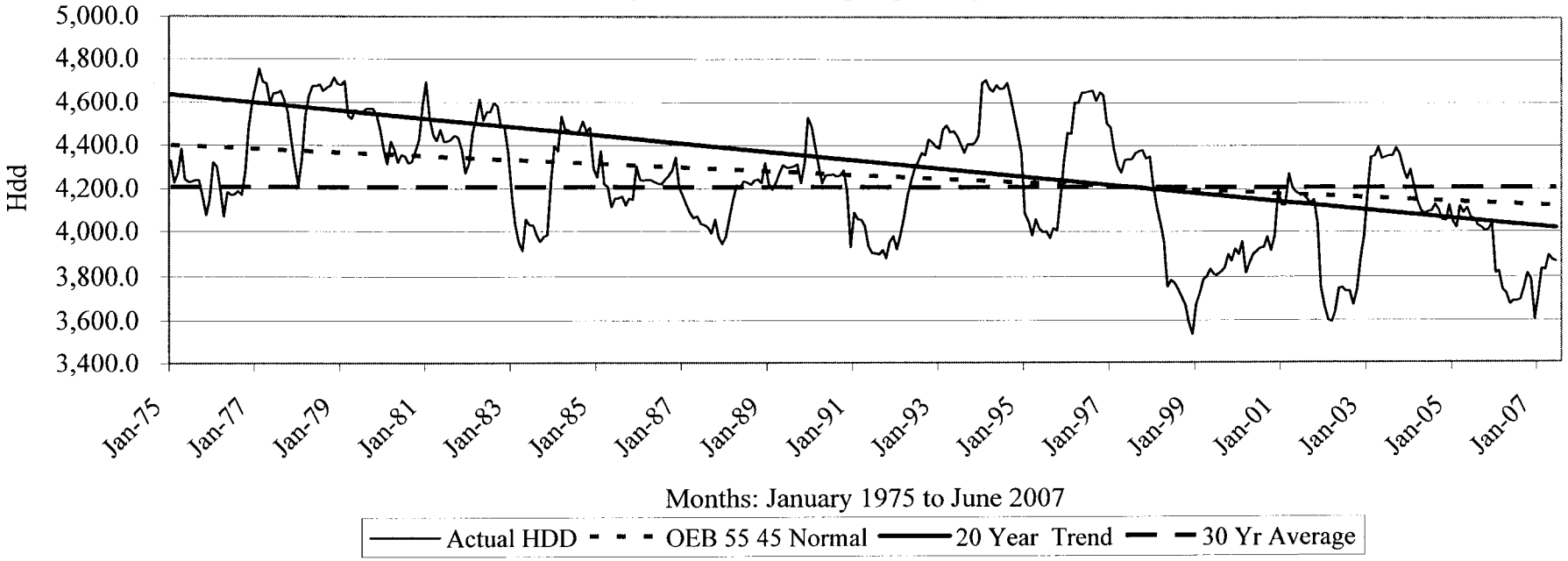
Chart 1

Rolling Total 12 Month Htg.Degree-Days



Question: August 20, 2007
Answer: September 4, 2007
Docket: EB-2007-0606

UNION GAS LIMITED

Answer to Interrogatory from
Vulnerable Energy Consumer's Coalition ("VECC")

Reference: *Union Exhibit B, Tab 1, p. 16*

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

Question:

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.*

Response:

a) In general the greater the incentives the greater the probability of achieving productivity improvements. The longer the incentive regulation term, the greater the incentive to pursue productivity improvements with longer term paybacks.

b) Union has not identified any specific investments to enhance productivity at this time for any term of price cap plan.

c) See part b).

Question: August 20, 2007
Answer: September 4, 2007
Docket: EB-2007-0606

UNION GAS LIMITED

Answer to Interrogatory from
Vulnerable Energy Consumer's Coalition ("VECC")

Reference: *Union Exhibit B, Tab 1, p. 17*

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

Question:

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.

Response:

Increasing the monthly customer charge in small increments does not provide significant protection from the financial impact of declining average use per customer. Union is not proposing to adjust the X factor. Please also see interrogatory response provided at Exhibit C1.21.

Question: August 20, 2007
Answer: September 4, 2007
Docket: EB-2007-0606

UNION GAS LIMITED

Answer to Interrogatory from
Vulnerable Energy Consumer's Coalition ("VECC")

Reference: Union Exhibit B, Tab 1, pp 18-20

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

Question:

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.

Response:

Union cannot identify any attributes of a revenue cap plan that would make a revenue cap plan better than a properly constructed price cap plan.

Please see interrogatory response provided at Exhibit C1.1.

Question: August 20, 2007
Answer: September 4, 2007
Docket: EB-2007-0606

UNION GAS LIMITED

Answer to Interrogatory from
Vulnerable Energy Consumer's Coalition ("VECC")

Reference: *Union Exhibit B, Tab 1, pp 21-2*

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

Question:

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).

Response:

i) Please see interrogatory response provided at Exhibit C3/C16/C33.1 c).

ii) Please see interrogatory response provided at Exhibit C3/C16/C33.1 c).

iii) Please see interrogatory response provided at Exhibit C15.1 f).

Question: August 20, 2007
Answer: September 4, 2007
Docket: EB-2007-0606

UNION GAS LIMITED

Answer to Interrogatory from
Vulnerable Energy Consumer's Coalition ("VECC")

Reference: *Union Exhibit B, Tab 1, p. 23*

Issue 3.1 - How should the X factor be determined?

Question:

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.*

Response:

a) Please see attached.

b) Union does not have similar breakdown for input costs of the overall economy.

c) Union's role with respect to PEG's work on the X factor was passive and limited to only providing data and responses to PEG generated requests.

d) Union does not have sufficient data to verify PEG's results.

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Line no.	Particulars	($000's)
1	Total Wages and Salaries (excl. capitalized overheads)	135,874
2	Total Benefits (excl. capitalized overheads)	28,794
3	Total Pension (excl. capitalized overheads)	18,471
4	Gross Cost of Plant: Balance at year end	5,643,248
5	Accumulated Depreciation: Balance at year end	2,144,720
6	Net Plant	3,498,528
7	Property and Capital Taxes	68,671
8	Income tax	21,418
9	Net Utility O&M	389,880
10	DSM Expenditures	11,874
11	Compressor Fuel	57,255
12	Net Utility O&M excl. Compressor Fuel (line 9 - line 11)	332,625
13	% Capitalization of Total O&M	18%
14	Non-Labour (=Net Utility O&M - Salaries - Benefits - Pension)	206,741

Question: August 20, 2007
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UNION GAS LIMITED

Answer to Interrogatory from
Vulnerable Energy Consumer's Coalition ("VECC")

Reference: *Union Exhibit B, Tab 1, p. 23*

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

Question:

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.

Response:

Union does not have sufficient data to verify PEG's results. Union is relying on Dr. Lowry's experience and expertise in the field of incentive regulation.

Question: August 20, 2007
Answer: September 4, 2007
Docket: EB-2007-0606

UNION GAS LIMITED

Answer to Interrogatory from
Vulnerable Energy Consumer's Coalition ("VECC")

Reference: *Union Exhibit B, Tab 1, p. 24*

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

Question:

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.

Response:

Please see interrogatory response provided at Exhibit C32.11 a). the AU Factor would need to be calculated every year by PEG in order to determine the new AU Factor.

Question: August 20, 2007
Answer: September 4, 2007
Docket: EB-2007-0606

UNION GAS LIMITED

Answer to Interrogatory from
Vulnerable Energy Consumer's Coalition ("VECC")

Reference: *Union Exhibit B, Tab 1, p. 24*

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

Question:

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 a 1% decrease in average use across all rate classes on Union's X factor, 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 1% decrease in average use by the general service rate classes 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.*

Response:

a) Table 11 b) in the PEG Study shows the weather normalized volumes provided by Union compared to the weather normalized volumes calculated by PEG. Union has verified that the Union weather normalized volumes included in Table 11 b) are the

same as the data provided by Union.

PEG's AU Factor is in line with Union's historically observed NAC decline.

Union has not verified the calculation of the AU of -0.72 as it does not have sufficient information from the PEG Study to complete the calculations.

b) to e) Union cannot calculate this number as it does not have sufficient information from the PEG study to do the AU calculation.

f) (i) The total 2007 in-franchise forecast delivery throughput volumes are 14,526,151 10^3m^3.

(ii) The 2007 forecast delivery throughput volumes for Rate 01, Rate 10 and Rate M2 are 5,249,448 10^3m^3.

g)

2007 - EB-2005-0520

	Delivery Volume (a)	Total Delivery Revenue (b)	Monthly Customer Charge Revenue (c)	Percent of Delivery Revenue (d)
R01	905,311	132,952	56,769	42.7%
R10	381,369	21,882	2,488	11.4%
M2	3,962,767	410,803	189,516	46.1%

2004 - RP-2003-0063

	Delivery Volume (a)	Total Delivery Revenue (b)	Monthly Customer Charge Revenue (c)	Percent of Delivery Revenue (d)
R01	934,729	129,727	40,789	31.4%
R10	378,147	20,600	2,406	11.7%
M2	4,122,565	403,614	132,458	32.8%

1999 - EBRO 499

	Delivery Volume (a)	Total Delivery Revenue (b)	Monthly Customer Charge Revenue (c)	Percent of Delivery Revenue (d)
R01	956,585	128,830	31,751	24.6%
R10	417,155	23,786	1,632	6.9%
M2	4,105,382	370,408	73,353	19.8%

Question: August 20, 2007
Answer: September 4, 2007
Docket: EB-2007-0606

UNION GAS LIMITED

Answer to Interrogatory from
Vulnerable Energy Consumer's Coalition ("VECC")

Reference: *Union Exhibit B, Tab 1, pp 24-25 and Appendix F, p. iii and p. v*

Issue: 1.1 - What are the implications associated with a revenue cap, a price cap and other alternative multi-year incentive ratemaking frameworks?

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

Question:

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.

Response:

a) Union is not aware of any methodological errors specifically with respect to the PEG revenue cap work. Union is not proposing a revenue cap and therefore did not spend a lot of time reviewing the revenue cap portion of the PEG Study.

b) See response to a) above.

Question: August 20, 2007
Answer: September 4, 2007
Docket: EB-2007-0606

UNION GAS LIMITED

Answer to Interrogatory from
Vulnerable Energy Consumer's Coalition ("VECC")

Reference: *Union Exhibit B, Tab 1, pp 26-27 and Appendix G pp v-vi*

Issue: 4.3- 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)?

Question:

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 m3).*

Response:

a) The following table supports the claim that decline in average use is accelerating. The table shows that the average annual rate of decline during the last four year period, 2003 to 2006, is greater than the previous four year period, 1999 to 2002 and the rate of decline during the earlier longer run period 1991 to 2002. To illustrate this point the residential rate M2 decline rate in the last four years is 1.8 percent; this compares with 0.4 percent in the previous four years and 0.9 percent over the earlier long run period.

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Annual Normalized Average Consumption (NAC)
based on the 55:45 Weather Normal for 2007
in cubic metres per customer

	Residential		Commercial			Industrial	
Year	Rate M2	Rate 01	Rate M2	Rate 01	Rate 10	Rate M2	Rate 10
1991	3,023	3,253	19,337	11,160	111,313	75,417	285,892
1992	3,021	3,243	19,769	10,921	105,080	72,432	269,345
1993	2,967	3,163	19,206	10,698	104,907	77,595	283,953
1994	2,921	3,099	18,414	10,396	108,997	77,143	299,880
1995	2,924	3,044	18,535	10,191	111,932	75,905	283,574
1996	2,970	2,979	19,267	10,121	109,529	77,835	304,700
1997	2,915	2,963	18,982	10,072	106,827	80,633	253,139
1998	2,775	2,795	17,983	8,802	100,377	79,800	171,842
1999	2,758	2,823	18,008	8,539	93,523	84,239	189,989
2000	2,752	2,931	17,551	9,600	105,752	75,840	201,632
2001	2,695	2,770	17,681	8,795	97,809	84,249	218,055
2002	2,725	2,773	17,829	9,219	102,027	86,683	241,152
2003	2,687	2,794	17,786	9,306	97,719	86,094	281,013
2004	2,610	2,663	17,353	8,883	96,114	79,811	230,567
2005	2,561	2,618	16,914	8,732	94,618	85,312	258,452
2006	2,535	2,586	17,485	8,368	93,029	82,119	237,020
			Annual Rate of Decline in NAC				
1992	-0.1%	-0.3%	2.2%	-2.1%	-5.6%	-4.0%	-5.8%
1993	-1.8%	-2.5%	-2.8%	-2.0%	-0.2%	7.1%	5.4%
1994	-1.6%	-2.0%	-4.1%	-2.8%	3.9%	-0.6%	5.6%
1995	0.1%	-1.8%	0.7%	-2.0%	2.7%	-1.6%	-5.4%
1996	1.6%	-2.1%	3.9%	-0.7%	-2.1%	2.5%	7.4%
1997	-1.9%	-0.5%	-1.5%	-0.5%	-2.5%	3.6%	-16.9%
1998	-4.8%	-5.7%	-5.3%	-12.6%	-6.0%	-1.0%	-32.1%
1999	-0.6%	1.0%	0.1%	-3.0%	-6.8%	5.6%	10.6%
2000	-0.2%	3.8%	-2.5%	12.4%	13.1%	-10.0%	6.1%
2001	-2.1%	-5.5%	0.7%	-8.4%	-7.5%	11.1%	8.1%
2002	1.1%	0.1%	0.8%	4.8%	4.3%	2.9%	10.6%
2003	-1.4%	0.8%	-0.2%	0.9%	-4.2%	-0.7%	16.5%
2004	-2.9%	-4.7%	-2.4%	-4.5%	-1.6%	-7.3%	-18.0%
2005	-1.9%	-1.7%	-2.5%	-1.7%	-1.6%	6.9%	12.1%
2006	-1.0%	-1.2%	3.4%	-4.2%	-1.7%	-3.7%	-8.3%
			Average Rates of the Annual Decline in NAC				
Period							
1992 -2002	-0.9%	-1.4%	-0.7%	-1.5%	-0.6%	1.4%	-0.6%
1999-2002	-0.4%	-0.1%	-0.2%	1.5%	0.8%	2.4%	8.9%
2003-2006	-1.8%	-1.7%	-0.5%	-2.4%	-2.3%	-1.2%	0.6%

Note: These NAC estimates are based on the 2007 55:45 weather normal and the 2007 rate case weather demand coefficients.

b) See above.

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c) During the next 5 to 10 years, Union does not expect that the acceleration in average usage decline will cause customers to reduce their consumption to zero. Union has seen the decline in usage increase from about 1 percent per year in the last decade to about 2 percent per year recently.

To show how long it would take to get to zero consumption, consider a residential customer that consumes 2,500 cubic metres per year in 2007. Increasing the decline rate from 2 percent per year to 3 percent per year would shorten the amount of time that it takes to arrive at zero consumption by about 142 years. At a 3 percent decline rate, the customer would have zero consumption in the year 2287. The results are similar for commercial and industrial customers.

UNION GAS LIMITED

Answer to Interrogatory from
Vulnerable Energy Consumer's Coalition ("VECC")

Reference: Union Exhibit B, Tab 1, pp 28-32

Issue: 4.3- 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)?

Question:

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 "the 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.

Response:

a) Charts 3 to 9 are presented below. These charts show the NAC estimates according to a 2007 weather normal based on the 20 year declining trend method. The charts presented below and the original charts presented in evidence show the decline in normalized usage with and without Union's DSM. Changing the

normal in the original charts to these based on the 20 year declining trend essentially scales the NAC estimates downward as shown on each chart. The relative proportion between the reported NAC and the NAC without DSM however remains the same in both the original and revised charts.

Chart 3

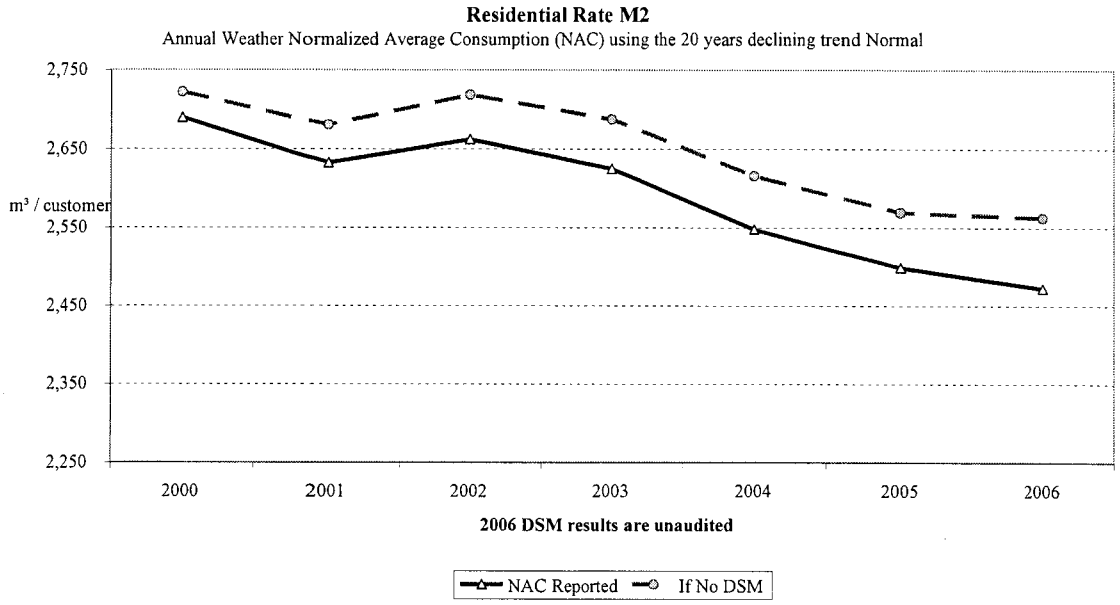

Chart 4

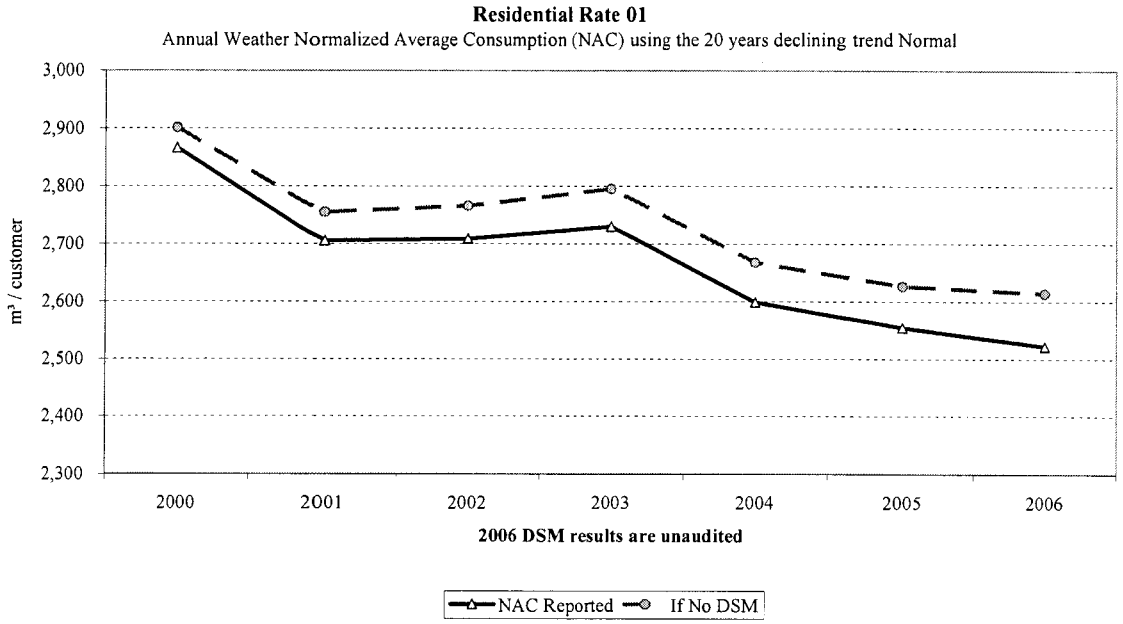

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Chart 5

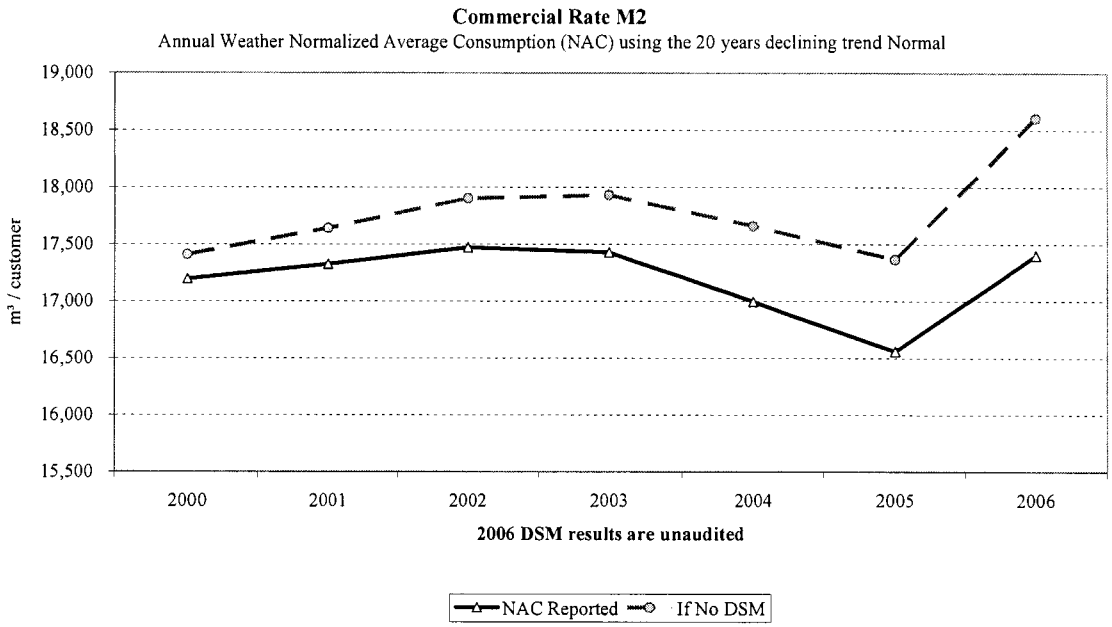

Chart 6

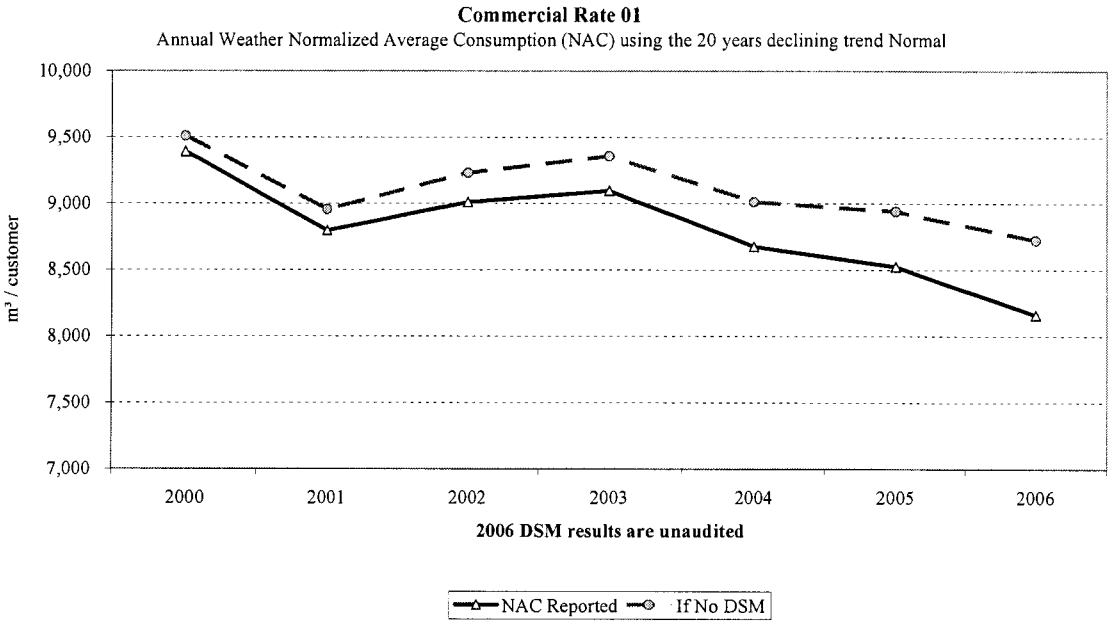

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Chart 7

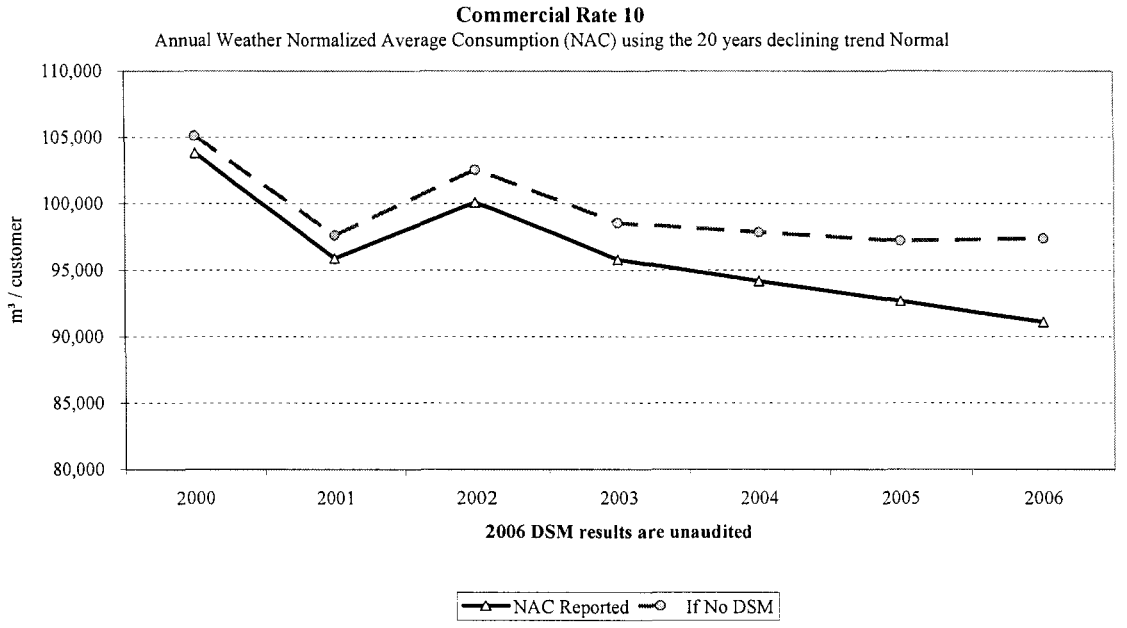

Chart 8

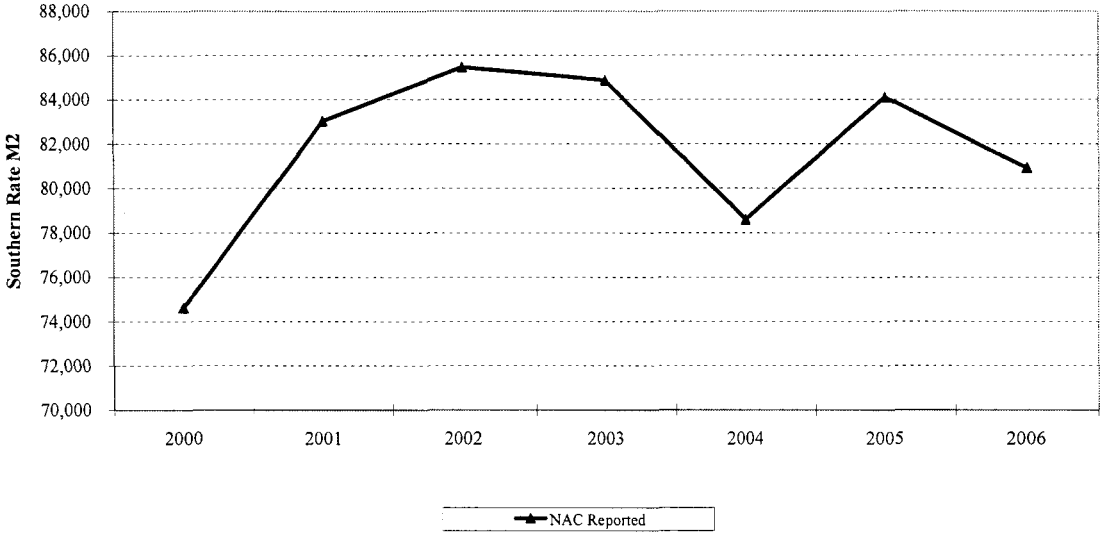

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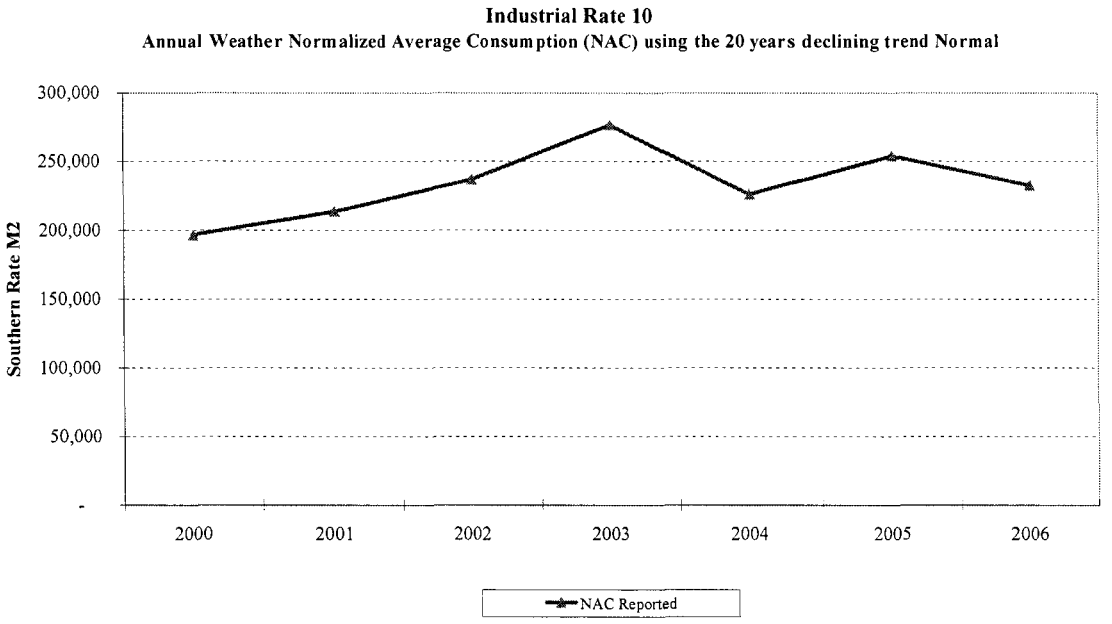
Chart 9



b) Union does not calculate normalized average consumption for any rate classes other than the general service rates classes (i.e. M2, Rate 01 and Rate 10).

c) PEG's AU Factor of -0.72 is in line with Union's historically observed NAC decline.

d) Union has not looked at any other methodologies for calculating the average use factor.

e) The data provided to PEG was included in the data sheet provided to stakeholders by Board Staff on April 11, 2007.

f) All general service rate class data is on a rate class basis.

g) Please see interrogatory response provided at Exhibit C3/C16/C33.17 h).

h) Please see Table 11b in the PEG study for the historical average use provided to PEG. The historical Union NAC figures based on the 2007 year 55:45 weather normal is presented in interrogatory response provided at Exhibit C32.13. The NAC figures based on the 20 year declining trend method are presented below.

Annual Normalized Average Consumption (NAC)
based on the 20 Year Declining Trend Weather Normal for 2007
in cubic metres per customer

	Residential		Commercial			Industrial	
Year	Rate M2	Rate 01	Rate M2	Rate 01	Rate 10	Rate M2	Rate 10
1991	2,961	3,189	18,983	10,952	109,374	74,348	282,097
1992	2,959	3,179	19,415	10,713	103,141	71,342	265,471
1993	2,905	3,100	18,852	10,490	102,968	76,499	280,053
1994	2,859	3,036	18,060	10,188	107,058	76,062	295,878
1995	2,862	2,980	18,181	9,983	109,993	74,762	279,608
1996	2,907	2,915	18,913	9,913	107,590	76,569	300,950
1997	2,852	2,899	18,628	9,864	104,887	79,384	248,645
1998	2,712	2,731	17,629	8,594	98,437	78,555	167,443
1999	2,696	2,760	17,654	8,331	91,584	83,017	185,650
2000	2,690	2,867	17,197	9,392	103,813	74,621	196,665
2001	2,633	2,706	17,327	8,795	95,870	83,033	213,548
2002	2,663	2,709	17,475	9,011	100,088	85,475	236,886
2003	2,625	2,730	17,432	9,098	95,780	84,880	276,631
2004	2,548	2,599	16,999	8,675	94,175	78,596	225,983
2005	2,499	2,554	16,560	8,524	92,679	84,107	253,876
2006	2,473	2,522	17,404	8,161	91,090	80,924	232,520
			Annual Rate of Decline in NAC				
1992	-0.1%	-0.3%	2.3%	-2.2%	-5.7%	-4.0%	-5.9%
1993	-1.8%	-2.5%	-2.9%	-2.1%	-0.2%	7.2%	5.5%
1994	-1.6%	-2.1%	-4.2%	-2.9%	4.0%	-0.6%	5.7%
1995	0.1%	-1.8%	0.7%	-2.0%	2.7%	-1.7%	-5.5%
1996	1.6%	-2.2%	4.0%	-0.7%	-2.2%	2.4%	7.6%
1997	-1.9%	-0.6%	-1.5%	-0.5%	-2.5%	3.7%	-17.4%
1998	-4.9%	-5.8%	-5.4%	-12.9%	-6.1%	-1.0%	-32.7%
1999	-0.6%	1.1%	0.1%	-3.1%	-7.0%	5.7%	10.9%
2000	-0.2%	3.9%	-2.6%	12.7%1	3.4%	-10.1%	5.9%
2001	-2.1%	-5.6%	0.8%	-6.4%	-7.7%	11.3%	8.6%
2002	1.1%	0.1%	0.9%	2.5%	4.4%	2.9%	10.9%
2003	-1.4%	0.8%	-0.2%	1.0%	-4.3%	-0.7%	16.8%
2004	-2.9%	-4.8%	-2.5%	-4.6%	-1.7%	-7.4%	-18.3%
2005	-1.9%	-1.7%	-2.6%	-1.7%	-1.6%	7.0%	12.3%
2006	-1.1%	-1.3%	5.1%	-4.3%	-1.7%	-3.8%	-8.4%
			Average Rates of the Annual Decline in NAC				
Period							
1992 -2002	-0.9%	-1.4%	-0.7%	-1.6%	-0.6%	1.4%	-0.6%
1999-2002	-0.5%	-0.1%	-0.2%	1.4%	0.8%	2.4%	9.1%
2003-2006	-1.8%	-1.8%	-0.1%	-2.4%	-2.3%	-1.2%	0.6%

Note: These NAC estimates are based on the 2006 20 Year Declining Trend weather normal and the 2006 budget - 2007 rate case weather demand coefficients.

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UNION GAS LIMITED

Answer to Interrogatory from
Vulnerable Energy Consumer's Coalition ("VECC")

Reference: *Union Exhibit B, Tab 1, p. 2*

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

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

Question:

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.*

Response:

a) Union does not have a list of the specific productivity improvements that have been achieved in the past. The Company was not managed in a way that tracked efficiency improvements in this manner. The aggregate impact of Union's historical productivity experience has been calculated by PEG. Please see p. 36 of the PEG study. Also see interrogatory response provided at Exhibit C13.24.

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b) Union is supportive of a 5 year term (rather than 3) and no ESM to maximize its incentives to aggressively pursue efficiency improvements. The justification for a five year term and no ESM was explained in the Board's NGF Report. On pp. 16-17 the Board indicates, "five year plans are the standard in PBR regimes, but plans as long as 10 years have been implemented. The long terms allow utilities to implement long-term efficiency improvements." Further, the Board indicated that "rebasing also avoids the incentive-diluting effects of earnings sharing mechanisms during the term of the plan."

Union is not proposing a service basket approach.

UNION GAS LIMITED

Answer to Interrogatory from
Vulnerable Energy Consumer's Coalition ("VECC")

Reference: *Union Exhibit B, Tab 1, p. 2*

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

Question:

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?*

Response:

a) Union has not researched what economists and policy makers generally recognize in real world policy decisions.

b) Please see interrogatory response provided at Exhibit C1.15.

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UNION GAS LIMITED

Answer to Interrogatory from
Vulnerable Energy Consumer's Coalition ("VECC")

Reference: Union Exhibit B, Tab 1, pp 36-37

Issue: 4.3- 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)?

Question:

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.*

Response:

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a) Please see interrogatory response provided at Exhibit C1.9.

b) Please see interrogatory response provided at Exhibits C4.8 and C3/C16/C33.17 h).

c) Union does not have sufficient information to analyze PEG's calculation.

d) Please see interrogatory response provided at Exhibit C23.31.

e) Union's proposed use of the general service rate classes' revenue share does not take into account the increase in the fixed monthly charges approved in the 2007 approved rate order.

f) The 0.644 figure is calculated from Union Gas data supplied to PEG as:
0.644 = [distribution revenues/total revenues] * [general service revenues/distribution revenues]

The share includes both fixed and variable revenues. It is based on actual revenues which have not been weather normalized.

UNION GAS LIMITED

Answer to Interrogatory from
Vulnerable Energy Consumer's Coalition ("VECC")

Reference: *Union Exhibit B, Tab 1, p. 8 and p.38*

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

Question:

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.

Response:

Confirmed.

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UNION GAS LIMITED

Answer to Interrogatory from
Vulnerable Energy Consumer's Coalition ("VECC")

Reference: Union Exhibit B, Tab 1, pp 11-12

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

Question:

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?

Response:

Please see interrogatory response provided at Exhibit C1.19.

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UNION GAS LIMITED

Answer to Interrogatory from
Vulnerable Energy Consumer's Coalition ("VECC")

Reference: Union Exhibit B, Tab 1, pp 39-40

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

Question:

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?

Response:

No. Please see interrogatory response provided at Exhibit C3/C16/C33.25.

Question: August 20, 2007
Answer: September 4, 2007
Docket: EB-2007-0606

UNION GAS LIMITED

Answer to Interrogatory from
Vulnerable Energy Consumer's Coalition ("VECC")

Reference: *Union Exhibit B, Tab 1, p. 42*

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

Question:

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?*

Response:

a) Yes, depending on the historical productivity of the utility and future productivity expectations and opportunities.

b) Union would need to look at all of the incentive regulation parameters approved by the Board before determining if an off-ramp was required.

Question: August 20, 2007
Answer: September 4, 2007
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UNION GAS LIMITED

Answer to Interrogatory from
Vulnerable Energy Consumer's Coalition ("VECC")

Reference: Union Exhibit B, Tab 1, pp 43-46

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

Question:

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)?*

Response:

a) Please see page 44 of Union's evidence filed as Exhibit B, Tab 1

b) Union could file actual information regarding FTEs on an annual basis during the plan if the Board determined that this would be useful information to have available.

c) Please see interrogatory response provide at Exhibit C23.38.

Question: August 20, 2007
Answer: September 4, 2007
Docket: EB-2007-0606

UNION GAS LIMITED

Answer to Interrogatory from
School Energy Coalition "SEC"

Reference: B/1/34

Issues 3.3 - What are the expected cost and revenue changes during the IR plan that should be taken into account in determining an appropriate X factor?

Question:

Please provide a calculation of the expected impact of changes to the Canadian dollar exchange rate on Union's throughput and revenues during the IR period. Please provide any studies, analyses, and other information related to such impacts.

Response:

No studies, analyses, or any other information of the nature requested was prepared to support the current forecast. Union is not in a position of specifically quantifying the impact changes in exchange rates will have on customers' consumption.

Question: August 16, 2007
Answer: September 4, 2007
Docket: EB-2007-0606

UNION GAS LIMITED

Answer to Interrogatory from
Vulnerable Energy Consumer's Coalition ("VECC")

Reference: *Union Exhibit B, Tab 2, p. 6*

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

Question:

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.

Response:

a) Yes. The Chow test is typically used to detect a structural break and not typically used to test for heteroskedasticity.

b) The requested Goldfeld-Quandt test for heteroskedasticity on the 1983 to 2002 Toronto Pearson annual weather data indicates that there is no presence of heteroskedasticity. The Goldfeld-Quandt F test result of 1.47 which is less than the 95% confidence critical value of 3.07, with 8 degrees of freedom in both the numerator and the denominator. The weather data is and the test results are presented below.

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Toronto Pearson Heating Degree-Days below 18C

Year	HDD	Year	HDD
1983	4,066	1993	4,181
1984	4,144	1994	4,110
1985	4,109	1995	4,042
1986	3,987	1996	4,177
1987	3,765	1997	4,034
1988	4,076	1998	3,219
1989	4,246	1999	3,541
1990	3,636	2000	3,826
1991	3,686	2001	3,423
1992	4,112	2002	3,631

Goldfeld-Quandt test

Number of Observations in each period	10
Degrees of freedom (dgf)	8

		SEE	SEE/dgf	F
From_93 to 02	**SEE1/dgf1 =**	511,722	63,965	**1.47**
From_83 to 92	**SEE2/dgf2 =**	348,817	43,602	
		95% Critical Value		3.07

The Goldfeld Quandt F test results for Union's Southern and Northern & Eastern Operating areas data spanning 1985 to 2004 equaled 1.86 and 1.50 respectively. No heteroskedasticity is present in the Union weather data.