RP-2007-0606

ONTARIO ENERGY BOARD

IN THE MATTER of the *Ontario Energy Board Act*, 1998, S.O. 198, c.15, Schedule B, as amended;

AND IN THE MATTER OF an Application by Union Gas Limited for an Order or Orders approving or fixing just and reasonable rates and other charges for the sale, distribution, transmission, and storage of gas commencing January 1, 2008.

FINAL ARGUMENT OF THE SCHOOL ENERGY COALITION

April 14, 2008

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1 WHAT IS THE ISSUE?

1.1 *Introduction*

1.1.1 This is the Final Argument of the School Energy Coalition in the Union gas Limited application for rates from 2008-2012, EB-2007-0606.

1.1.2 These submissions are limited to the final outstanding issues in this application, all relating to how changes in taxes should be accommodated by the incentive regulation structure. In this first section, we will try to make as clear as possible the question to be addressed by the Board, in our submission. In the second section, we will look at the evolution of the Applicant's position on this issue. In the third section, we will provide our analysis and submissions based on the evidence before the Board, and in the fourth section we will deal with some collateral matters.

1.2 *The Questions Remaining from the Settlement Agreement*

1.2.1 ***Whether Changes in Corporate Income and Capital Taxes Meet the Z Factor Tests*** The Settlement Agreement in this application [Schedule A to the Decision of the Board dated January 17, 2008] records the settlement of almost all of the issues. Of those remaining, two (customer additions and commodity risk management) have been addressed in a separate process. Only two outstanding issues remain, as follows:

(a) ***The Z Factor Issue.*** Issue 6.1: "*Certain parties maintain that changes in the amounts of taxes payable by Union resulting from federal and/or provincial legislation and/or regulations thereunder qualify as Z factors including changes in federal tax rates and calculation rules announced in March and October of 2007.*"

(b) ***The Base Rate Adjustment Issue.*** Issue 14.1: "*There is no settlement of the base rate adjustments that flow from the amount of taxes payable by Union as a result of tax changes resulting from changes to federal and/or provincial legislation and/or regulations thereunder.*"

1.2.2 We will deal with the Base Rate Adjustment Issue in the third section of these submissions. While some aspects of it appear to flow from the discussion of the Z Factor Issue, the areas of disagreement are not entirely the same, and the conceptual basis for a base year adjustment is different from a Z factor.

1.2.3 ***What Is a Z Factor?*** The definition of a Z factor is a completely settled aspect of the application. The definition – which is, in fact, the definition that is well known to this Board from many other proceedings and processes, and is generally accepted within the regulatory community - is set forth in Issue 6.1 of the Settlement Agreement as follows:

> "*The parties agree that Z factors generally have to meet the criteria established in Union's evidence, ie.*
>
> *1. the event must be causally related to <u>an increase/decrease in cost</u>;*
>
> *2. the cost must be beyond the control of the utility's management, and not a risk for which a prudent utility would take risk mitigation steps;*
>
> *3. the cost increase/decrease must not otherwise be reflected in the price cap index;*
>
> *4. any cost increase must be prudently incurred; and*
>
> *5. the cost increase/decrease must meet the materiality threshold of $1.5 million annually per Z factor event (i.e. the sum of all individual items underlying the Z factor event)." [emphasis added]*

1.2.4 Mr. Penny, in his opening statement on this matter, correctly set out the shorter version of this definition, as follows [Tr3:5]:

> "*Z-factor adjustments are adjustments for <u>changes</u> in <u>costs</u> that are both outside the price cap formula and result from events which are outside management's control." [emphasis added]*

1.2.5 We have added emphasis in both quotes because those two aspects of the Z factor concept are critical to understanding the Z Factor Issue currently before the Board. As the agreed criteria make clear, and Mr. Penny explicates, the issue of a Z factor only arises when a cost is affected, and further only arises when something happens to make that cost go up or down relative to the amount in the base year revenue requirement.

1.2.6 ***Costs Affected.*** The need for a cost to be affected is well accepted. To give an example, suppose that the only change in taxes during the IR period is a change in the GST rate. Union would not be able to seek Z factor treatment for that change, because a change in GST does not affect their actual costs [Tr.7:61]. The fact, as suggested by Dr. Wilson [K7.1], that a change in GST affects the GDP deflator, is in fact not relevant for Z factor purposes unless there is first a cost impact. It might, in fact, be the case that the Inflation factor (ie. GDP deflator) should be adjusted, but as we note below that issue is not currently before the Board. It is, we think, well accepted that Z factor treatment of a GST change would not be possible, because no cost is affected. The fact that revenue under the PCI may be affected is not relevant to the Z factor discussion. As we will note later, changes in the GDP deflator resulting from tax changes in the past will also not be relevant because they do not change <u>costs</u> during the IR period.

1.2.7 ***Requirement for Increase/Decrease.*** The aspect of "change", or "increase/decrease", is also quite straightforward, but in this context bears careful definition. A cost "changes" if the cost in a year of the IR plan is different from the same cost category as built into the base year rates. Each year, the cost in question is calculated, and compared to the amount in the base year rates. If it is different, and if all of the other criteria have been met, there would be a Z factor.

1.2.8 The importance of "change" can sometimes be seen when a cost increase is slightly less than the materiality threshold, but continues year after year. Suppose, for example, that the government imposed a special levy on gas distributors in 2008, starting at $1 million and increasing by $1 million per year. In 2008, the increase in cost, while otherwise qualifying as a Z factor, would not be material. However, in the second year the increase over base year would be $2 million, and that would qualify. The fact that the increase from the previous year is only $1 million is irrelevant, because it is the delta from base year to current year that is assessed for Z factor treatment.

1.2.9 This reason clarity on this point is important is that the "event" that causes the change does not have to take place during the IR period. By way of example, if there is a major storm in the last week of December 2007, and as a result Union incurs $5 million of incremental costs in January 2008 to deal with it, that will qualify as a 2008 Z factor (subject to meeting all of the other tests) even though the event giving rise to the cost increase happened in 2007. It is the cost change that must be in the IR period, not the event causing it.

1.2.10 That is particularly relevant in this case because some of the 2008 tax changes were announced in 2007 (and may therefore be considered 2007 "events"), and because some of the 2007 tax changes were not reflected in 2007 base year rates, so will represent a change in costs in 2008 and subsequent years. In our discussion of base year adjustments, this factor will be important in distinguishing Z factors from base year adjustments.

1.2.11 ***Not Reflected in the PCI Index.*** It is worthwhile to ensure that test #3, ie. whether the PCI Index picks up the change, is clear. This is, it is submitted, the sole test that the Board is considering in this case, and therefore any ambiguity would be a problem.

1.2.12 It is submitted that the purpose of this test is, simply put, to avoid double counting. Certain aspects of cost changes, while actually or arguably meeting the other tests, are already the subject of revenue requirement increases. In effect, the PCI index takes account of these impacts in increasing the utility's budget each year.

1.2.13 Perhaps the best example of this is union wage settlements. In the last couple of years, the Board has seen a number of electricity distributors seek Z factor type treatment when they signed new, multi-year union contracts with their employees. They identify a cost "hit", and seek an adjustment for it. The Board has in every case responded by explaining that the annual IR formula includes the expectation that there will be some increases in wage and other costs, and is calculated to provide a budget increase sufficient, over the IR period, to meet those requirements.

1.2.14 The reason it is important to be clear on this is that, in the end, this discussion is about arithmetic, not economic concepts. If the utility has an unexpected cost increase of $5 million, but the inflation factor (or the X factor, for that matter) responds naturally to that cost increase so that the utility has an increase in revenues of $5 million, there is no need for a Z factor. The utility would be getting the $5 million twice if you did that. The same holds true for a cost decrease, like a tax reduction. The government hands the utility the money. The PCI formula either reduces revenues by a like amount, leaving the utility neutral, or it doesn't. If it doesn't, a Z factor is required. If it does, no Z factor is required.

1.2.15 As we will note in more detail later, a key difference between this case and the RP-2001-0029 case in which the same issue was considered, is that in this case the Board panel insisted on having data before it, so it could assess the dollar impacts for itself. The Board panel in the previous case dealt only with the theoretical concepts and, as we submit below, as a result was led to the wrong conclusion.

1.3 ***What is Not in Issue?***

1.3.1 ***Inflation Factor***. In Issue 2.1.1 of the Settlement Agreement, the selection of the GDP IPPI FDD, often called in this proceeding the GDP deflator, was a completely settled issue. We note that there were no caveats to that, and no adjustments to the GDP deflator are contemplated in the Settlement Agreement.

1.3.2 As we will note in more detail later, it is submitted that if the Board concludes that some non Z factor items are not properly (or fairly) captured in the GDP deflator, that matter is no longer in issue, and therefore any adjustment to any aspect of Union's rates to reflect that conclusion would be inconsistent with the completely settled and approved Settlement Agreement.

1.3.3 Mr. Packer has confirmed in his oral evidence [Tr.7:63] that Union is not proposing any adjustment to the inflation factor.

1.3.4 ***X Factor.*** In Issue 3.1 of the Settlement Agreement, the parties completely settled the issue of the X factor by fixing it at 1.82% each year. That figure is not one proposed in any of the evidence, by any expert or non-expert witness, and the parties in fact on page 6 of the Settlement Agreement went to some length to make clear that, which the figure is "within a reasonable range available on the evidence", it is not based on any specific report or expert opinion. It is a negotiated number.

1.3.5 X Factor is, essentially, the percentage by which the utility's costs can reasonably be expected to increase faster or slower than the macroeconomic inflation factor during the IR period. It is typically determined by looking at empirical evidence of the relationship between utility costs of all types and overall inflation levels over a time series of past data, and calculating the trend or average, then adjusting to reflect certain types of impacts, like the stretch factor to reflect the productivity benefits of incentive regulation.

1.3.6 At various stages in the evidence, witnesses and counsel implied that the differential impact of tax changes on Union vs companies in the economy as a whole would be a relevant issue in this proceeding. One specific example of that was the following exchange between Mr. Penny and the SEC witness, Dr. Georgopoulos (Tr:5:33]:

> *"MR. PENNY: All right. Thank you. Isn't the issue that we are debating here, the extent to which Union's costs may move differently from those in the economy as a whole?*
> *DR. GEORGOPOULOS: The issue, I understand it, is whether the GDP deflator captures the reduction in the corporate tax cut."*

1.3.7 It is submitted that whether or not Union's costs move differently from those in the economy is completely irrelevant to the issues of whether tax changes should be a Z factor. This question does not appear in the list of Z factor criteria. Rather, Dr. Georgopoulos correctly characterizes the question: does the GDP deflator capture (ie. offset) the tax savings Union will be enjoying during the IR period.

1.3.8 In fact, if there is a difference between the costs Union incurs and the costs other companies incur, that is captured in the X factor, which is designed specifically for that purpose. In this case, as Mr. Packer agrees [Tr.7:65], the X factor has already been determined, so even if this Board concluded that tax changes impact Union differently than other companies, it would be inappropriate to make any adjustment for that fact. Those differentials have already been finalized.

1.3.9 In addition, we note that if there is a further change in Union's costs during the IR period (in respect of which Z factor treatment is proposed), that change relates back to <u>Union's</u> base year costs, not to the costs of any other company. In this regard, Mr. Penny's characterization, and some of the comments in the evidence of various experts, are simply incorrect.

1.3.10 It could, of course, be argued that a difference in impact on Union and companies in the economy will be reflected in the GDP deflator, and it is only costs that affect Union differently than the reflection in the deflator that qualify for Z factor treatment. That is correct, but we have seen that looking at the impacts on various sectors is not productive, so this Board has asked for and obtained direct simulations of the GDP deflator impacts. Once the Board has those, cost differences between Union and other companies cannot even be relevant as a proxy or indicator.

1.4 ***<u>Onus</u>***

1.4.1 ***Legal Onus.*** Onus is, of course, technically always relevant to any matter before the

Board, but in practice it is not discussed very much. It was not really an issue in this case, either, until Dr. Lowry, in his paper and then in his oral evidence [Tr.6:71], stated the opinion that the onus was on the intervenors to prove Z factor treatment was appropriate, and they had not met their onus. He went on to say [Tr.6:72] that Union had not proved their case either, in his opinion, and as a result of his assumption that the intervenors have the onus, they lose.

1.4.2 With the greatest of respect to Dr. Lowry, whose knowledge of incentive regulation is enormous, he is not trained in the law, and his legal conclusion is incorrect. The onus in every application by Union before this Board is at all times on Union, and never leaves them in any circumstances.

1.4.3 In this particular case, the actual issue of whether any given tax change is a Z factor arises annually when Union seeks its annual adjustment to its rates. The Settlement Agreement stipulates exactly what happens at that time:

> *1. Union will make application for Z factor adjustments…in a time frame that will enable these issues to be resolved in sufficient time to be reflected prospectively in the next year's rates;*
> *2. Union will file a draft rate order with supporting documentation by October 31 which reflects the impact of…Z factors…*

1.4.4 It is submitted that each year, when Union makes its rate application, it has a positive obligation to include in its application all changes in its costs that qualify as Z factors, whether positive or negative. If the tax changes under discussion in this case are in fact Z factors (which is an objective fact – they either are, or they are not), then Union has an obligation to seek a rate adjustment to reflect them. If they are not in fact Z factors, then Union has no such obligation. There is never any responsibility on the ratepayers or any other intervenor to seek Z factor treatment for anything. The onus is at all times on Union.

1.4.5 What is happening in this case is that the Board is being asked to determine in advance whether certain tax reductions qualify, as a matter of proper interpretation of the Settlement Agreement, as Z factors. It is within the Board's right to say that it will not decide that until the annual rate application. However, it is of course more efficient to have the general discussion once, at the beginning, notwithstanding that the question has not yet arisen in a technical sense. In this case, therefore, the onus is the same as it would be had the question arisen in the annual adjustment application, ie. on Union.

1.4.6 ***Practical Onus.*** Union may well argue that the onus question is not about legal niceties, but about who is actually putting forward Z factor treatment of tax changes. They may say that nothing is a Z factor unless it is demonstrated that it meets the five tests, and the practical onus is on the person seeking Z factor treatment to demonstrates that it does meet the five tests.

1.4.7 There are two reasons that proposition would not be correct in this case.

1.4.8 First, the Board is well aware of the overriding regulatory issue of information assymmetry. Simply put, the utility has the information on most issues, and it is only when it shares the information that other parties, and the Board, get visibility on the issues in play. The reason it is important to ensure that the onus, including the practical onus, at all times remains on the utility, is that it has control of the information that determines whether there is any issue to discuss at all. If this Board softens the utility's onus in any way, that invites the utility to make internal judgments (for example about Z factors that would reduce rates), and simply not raise them in their filings. They would be able to argue that it is not their job to raise them, but that of the intervenors (who don't have the information on which to base such an application).

1.4.9 Second, putting any practical onus on the ratepayers in this context is requiring them to prove a negative. This is well known to be an inappropriate way to reach solid conclusions. In this case, it is common ground that tests 1, 2, 4 and 5 of the Z factor criteria are met. Test #3 is a negative, ie. of the form "X is not true". In normal logical analysis, the person seeking to demonstrate that X is true has the onus to so demonstrate, since a positive is more susceptible of proof than a negative in most cases.

1.4.10 To put this in perspective, it is appropriate to look at Test #2, of which the second part is also a negative. In Z factor proceedings, it is normally the intervenors that raise the question of whether a "prudent utility would take risk mitigation steps". Although the legal onus on that point still rests with the utility, the practical requirement to raise a prima facie case of the positive side is usually and rightfully taken up by the intervenors.

1.4.11 The same holds true here. If the Applicant wishes to exclude this change from Z factor treatment, from a practical point of view it is their task to show the Board that the exclusion in Test #3 is applicable.

1.4.12 ***Getting the Right Answer.***Notwithstanding our conclusions above on onus, in our submission onus – legal or practical – should play no part in this Board's decision on these outstanding issues. This is an important question of incentive regulation structure, and this Board is committed to an expanded use of incentive regulation for the foreseeable future. It is important this that Board come to a decision on this point, not based on who had the onus, but based on the hard evidence before it, and on its conclusions from that evidence. In this proceeding, this Board has for the first time had an opportunity for a reasonably thorough review of these questions. It would be wrong and wasteful, in our submission, to shrink from making a substantive decision because it is easier to decide based on a legal construct.

2 THE COMPANY'S POSITIONS

2.1 *The "Regulatory Precedent"*

2.1.1 ***The Issue.*** In the context of Union's last incentive regulation plan for 2001-2003, Union led the evidence of Drs. Mintz and Wilson supporting the view that pervasive changes in corporate income and capital taxes should not be the subject of Z factor adjustment. Their rationale then was that such tax changes are reflected in the GDP deflator through the mechanism of a reduction in the user cost of capital, and thus an increase in capital investment and therefore productivity, a reduction in unit costs, and a reduction in inflation.

2.1.2 Mr. Penny described how closely that case resembled this one in his opening statement, when he said [Tr.3:9-10]:

> *"In the first case, the evidence of these very witnesses we are about to hear from was accepted by the OEB on this very issue, and that was a hearing before Mr. Jackson, Mr. Donimy and Mr. Sommerville during Union's trial PBR plan. In that case it had been accepted that federal tax changes of general application would be reflected in the chosen GDP deflator, and in the original PBR decision itself, the Board said at page 96 that:*
> *"In principle the Board believes that in the long run economy-wide changes are captured in economy-wide indices such as the GDP PI and therefore are captured in the price cap." "[emphasis added]*

2.1.3 In that case, the Board did not have evidence before it of "distributed lags", or "imperfect competition", and had no simulation results with which to compare the dollar impact of tax changes with the dollar impact of GDP deflator responses.

2.1.4 ***The Experts Got it Wrong.*** This Board panel has that additional information, and it tells a completely different story. For example, as can be seen from Exhibit K7.1, Table 1, at Box 21(c), when prior period tax reductions and GST changes (neither of which were in effect in 2001-2003) are removed from the analysis, the cumulative revenue offset from the GDP impacts is 3.5% of the total tax savings of Union ($1.24 million divided by $35.09 million). As a result, whatever the tax savings were that Union enjoyed during that previous IR period, 96.5% of them turned out to be a windfall to the utility.

2.1.5 By not considering the impacts of distributed lags and imperfect competition in their analysis, Drs. Mintz and Wilson inadvertently mislead the Board in that previous case, and in the process convinced the Board to give Union a substantial windfall at the expense of the ratepayers.

2.1.6 There is nothing that can be done about that now, but with better information the Board can ensure that the same result is not repeated. The regulatory precedent in fact appears to stand, not for the proposition Mr. Penny proposes (a special OEB version of stare decisis), but for the opposing proposition that a Board panel faced with limited and incorrect information can be led to an incorrect conclusion.

2.1.7 It is also, of course, true that notwithstanding the lengthy CVs and undoubtedly stellar reputations of both Dr. Mintz and Dr. Wilson, this Board must now look at their opinions in this case with a more critical eye. Even exceptional experts can be wrong.

2.2 ***The Original Evidence of Mintz and Wilson in this Proceeding***

2.2.1 ***Déjà vu.*** In their original evidence filed in this case, Drs. Mintz and Wilson refer back to their previous evidence with approval, noting [p. 1]:

> *"We argued that federal corporate tax reductions would be reflected in the GDP price index and therefore automatically result in lower prices under a price-cap index."*

2.2.2 On page 2, they set out their basic thesis, that lower "capital costs" arise and:

> *"As a result of competitive forces, businesses would reduce prices charged on products and services as a result of cost reductions. Thus, broad corporate tax reductions would be reflected in a lower aggregate price index used to adjust rates under the price cap index."*

2.2.3 After some discussion of tax changes that are not national in scope, and some arguments for why they should be included too, they reach their eventual conclusion as follows [page 5]:

> *"Thus, we conclude that the national GDP final demand deflator will more than compensate for the effect of corporate tax reductions on natural gas distributors in Ontario.."*

2.2.4 Mr. Penny, in his opening statement, and despite all of the interrogatories, intervenor evidence, and reply evidence of his own witnesses, characterized the position of Drs. Mintz and Wilson as of March 31st as follows [Tr.3:8]:

> *"…their opinion is that to make a Z-factor adjustment to Union's rates for either the general corporate and capital tax reductions or the accelerated rate of depreciation available, and to apply the GDP inflation factor would double-count or more than double-count the economic effect of the tax changes on Union."*

2.2.5 There is no reference in the original evidence of Drs. Mintz and Wilson to GST cuts, or to the GDP impact of income and capital tax changes prior to 2007. They do, however, note that they included in their analysis numerous provincial tax changes in 2007 that do not in fact impact Union because they are in provinces other than Ontario [page 6].

2.2.6 ***The Experts Got it Wrong.*** Sadly, in essentially repeating the errors they made in their analysis in 2001, Drs. Mintz and Wilson again reached a conclusion that their own evidence now shows to be incorrect. Dr. Wilson now admits that his first report to this Board was incorrect [Tr.7:50], but says that the reason it was wrong is that they didn't consider distributed lags or imperfect competition at the time of their original paper. Thus, for the same reason that they were wrong in 2001, they were wrong in January 2008.

2.2.7 We note that, on re-examination [Tr.7:72], Dr. Wilson reiterates that he believes the conclusion cited in paragraph 2.2.3 above is still correct. However, as the Board now knows, the reasoning underlying the conclusion today is quite different from the reasoning in January, or the similar reasoning seven years ago.

2.3 *The Reply Evidence of Mintz and Wilson*

2.3.1 ***Issues Raised.*** Shortly before the oral hearing commenced, and despite the fact that the Procedural Order did not provide for Reply Evidence, Drs. Mintz and Wilson filed what turned out to be a very useful document, Exhibit E1, Tab 2, dated March 27, 2008. In it, they purported to answer three issues raised by the intervenor experts:

(a) The differential impact of tax changes on capital intensive vs. average companies;

(b) Lags in the translation of tax reductions into the GDP deflator; and

(c) The impact, if any, of Canada's 2% inflation target (through monetary policy) on the GDP changes that were supposed to occur;

2.3.2 ***Differential Impact.*** As we have noted earlier in these submissions, any differential impact of tax changes on Union vs. other companies is, in our view, a matter relating to the X factor, and therefore not properly before this Board. That aspect of this case has been completely settled.

2.3.3 Notwithstanding that, Drs. Mintz and Wilson have tackled that issue, and tried to bring it through to a GDP deflator impact, which is of course before this Board. At page 6 of their Reply Evidence, they reach the conclusion that, before you add in the impact of GST, the tax changes in 2007 and 2008 on large corporations (note that it is not all corporations) would total 3.1%, and that should be assumed to have a 70% impact on GDP deflator, resulting in a total impact of 2.2%. Just stopping there, this is of course incorrect, since it is "the corporate sector as a whole" that is 70% of GDP, so excluding small corporations makes the conclusion faulty.

2.3.4 The 2.2% conclusion has in any case now been shown to be wrong for the IR period. The evidence of Drs. Mintz and Wilson in J3.3 demonstrates that, before the manual addition of GST, lines 8 and 9, representing the two years of tax changes referred to in the Reply evidence, total 1.32%, not 2.2%.

2.3.5 Then, for the first time, the witnesses in their Reply Evidence refer to GST, saying that of course you have to account for those changes as well if you are going to look at GDP impacts. They say that while the GST does not have any impact on Union's costs, it does have an impact on GDP, and therefore should "in fairness" be included.

2.3.6 We have discussed earlier the error of considering GST in this calculation. In addition, we note that their subsequent numbers show that, even with GST, the total would be 1.92%, not the 2.8% they claim in their Reply Evidence.

2.3.7 ***Distributed Lags.*** During the additional oral evidence last week, the Board for the first time heard from Dr. Wilson about the concept of distributed lags. This is a subject, by the way, with which Dr. Wilson has extensive familiarity, as he has been doing economic impact studies in which distributed lags are a central issue for over thirty years [Tr.3:34].

2.3.8 Despite this, it took questions by the intervenors, and evidence by a much more junior expert, Dr. Georgopoulos ("what is Atkinson College?", Mr. Penny asked him on day 5 of the proceeding, as if questioning whether it was a real degree-granting institution), to get Dr. Wilson to turn his mind to the issue of how lags would impact the conclusion he was urging on this Board.

2.3.9 At pages 8 and 9 of the Reply Evidence, he discusses this issue. It is in this discussion that Dr. Wilson first brings in the possibility that this Board should also take into account GDP impacts of tax changes from many years ago. His startling proposition in fact goes far beyond that [page 8]:

> *"…the Board, in determining the Z-factor adjustment for 2008, would have to determine the impact not only of tax changes implemented for 2008, but also for all previous tax changes where lagged effects have not been fully realized, and, as noted above, <u>there is no reason to limit this approach to tax changes</u>." [emphasis added]*

2.3.10 Dr. Wilson goes on, using this as a straw man, to argue against it by saying that it is too complicated and data is "difficult to obtain". In this discussion, he is, in our submission, arguing either that the GDP deflator is not an appropriate inflation measure for incentive regulation, because of lagged effects, or the X factor in this proceeding is not correct because it fails to adjust for past tax changes. With respect to Dr. Wilson, neither issue is before this Board, and in any case this is not his area of expertise.

2.3.11 On page 9 of that evidence, Dr. Wilson goes on to foreshadow his later numerical evidence, talking about the extended distributed lag patterns found in FOCUS model runs.

2.3.12 He also notes - as if it is of considerable importance - the possibility of anticipatory impacts. As we later saw in J6.1 and K7.1, the actual impact of a three year acceleration of the impact (a rough and probably overly aggressive way of modelling anticipatory impacts) is essentially immaterial.

2.3.13 Notwithstanding the fact that his numbers were wrong, and he was by that time aware that lag effects would be an important part of the analysis in this case, on March 31st Dr. Wilson was still saying [Tr.3:62] that his "numbers" in the Reply Evidence demonstrated that there would be a 0.55% annual reduction in GDP deflator over the five year IRM as a result of the 2007 and 2008 tax cuts. We now know that to be incorrect. In fact, it was not even close.

2.3.14 ***Impact of Fixed Inflation Rate.*** Finally, the Reply Evidence challenges the issue raised by Dr. Georgopoulos that the Bank of Canada has a 2% inflation target, and therefore potentially monetary policy will automatically offset any inflation impact of tax reductions.

2.3.15 To respond to that, Dr. Wilson and Dr. Mintz argue in the Reply Evidence that any monetary policy response will result in an increase in Union's prices, so that in effect underneath the surface the tax impact will still be there, but it just won't be visible due to the masking effect of the monetary policy.

2.3.16 In support of that, Table 3 is offered, which purports to prove the effect. With the greatest of respect, what Table 3 in fact does is assume that effect, and then show that if you assume it, it produces the result you have assumed. It is, it is submitted, not useful to the Board.

2.3.17 We note that nowhere does the Reply Evidence deal with the question of additional lag effects arising from any monetary policy response, even though as the Board saw in the Bernancke paper [Ex. K3.6], it is well accepted that there are significant lags between a monetary policy action and capital investment response.

2.3.18 We also note that, despite the fact that Drs. Mintz and Wilson say there is no impact of monetary policy on the capital formation/GDP deflator issue, all of the runs of the FOCUS model for their own RST study did include a monetary policy response. It is clear that monetary policy is relevant and material in this kind of analysis. But, again, it took the junior member of our coterie of experts to raise it, even though Dr. Wilson already knew it was relevant.

2.3.19 The result of this discussion in the Reply Evidence was that the Board is no further ahead in understand what actually happens to the GDP deflator when corporate income and capital taxes are reduced.

2.4 *The Oral Evidence ofUnion Gas*

2.4.1 The oral evidence of the Company and its experts in this proceeding was, in fact, an amalgam of the many positions that the Company had taken at various times. So, for example, Mr. Penny said, in his opening statement [Tr.3:6]:

> *"During the term of the incentive regulation plan, it is Union's position that the economic effect of these tax changes will be picked up in the national price index being used as the inflation factor in Union's price index." [emphasis added]*

2.4.2 Asked on the final day of the oral evidence whether that was still the Company's position, Mr. Packer said [Tr.7:59] that it was. The evidence of his own experts, of course, shows that not to be the case. It was not the case in 2001, it was not the case when the evidence of Drs. Mintz and Wilson was filed in January, it was not the case on the first day of the hearing, and it is still not the case today.

2.4.3 At various times during the oral evidence, the Company has continued to press the simpler position (these tax changes are reflected in the GDP deflator), and has also emphasized its new position, ie. that you have to include GST and prior period adjustments to get a "fair" picture of how the issue should be resolved.

2.5 *The Simulation Results*

2.5.1 ***Doing the Math.*** As noted earlier, this ends up being about arithmetic, and this Board panel has, in insisting on getting real numbers, put itself in a position to do the arithmetic far better than any previous Board panel or policy process was able to do.

2.5.2 It is instructive to note that Dr. Georgopoulos testified this is a problem that should be approached on an empirical basis [Tr.5:14]. He said that you can either do a rigorous analysis of past data to determine the relationship between GDP deflator and corporate tax changes (an econometric analysis of the sort Dr. Lowry does on a regular basis), or you can use an empirically estimated simulation model to forecast the impacts of any given corporate tax change on GDP deflator in isolation from other factors.

2.5.3 It appears clear that Dr. Lowry [Tr.6:76] and Dr. Wilson [Tr.3:37] both agree that these rigorous analyses are possible, but they are non-trivial tasks. Dr. Wilson in fact is very experienced in a model, the FOCUS model, that does exactly the second type of simulation. He has not run that model for this case because he didn't have enough time.

2.5.4 ***Quality of the Results.*** It is important to recognize that, although it was clear from relatively early on in this process that the issue would coalesce into how much of the tax effect actually flowed through during the IR period, Dr. Mintz and Dr. Wilson strongly resisted providing numerical information to help the Board understand that question. It was only at the insistence of the Board panel on March 31st that Union Gas reluctantly agreed to "see whether they could" provide any numbers, and even then they provided nothing until the last day scheduled for the proceeding.

2.5.5 Nonetheless, for the first time this Board had actual numbers to look at.

2.5.6 Instead of taking the more rigorous approach, because of the time constraints Dr. Wilson attempted to use lag patterns found in an unrelated study that he determined to be analogous. Although the evidence before this Board is that commodity taxes have quite different impacts on the GDP deflator, Dr. Wilson said that a shift from an RST type of sales tax to a GST type of sales tax creates a reduction in the user cost of capital, and from that point on the effects would be the same as any other reduction in the UCC [Tr.7:9].

2.5.7 This is the only part of the numbers provided in J3.3, J6.1 and K7.1 that is empirically estimated. The rest are calculations based on the assumptions contained in the original work of Mintz and Wilson. That means, for example, that the impact of imperfect competition has not been included in these numbers. This will tend to make these numbers overstate the GDP deflator impacts.

2.5.8 Further, we note that the tax changes included in the analysis include not only prior period changes, and GST, but also a number of provincial tax changes in other provinces that do not affect Union. While the Board later required Union Gas to disaggregate the effects of the prior period changes, and the GST, the witnesses have told us [Tr.7:35] that they cannot estimate the impact of the non-qualifying provincial tax changes. Once more, this means that the numbers will tend to overstate the GDP deflator impacts of the tax changes to which Z factor treatment is being considered.

2.5.9 ***Numeric Results***. What Dr. Wilson's modelling, and the subsequent calculations by Union Gas, do show is the following:

(a) The original position set out in the January evidence, and adopted by this Board in 2001, turns out not to be correct. In a five year IRM, the tax changes in the IR period are offset by no more than a 9.3% reduction in revenue due to the GDP deflator [K7.1, Table 1, Box 21(e) divided by Box 18(e)]. This is overstated in a number of ways, as we note above.

(b) About 17.4%, $13.97 million [J6.1 Table 1, Box 21(e) minus K7.1, Table 1, Box 21(e)] of the effect claimed by Union Gas arises because of the GST change. This demonstrates that the conclusion in the Reply Evidence and in oral evidence on March 31st, that there would be a full offset without including the older tax changes, is also not sustainable.

(c) The remainder of the effect, $59.14 million [J6.1, Table 1, Box 25(e) less Box 21(e)], or 73.5%, arises because of tax changes prior to the IR period .

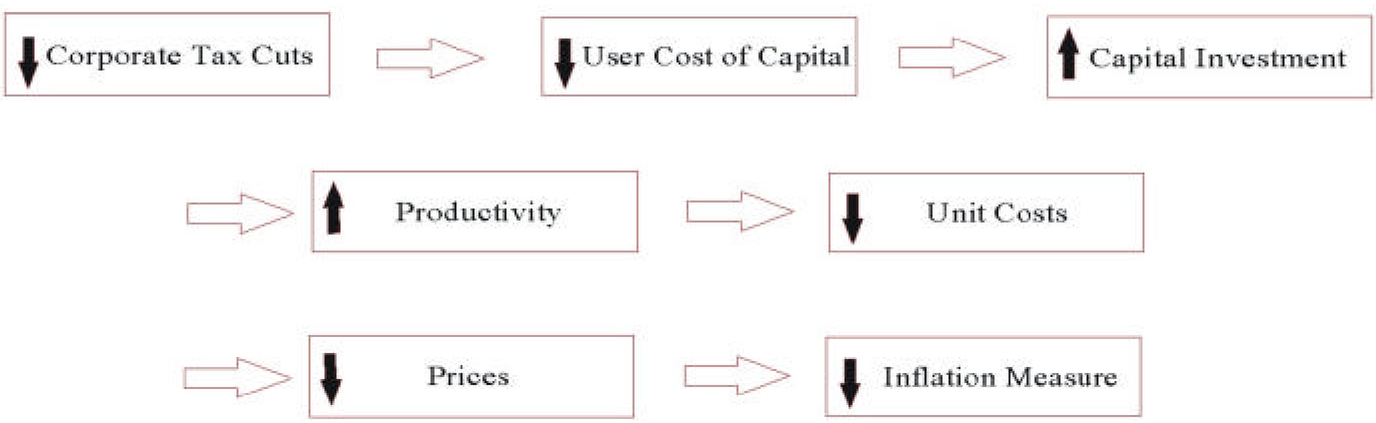
2.5.10 The Company's numbers thus appear to demonstrate that, unless there is some reason to "offset" the tax benefits (from the tax changes that otherwise qualify for Z factor treatment) with unrelated GDP impacts (from GST and prior period tax changes), their best case would be to seek a 9.3% reduction in the Z factor of the taxes, to reflect the small amount of GDP deflator pass-through their expert now claims will arise.

3 SEC ANALYSIS AND RECOMMENDATIONS

3.1 *Principles Operating in this Situation*

3.1.1 In his direct evidence, Dr. Georgopoulos tabled a flow chart [Ex. K5.1] showing the mechanism proposed by Drs. Mintz and Wilson by which corporate income tax cuts end up being reflected in the GDP deflator. That flow chart is reproduced below.

Mechanism by Which Tax Cuts Drive an Inflation Response



3.1.2 It appears that, as Mr. Penny put it at one point, the experts are all “in violent agreement” that this is in fact correct, and that there is some effect on the inflation rate from corporate income tax cuts, flowing through this mechanism.

3.1.3 The evidence of Dr. Georgopoulos focused on two things:

(a) The imperfect translation from a reduction in Unit Costs, through to a reduction in Prices and then a reduction in the Inflation Measure. This is the result of imperfect competition, tradeable goods (prices set outside of Canada), and price stickiness.

(b) Lags at all stages of the process.

3.1.4 There appears to be general agreement that the Canadian economy is not perfectly competitive, and as a result there will be some reduction in the translation from reduced costs to lower inflation. We were unable, however, to get the Union Gas witnesses to provide any numbers on this effect, and SEC was not in a position, in the time available, to arrange any modelling of this effect. The Board is left, therefore, with data before it that assumes 100% flowthrough of these effects, even though it is quite apparent something less than 100% is in fact the case.

3.1.5 With respect to lags, as we have noted earlier Dr. Wilson and Dr. Mintz initially ignored lag effects, but have since accepted, as have all parties, that there are significant lag effects. Further, Dr. Wilson, in conjunction with Union Gas, has now filed evidence (J3.3, J6.1 and K7.1) that quantifies those lag effects.

3.1.6 It would thus appear to us that the economic principles at work here are not seriously in dispute. While the various experts had nuances on competition, and lags, and other aspects of the problem, in the end they all appear to be on the same page. The difference comes down to the numbers, and to how the <u>regulatory</u> rules, rather than the <u>economic</u> principles, operate given the facts before the Board.

3.1.7 In our submission, those regulatory rules lead the Board to the inescapable conclusion that the tax changes in question should be the subject of annual Z factor adjustments as they arise.

3.2 ***<u>GST Impacts</u>***

3.2.1 We have commented earlier on the appropriateness of considering the GST impacts on GDP deflator as part of this analysis, as Union proposes. This is not, of course, an issue of economics, so in fact the opinion of Dr. Wilson, stated a number of times, that this must be included for fairness, is simply not relevant. He is not qualified to advise the Board on how an incentive regulation mechanism should work, only on what the economic effects are of certain events. He has done that. The Board, not Dr. Wilson, are in fact the experts in incentive regulation.

3.2.2 It is submitted that it would be incorrect to offset a corporate income tax change that would otherwise qualify as a Z factor with a GDP impact arising out of a change in GST. Since the GST change is not the subject of the Z factor, it technically is irrelevant in any case, as we have noted earlier.

3.2.3 However, the incentive regulation issue is much more fundamental than that. If we are offsetting the dollars in hand enjoyed by Union from corporate income tax cuts with the GST impact on GDP deflator, why can't we offset other Z factor amounts using unrelated impacts. For example, if there is a major storm, and Union comes in for some more money, can the intervenors argue that interest rates went down in the same year, so Z factor treatment should be disallowed? When Union comes in, as they well might, seeking rate increases through a Z factor for municipal permit fees, can we argue that gasoline prices are finally dropping again, so that saving offsets the increased permit fees?

3.2.4 Z factor analysis is not supposed to turn into a mini cost of service proceeding, in which we look at all cost changes and see if they add up to a rate increase or decrease.

One purpose of incentive regulation is to avoid that. It is for precisely that reason that the criteria for Z factor treatment are very precise, and they do not allow for offsets in the PCI index, unless the offsets are the direct result of the event that has given rise to the cost increase.

3.2.5 For these reasons, it is submitted that the 17.4% (or more) of the GDP deflator impact that arises because of GST changes is not applicable, and should be excluded from this Board's analysis.

3.3 *Impacts of Prior Period Tax Changes*

3.3.1 The same reasoning applies, in exactly the same way, to the tax changes prior to the IR period. Those changes do not comply with the Z factor criteria, and adding them in to offset the cash in hand from the current tax reductions is not a correct approach to incentive regulation.

3.3.2 Union has attempted to present this as a matter of consistency of the treatment, rather than the truth, which is that they are attempting to bring in extraneous factors to offset a cost reduction that would otherwise qualify for Z factor treatment.

3.3.3 This is not mere philosophy. In its last IR plan, Union enjoyed some tax reductions, and the GDP deflator did not in fact adjust sufficiently to offset them. In fact, as we saw from K7.1, and discussed earlier in these submissions, if Union saved $50 million in tax during those three years, it had $1.75 million (3.5%) of reduced rates from the GDP impact during that period. The remaining $43.25 million "stuck to their jeans", as the saying goes.

3.3.4 But now, they argue that the delayed effects of those very same tax reductions, for which they kept virtually all of the money, should be used to offset new tax savings. This is the worst sort of double counting.

3.3.5 In cross-examination, Mr. Birmingham sought to convince the Board [Tr.3:178] that even in cost of service years the lagged effects of those prior tax reductions were being felt. With respect, this is simply not reality. In cost of service years, the Company seeks a budget to cover its costs and its reasonable rate of return. The GDP deflator does not set prices, or revenue, and there is no net underearning by the Company that offsets the overearning in the prior period in which the tax saving was enjoyed. If the GDP deflator was effected in those years, so were Union's budgeted costs, so the Company was whole during those cost of service years. It did not end up, even notionally, "repaying" the windfall it received during the previous IR period.

3.3.6 It is therefore submitted that the 73.5% of the GDP deflator impact as calculated by Dr. Wilson that arises due to prior period tax changes should be excluded by this Board as inconsistent with proper incentive regulation principles, and double counting of the worst kind.

3.3.7 We note in passing that where an incentive regulation period is followed immediately by another, with a base year in between, there is some cost of service re-adjustment in the single year, but there may also be some lag effects that should be taken into account in the subsequent period. In the next IR round for Union, that may be the case. However, the appropriate way to adjust for them is either in the X factor or in the I factor in that case (depending on how the lag effects manifest themselves in those subsequent years). Even in that case, it would not be appropriate to use them to offset a Z factor that would otherwise arise in that IR period. Whatever effect there is, should be reflected in the X or I factor.

3.4 *Impacts of Tax Changes Within the IR Period*

3.4.1 The remaining 9.3% of impacts in the IR period are arguably a reduction in the Z factor treatment of the tax changes.

3.4.2 However, it is submitted that the Board should not order a 9.3% reduction in Z factor treatment, for three reasons.

3.4.3 First, when only a small amount of the Z factor amount is reflected in the PCI index, no offset should normally be applied as a matter of general principle. Virtually every signficant event will have some GDP deflator impact, however small. For example, a major storm in southwestern Ontario that produces a cost increase for Union Gas will also have some measurable impact on Canadian inflation, because it will affect many other companies as well. It is submitted that it is not appropriate in those circumstances for the Board to engage in a detailed economic exercise to track down the small inflation impact of a major utility cost change. The principle, it is submitted, should be that the inflation impact must be a substantial percentage of the Z factor before the Z factor treatment is adjusted.

3.4.4 Second, as we have noted earlier the data before the Board includes tax changes for other provinces embedded in the 9.3% that are clearly not Z factor items, and therefore should be removed in doing the GDP calculation. We therefore already know that the 9.3% is too high, but not by how much.

3.4.5 Third, as we have also noted earlier, the numeric results Union Gas has presented to the Board do not include the effects of imperfect competition and prices set outside of Canada, even though clearly they will have some impact. The Union Gas numbers, including the 9.3%, are overstated because they assume that there is perfect competition and therefore all tax reductions will eventually, after many years, end up reflected in the GDP deflator.

3.4.6 For these reasons, we believe that even the 9.3% that is arguably an offset to the Z factor adjustment should not be applied by this Board.

3.5 ***Base Year Adjustments***

3.5.1 It is possible to look at base year adjustments as if they are simply part of the Z factor analysis. In our respectful submission, base year adjustments are conceptually different from Z factors, and it is important to look at them in that context.

3.5.2 In our submission, a base year adjustment should be applied in this case only where an event arising subsequent to the base year rates being set, but before the end of that year, caused those rates to overstate Union's costs in that year. The difference between the approved revenue requirement in the base year, and the revenue requirement that would have been appropriate for the base year if the subsequent event had been known at the time, is the base year adjustment. In no circumstances, in our view, is the expected cost level in the first year of the IR plan relevant to that discussion. A change in cost in the IR period should be the subject of a Z factor adjustment.

3.5.3 Our reasoning is that a base year adjustment is a conclusion, by the Board, that the base year rates were too high or too low to form the going in number for the IR plan. In the context of tax costs, they therefore relate solely to the base year. Changes in the IR years would be reflected in the Z factor.

3.5.4 While we recognize that there are circumstances in which the Board would adjust the base year costs for other reasons (e.g. a one time cost in the base year that will not recur in the future), in the context of tax changes that is not the case. Even when those other reasons apply, it is the fact that the base year is not "normal" (ie., not a good "base") that is the operative fact. The Z factor concept of "change" is not the key issue.

3.5.5 It is therefore submitted that the amount of the base year adjustment should be the difference between the grossed-up taxes included in the approved 2007 revenue requirement, and the grossed-up taxes that would have been included in the approved 2007 revenue requirement at the rates (income and capital tax rates, and CCA rates) that eventually applied to the base year.

3.5.6 It would appear to us that there is common ground on the base year amount, assuming this analysis. As set forth by Union, it is $2.8 million [Tr.4:89-90].

3.6 ***Recommended Result***

3.6.1 We therefore urge the Board to find as follows:

(a) Each year during the IR period, Union should calculate its income and capital taxes using the tax rates and CCA rates in effect in 2007 and in the year in question. The difference should be grossed-up by the appropriate percentage for the year, and credited or debited to the ratepayers, as the case may be, as a Z factor.

(b) Since it is known that the tax rates in 2008 are lower than 2007, the amount currently being charged by Union to a deferral account in the amount of $8 million per annum should be removed from that account at the expense of the shareholder. When the Z factor adjustment for 2008 is completed, that amount should be deducted from the Z factor, and so on in subsequent years.

(c) Base rates should be adjusted by an amount equal to the difference between Union's grossed-up taxes in 2007 as approved, and its grossed-up taxes for 2007 using the same income, but recalculated on the tax rates and CCA rates actually applicable for 2007. That amount appears to be $2.8 million.

4 OTHER MATTERS

4.1 *Subsequent Evidence*

4.1.1 We remain concerned about the quality of the empirical evidence in this proceeding. Although we have concluded that the Board should, in this case, adopt the numeric results in the Union Gas evidence, it is clearly less than rigorous. Given the fact that the issues raised in this proceeding are applicable to many incentive regulation mechanisms, and that the Board is committed to the significant use of incentive regulation in the future, we believe that a more rigorous study of this issue would be of value to the Board as a policy input.

4.1.2 Therefore, we propose that this Board panel recommend to the Board to engage the appropriate experts to do empirical studies to determine the actual relationship between tax changes and various inflation measures, and the parameters under which that relationship will change (e.g. type of tax change, pre-announcement, etc.). Once the Board disposes of the issue in this proceeding, we believe that the longer term consideration of this issue by the Board will be informed by such an analysis.

4.2 *Costs*

4.2.1 The School Energy Coalition hereby requests that the Board order payment by the Applicant Union Gas of our reasonably incurred costs in connection with our participation in this proceeding. It is submitted that the School Energy Coalition has participated responsibly in all aspects of the proceeding, in a manner designed to assist the Board as efficiently as possible.

All of which is respectfully submitted.

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