Z Factoring Pervasive Corporate Tax Reductions

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Introduction

On 17 January 2008 the Ontario Energy Board ("OEB") accepted a Settlement Agreement with addendum between Union Gas Ltd ("Union") and other parties in proceeding EB-2007-0606. The proceeding has considered a multi-year incentive rate mechanism ("IRM") for Union's regulated gas distribution, transmission, and storage services. The IRM features a price cap index ("PCI") with a formula that includes a Z factor term to adjust PCI growth for hard to foresee events.

Several issues were left unresolved in the Settlement Agreement. One was the handling of changes in federal and provincial tax policies. Recent federal legislation has reduced prospective corporate income tax rates in Canada. Increased capital cost allowances are also being considered at the federal level. Companion reductions in corporate tax burdens are under consideration in Ontario and several other provinces. Tax reductions are thus expected throughout Canada and not just in Ontario or its gas utility industry.

Parties to the Agreement have differed over whether reductions in the tax payments should be Z factored. Union argues that they should not be, and has released commentary by Jack Mintz and Thomas Wilson that compares the impact of tax policy changes on the marginal effective rate of taxation of Union to the impact for non-resource sectors of Canada's economy. The addenddum to the Agreement dated 14 January 2008 provides for a round of evidence and interrogatories on the tax change issue which may culminate in a March hearing. It also provides for interim base rates to be adjusted downward by $8.0 million, a sum described as "the approximate possible value of federal and provincial tax changes for 2008".

Pacific Economics Group ("PEG") advises Board Staff on incentive regulation. Staff has asked PEG to provide our views on the tax change issue. Our work for Staff to answer this question has included a review of the principles for PCI design and a consideration of how tax changes generally affect the GDPIPI but not a review of Mintz and Wilson's empirical work. In the pages that follow we first provide general comments on the appropriate role of a Z factor in a PCI. We then apply these principles to the case of pervasive reductions in corporate taxes.

Z Factors

The PCI in the Settlement Agreement has the general form

$$PCI_t = PCI_{t-1} \times (1 + P_t - X + Y_t + Z)$$

where in each year t

$P_t = GDPIPI_t / GDPIPI_{t-1} - 1$

$GDPIPI_t$ = gross domestic product implicit price index for final domestic demand

X = X factor

Y_t = Y Factor

Z_t = Z factor.

The X factor is fixed at 1.82% for the term of the IRM. This value is quite similar to the 1.73% X factor of the "summary" PCI that is supported by PEG's research if the compensation to Union for declining average use is not. handled in the Agreement via a special X factor term.[1]

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[1] See Mark Newton Lowry, David Hovde, Lullit Getachew, and Steve Fenrick, "Rate Adjustment Indexes for Ontario's Natural Gas Utilities", November 20, 2007.

The 1.73% calculated by PEG was based on input price and productivity research and designed to afford Union reasonable compensation for the trend in the *total* cost of its base rate inputs (including taxes) per unit of output. The input price differential ("IPD") term computed by PEG was an estimate of the difference in the long run input price trends of the economy and the gas utility industry and did not consider expected tax policy changes. The Y factor term of the PCI in the Settlement Agreement adjusts PCI growth as required to recover costs that are not covered by the PCI. The lists of costs slated for Y factor treatment doesn't include taxes.

The Z factor term of the PCI is not defined in the Settlement Agreement. In incentive regulation plans across North America, a Z factor term is usually understood to adjust PCI growth for eligible unforeseen changes to the unit cost that should be covered by the PCI and not Y factored.[2] The Settlement Agreement does specify criteria for defining events that are eligible for Z factor adjustments:

1. The event must be causally related to an increase/decrease in cost.

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 captured in the PCI.

4. Any cost increase must be prudently incurred.

5. The cost increase/decrease must meet a materiality threshold of $1.5 annually per Z factor event.

Criterion 3 is consistent with the logic of economic indexes that provides the principles for PCI design. According to this logic, if a PCI is designed to provide a reasonable target for

[2] For a discussion of price cap index design see Mark Lowry and Larry Kaufmann, *Energy Law Journal* Vol. 23, No. 2 (2002).

growth in the unit cost of a group of inputs then any Z factoring due to unforeseen changes in that cost should consider the extent to which the inflation measure and other terms of the PCI formula already provide an appropriate rate adjustment for the event. A failure to make this calculation accurately will result in a double counting of the financial impact of the event.

Application to Taxes

Corporate income taxes are a cost of capital ownership. A change in tax rates affects capital cost through its effect on the price of capital (the cost of ownership per unit of capital that is owned). Since capital accounts for half or more of the cost of gas utility base rate inputs, a material change in the price of capital is likely to materially affect the overall rate of inflation in the prices of base rate inputs.

A change in income tax rates that is applicable to all firms in Canada affects their cost of doing business in two ways. One is the direct effect on the taxes paid by the business. The other is the indirect effect on the prices of goods and services purchased from other Canadian firms. In the long run, competition between firms is apt to pass cost savings of both kinds through to customers in the form of slower growth in the prices of the products that they sell. The GDPIPI for final domestic demand measures inflation in the prices of consumer goods and services and capital equipment that are purchased for domestic use. In the event of a pervasive reduction in corporate taxes the GDPIPI will thus reflect the impact of the cost savings on the typical firm that provides these final goods and services.

The handling of such an event for purposes of PCI escalation depends on PCI design. Suppose as one example that the PCI inflation measure is expressly designed to track the input price trend of the industry, including taxes. In that event, there will be no grounds for a Z factor

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adjustment since the inflation measure already reflects the effect of the tax rate change on the unit cost of gas utilities.

Suppose now that the PCI inflation measure is the GDPIPI, as in the Settlement IRM. Since the GDPIPI isn't designed to track the input price inflation of natural gas utilities and the IPD did not anticipate the tax reductions it is possible that the PCI will slow by more or les than is warranted. However, the calculation of any Z factor intended to rectify this problem must consider the extent to which the effect of tax reductions is captured by the slowdown that *does* occur in the GDPIPI. Were the tax reductions in question specific to the gas utility industry, the slowdown in the GDPIPI would be slight and something close to the entire tax reduction might be Z factored. However, the tax reductions under discussion are pervasive and should slow the growth of the GDPIPI materially. The appropriate Z factor adjustment for the tax reductions is thus likely to be substantially less than the gross adjustment that might occur for industry-specific tax reductions.

This analysis suggests that, when considering the appropriate Z factor adjustment for a pervasive reduction in corporate income taxes, a central issue is whether the slowdown in the GDPIPI is much different from the overall slowdown in prices for gas utility inputs. This is an empirical question that is difficult to answer accurately. Similar questions could arise over other imperfections of the GDPIPI as a measure of industry input price growth. The dollars that are potentially Z factorable are apt to be considerably less than the total tax savings and may not pass the materiality threshold. Since, additionally, one goal of incentive regulation is to simplify regulation, PEG believes that it is reasonable for the Board, absent convincing empirical evidence that the GDPIPI will handle the tax reductions inappropriately, to rule that a pervasive reduction in federal and provincial corporate taxes does not warrant any Z factoring.

The OEB assumed just this position in its Decision with Reasons in RP-2001-0029. This proceeding considered the implementation of the price cap plan for Union Gas. The handling of reductions in Ontario corporate income taxes, at a time when other provinces were also lowering such taxes, was one of the implementation issues. The Board acknowledged in its decision that

> There may be instances where a tax change is of such a nature that it may warrant treatment as a Z factor. Such a case may arise when a tax change is of such special and unique application to Union that it could not reliably be expected to be reflected in a Canada-wide index such as the GDPPI.[3]

In the case under consideration, however,

> The Board accepts for now that the changes in the Ontario corporate tax rates are or will be reflected in the GDPPI, and that no Z factor adjustment should be made at this time with respect to the rate schedules currently in effect under the PBR plan. The income tax changes, therefore, are to be considered to be captured in the determination of the PCI.

The tax reductions under consideration in this case appear to be even more pervasive than those the Board considered in rendering this decision.

Conclusions

The Settlement Agreement states clearly that Z factored costs must be net of amounts that that are reflected in other terms of the PCI formula. The tax reductions under consideration for Z factoring in this case seem to apply to most or all firms in Canada's economy and should

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[3] Decision with Reasons, RP-2001-0029 (September 20, 2002) p. 79.

produce a material slowdown in GDPIPI growth. The net benefit to consumers of Z factoring

these tax reductions is therefore likely to be substantially less than the total value of the

reductions. The difference between the slowdown in the GDPIPI and the input price growth

faced by Union is a complex and potentially controversial empirical issue. Similar issues may

arise during the plan since the GDPIPI is not designed to track industry input price growth.

Absent solid evidence that the GDPIPI will respond inappropriately in this instance, it is

therefore reasonable for the Board to reject the Z factoring of any part of the tax reductions.