

**THE COMPETITION TRIBUNAL**

**IN THE MATTER OF THE *COMPETITION ACT*, R.S.C. 1985, c.C-34, and the *Competition Tribunal Rules*, SOR/94-290, as amended;**

**AND IN THE MATTER OF an inquiry pursuant to subsection 10(1)(b) of the *Competition Act* relating to the proposed acquisition of ICG Propane Inc. by Superior Propane Inc.;**

**AND IN THE MATTER OF an Application by the Commissioner of Competition under section 92 of the *Competition Act*.**

**BETWEEN:**

**THE COMMISSIONER OF COMPETITION**

Applicant

- and -

**SUPERIOR PROPANE INC. and ICG PROPANE INC.**

Respondents

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**AFFIDAVIT OF DONALD G. McFETRIDGE**

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I, DONALD G. McFETRIDGE, of the City of Ottawa, in the Province of Ontario, Professor of Economics, MAKE OATH AND SAY:

1. I have been asked by counsel to Superior Propane Inc. and ICG Propane Inc. to evaluate the report of Peter G. C. Townley, sworn August 16, 1999, served by the Commissioner of Competition on August 18, 1999 (the "Townley Affidavit").

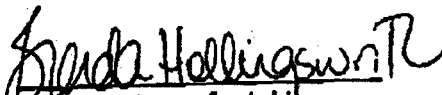
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2. Attached hereto and marked as Exhibit "A" is a true copy of my report, which represents the work I have done and analyses made with respect to the Townley Affidavit.

SWORN BEFORE ME at the City of  
Ottawa, in the Province of Ontario,  
this 14 day of September, 1999

  
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DONALD G. McFETRIDGE

  
Commissioner for taking  
Affidavits, etc.  
Brenda Hallingsworth

This is Exhibit "A" referred to in the  
Affidavit of Donald G. McFetridge  
sworn before me this 14 day of  
September, 1999.

*Brenda Hollingsworth*  
Commissioner for Taking  
Affidavits, etc.  
*Brenda Hollingsworth*

## REPORT OF D. G. MCFETRIDGE

### I. Introduction

1. The purpose of this report is to discuss some of the issues raised in the report of Peter G. C. Townley sworn on August 16, 1999 and served on the Respondents by the Commissioner on August 18, 1999.
2. Professor Townley argues in Section 1 of his report that a reasonable objective of merger policy "... would be to approve mergers that would contribute to the overall well-being (economic welfare) of Canadians and not to approve mergers which would diminish the economic well-being of Canadians." I agree.
3. In Section 2 of his report, Professor Townley explains the alternative theoretical criteria for determining whether an event has improved economic well-being. He appears to accept that the Pareto Improvement Criterion which would reject an economic change if anyone loses from it, is overly restrictive in that it could preclude changes that would make most people better off, even a great deal better off. The alternative is the Potential Pareto Improvement Criterion which requires only that those who gain from an economic change be able to compensate those who lose and still be better off. Professor Townley notes in his report that the Potential Pareto Improvement Criterion implies the operational rule that if the gains from a project or policy exceed the losses, the project or policy involved should proceed, and for this reason it is also called "the cost-benefit analysis criterion." (p.3) Professor Townley states in his textbook that this operational rule is the one usually adopted in cost-benefit analysis.<sup>1</sup> The adoption of the Potential Pareto Improvement Principle carries with it the assumption that the distribution of income is satisfactory to the decision-maker or could be made so. Professor Townley explains in his textbook that economists commonly make this assumption in the case of countries such as Canada where governments employ an array of tax and transfer policies for redistributive purposes. I agree with view that the Potential Pareto Improvement Principle is appropriate as a guiding theoretical principle.
4. Professor Townley explains that Compensating Variation (CV) and Equivalent Variation (EV) are exact (but different) monetary measures of the effect of an economic event such as a price change on an individual's utility. Some elaboration might be useful here. Suppose a product purchased by an individual increases in price. This makes the individual involved worse off. The question is how much worse off? EV is the *variation* in income (reduction in income in this case) which is *equivalent* to the price increase. For example, if an increase in the price of the product from \$1.00 to \$1.20 per package has the same effect on an individual's utility as a reduction in that individual's income by \$15 per year, then \$15 is the equivalent variation for this price increase. CV is the amount (*variation* in income) the individual would have to be paid in

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<sup>1</sup>Peter G.C.Townley, Principles of Cost-Benefit Analysis in a Canadian Context (Scarborough, Prentice Hall Canada, 1998) p.82.

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*compensation* to keep her as well off as she was prior to the price increase. Although these two measures are said to be exact, they will take on different values unless the individual purchases the same quantity of the product involved regardless of her income level.<sup>2</sup> As far as I know, the EV's or CV's of individuals are not used in cost-benefit analysis. Cost-benefit analysis usually relies on aggregate data based on actual or forecast sales in the relevant market.

5. In theory, the effect of an economic change on a group of individuals is determined by summing their respective CV's or EV's. If we simply sum them, we are assuming implicitly that a dollar lost or gained by one individual is equal to a dollar lost or gained by another (a dollar is a dollar). It is possible that a policy-maker may decide that the loss in utility (well-being, satisfaction, happiness) associated with the loss of a dollar differs from individual to individual so that the unweighted sum of the CV's or EV's of the individuals in a group may not be an accurate reflection of the change in the utility of the group.

6. Professor Townley concedes that "many analysts" and "many cost-benefit analyses of public sector projects" ignore this theoretical problem and adopt the convention of simply adding up individual gains and losses to obtain an aggregate net benefit measure. (pp.10-11). He suggests that this could be either because those engaged in project evaluation do not appreciate the value judgement they are making or because, in his view, most public projects redistribute income in favour of the less wealthy in any event. I disagree. My understanding of the literature on project evaluation is that distributional weights are not used because the information required to derive weights is generally not available and, even if it were available, there is no consensus as to which of the many possible weighting schemes would be appropriate.

7. It is indeed the case that project evaluation typically assumes that a dollar is a dollar. The Treasury Board's benefit-cost guide argues against incorporating differential distributional weights directly into benefit or cost calculations.<sup>3</sup> It does not advocate that distributional considerations be ignored. It recommends instead that they be addressed separately (pp.43-44). Its stated reason is that the government's distributional goals are too complex to be reflected in any one weighting scheme.

8. In their textbook (cited by Professor Townley) Sugden and Williams explain that unitary distributional weights (a dollar is a dollar) are typically used because non-unitary weights "...

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<sup>2</sup>For further discussion, see, for example, B. Curtis Eaton and Diane F. Eaton, Microeconomics Third Edition (Englewood Cliffs, Prentice Hall, 1995) pp.114-20.

<sup>3</sup>Planning Branch, Treasury Board, Benefit-Cost Analysis Guide (Ottawa, Supply and Services Canada, 1976) p.43.

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make cost-benefit analysis a much more difficult and time-consuming exercise."<sup>4</sup> One problem is that market-generated data are observed as aggregates. These totals are unweighted sums of individual gains and losses. To go back and apply differential weights would require the analyst to "unscramble an omelette" of market-generated information. Classifying individuals by their market roles (workers, capitalists) may help but Sugden and Williams express doubt as to whether this is the most appropriate way of assigning distributional weights.

9. Professor Townley himself assumes that a dollar is a dollar in his cost-benefit analysis textbook:

In any case, the assumption of equal marginal utilities of income - that a dollar is a dollar is a dollar, to whomever it accrues - is common in cost-benefit analysis and is made here explicitly.<sup>5</sup>

10. In my opinion it is incorrect to argue that cost-benefit analysts do not use distributional weights because public projects necessarily result in a more equal distribution of wealth. It is certainly arguable that, while the general thrust of public policy may be egalitarian, government policies and programs do not inevitably favour the less wealthy.<sup>6</sup> Government objectives are complex. Depending on the circumstances, governments may favour political, cultural or efficiency goals over distributional equality. The existence of agricultural (monopoly) marketing boards, the public subsidization of university education, the subsidization of film production in Canada, the subsidization of industrial R&D and other programs may redistribute income away from less wealthy to more wealthy Canadians.

11. One reason for assuming that a dollar is a dollar is that the distributional implications of a program or policy may be obscure. The best assumption may be that they are neutral, that is, that whoever they are, the winners and the losers place roughly the same value on a dollar gained or lost. Dr. Townley appears to concede as much when he constructs an example of a dam which would favour lower income groups if it were financed by progressive taxation and if it benefitted all citizens equally (fewer wet basements, more places to swim). But a wet basement may impose a bigger loss on a wealthy household than on a poor household and, while swimming opportunities may be equally distributed, water skiing and sailing opportunities may not be.

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<sup>4</sup>Robert Sugden and Alan Williams, The Principles of Practical Cost-Benefit Analysis (Oxford, Oxford University Press, 1978), p.206.

<sup>5</sup>Peter G.C. Townley, Principles of Cost-Benefit Analysis in a Canadian Context (Scarborough, Prentice Hall Canada, 1998) p.82.

<sup>6</sup> The Treasury Board Benefit-Cost Analysis Guide makes the point that distributional implications must be demonstrated rather than assumed (p.46).

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Professor Townley admits that even in the dam example he has constructed to illustrate the point that public projects normally involve a "progressive" redistribution of wealth, there is no clear distinction between winners and losers (p.11). But, he says, mergers are different.

12. Professor Townley argues that: "In a situation where a merger would cause the price of the good in question to rise, consumers lose and merging firms gain. Unlike the dam case (§.11 above), the distinction between winners and losers is clear." (p.11) But is it so clear? Presumably it is the shareholders in the merging firms who gain. In this case this would be the shareholders of Petro-Canada and the unit holders of the Superior Propane Income Fund.<sup>7</sup> Given the assumed lessening of competition, shareholders or principals in some or all competing firms are also likely to gain. Shareholders in any firms producing substitute products may also gain. Share holdings may be direct or indirect. Households may be indirect shareholders through pension funds, mutual funds and other financial intermediaries. For example, Superior Propane is aware that of its 45.7 million units outstanding, nearly 12 million units are held by mutual funds and pension funds. Employees of the merging firms, some or all competitors and producers of substitute products may also realize gains (bonuses, salary increases) in addition to those realized in their capacity as stockholders.

13. Under the hypothesis that the price of propane increases post-merger, some customers will lose surplus. If a product is purchased by households as a final good, these households lose as customers although they may experience offsetting gains as direct or indirect shareholders or employees of the merging firms, their competitors or suppliers of substitutes. If the product concerned is purchased by other firms as an intermediate good, direct and indirect shareholders and employees of these firms may lose if the increase in the price of the good concerned cannot be passed on quickly and completely to their customers. Whether a using industry can pass an increase in the price of an input on to its customers depends in theory on both supply conditions and the nature of competition in the using industry.<sup>8</sup> This story may repeat itself several times as the product concerned may be embodied in inputs used in successive stages of production before being embodied in a final good or service purchased by households or exported. There are two crucial points here. First, in many merger cases, it will not be obvious who the winners and losers are. Second, there is no basis for simply assuming that, whoever the winners and losers might be,

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<sup>7</sup>My understanding of the terms of the proposed merger is that any gain realized by the shareholders of Petro-Canada stands regardless of the disposition of this case by the Tribunal. According to its Annual Report, 18 percent of Petro-Canada shares are held by the Government of Canada.

<sup>8</sup>For example, an increase in the price of a product used in the extraction of crude oil from the oil sands in Alberta may show up as a decrease in the value of oil sands leases rather than in an increase in the price of gasoline. In this case, it is the owners of a specialized cooperating downstream input rather than final customers who would lose.

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a given amount of wealth results in greater utility, well-being or happiness in the hands of one group rather than the other.

### II. Alternate interpretations of section 96

14. In Section 3 of his report, Professor Townley describes and compares four possible interpretations of Section 96. These are:

- (a) the total surplus standard;
- (b) the price standard;
- (c) the consumer surplus standard and;
- (d) the weighted surplus standard (my terminology).

#### *(a) The Total Surplus Standard*

15. Under the total surplus standard, a section 96 defence would succeed if the increase in profits resulting from the merger exceed the aggregate loss in consumer surplus. Put another way, the total surplus standard would be satisfied if shareholder gains exceed consumer losses or if the gains individuals realize as shareholders exceed the losses they experience as consumers.

16. The gain realized by shareholders is the sum of (technical) efficiency gains likely to result from the merger and the transfer from consumers as a result of the exercise of market power post-merger. The loss experienced by consumers is the sum of the deadweight loss in consumer surplus and the transfer from consumers to producers. On the assumption that a dollar is a dollar, the transfer from consumers to shareholders nets out, leaving the requirement that, in order to satisfy the total surplus standard, the gain in technical efficiency attributable to the merger must exceed the deadweight loss resulting from the increase in market power resulting from the merger.

17. The total surplus standard was adopted by the Competition Bureau in its *Merger Enforcement Guidelines*. The *Guidelines* define quantitative anticompetitive effects as:

...the part of the total loss incurred by buyers and sellers in Canada that is not merely a transfer from one party to another, but represents a loss to the economy as a whole, attributable to diversion of resources to lower valued uses. This loss is sometimes referred to as the deadweight loss to the Canadian economy. (p.45)

18. The *Guidelines* advocate a balancing of the anticompetitive effect defined above against the efficiency gains attributable to the merger:

Where a merger results in a price increase, it brings about both a neutral redistribution effect and a negative resource allocation effect on the sum of producer and consumer



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surplus (total surplus) within Canada. The efficiency gains... are balanced against the latter effect, i.e., the deadweight loss to the Canadian economy. (p.49)

19. In a recent speech, Gwilym Allen, Assistant Deputy Commissioner of Competition at the Competition Bureau confirmed the Competition Bureau's view, expressed in the *Guidelines*, that a merger should be evaluated on the basis of its effect on total surplus:

First, the Bureau believes that a trade-off must be performed to determine whether an anticompetitive cost saving merger should be approved. Second, the Bureau believes that this trade-off should be made with the goal of determining the impact of the merger on total economic welfare. Finally, the trade-off should incorporate modern economic thinking which recognizes that there are limitations to the traditional Williamson trade-off.<sup>9</sup>

20. In the United States, the total surplus standard is frequently referred to as the consumer welfare standard. This reflects its recognition that consumers are also producers and that the evaluation of the effect of a merger on an individual should include its total effect rather than merely its effect on that individual as a consumer. It is the total size of the economic pie that matters:

The consumer welfare standard of the antitrust laws therefore looks to the total size of the economic pie, adjusted if necessary for resources wasted to achieve market power, not merely to the size of the individual pieces.<sup>10</sup>

21. Use of the total surplus standard does not require that income distribution issues be ignored. Income distribution objectives can be and are addressed by other public policies. This point is forcefully made by Dr. Lawrence Schwartz in an article published before he was appointed to the Competition Tribunal:

The more practical issue is whether there are not better ways of redressing wealth transfers than through competition policy. Here the answer is clear: gains in income and wealth that are deemed socially undesirable can be attacked through a suitably-designed tax system and returned to consumers at a lower cost to society than through a

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<sup>9</sup>Gwilym Allen, "The Treatment of Efficiencies in Merger Analysis" (speech prepared for the "Meet the Competition Bureau" conference, Toronto, May 3, 1999) <http://strategis.ic.gc.ca/SSG/ct0154e.html>

<sup>10</sup>Charles F. Rule and David L. Meyer, "An antitrust enforcement policy to maximize the economic wealth of all consumers" *The Antitrust Bulletin* 33 (Winter, 1988) p.686.

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competition policy that restrains efficiency-enhancing mergers.<sup>11</sup>

22. Professor Townley has four objections to the use of the total surplus standard. First, it requires the comparison of aggregate consumer losses and aggregate shareholder gains and assumptions must be made if aggregate data are to be used. Second, it makes use of the concept of consumer surplus and this is not an exact measure of welfare change for an individual. Third, it is most easily satisfied for products that are price inelastic in demand. Such products could be necessities and governments may regard increases in their prices as particularly inequitable. Fourth, an implication of the use of the total surplus standard is that distributional concerns can be dealt with in other ways (income taxation and expenditure) but these options may be costly.

23. Professor Townley argues that the change in consumer surplus resulting from a price increase is not an exact measure of welfare change as are CV and EV. This is correct as a matter of theory. It is, however, likely to be a good approximation in this case. In the case of an increase in the price of propane relative to all other goods, the (absolute value of) the loss in consumer surplus lies between the two exact measures of the reduction in the welfare of consumers (as consumers). Specifically, Equivalent Variation < |Change in Consumer Surplus| < Compensating Variation (where the vertical lines signify absolute value).<sup>12</sup>

24. In a widely cited paper, Robert Willig has shown that when the product involved accounts for a relatively small fraction of the consumer's income, the percentage difference between the change in consumer surplus and either equivalent or compensating variation is quite small.<sup>13</sup> In his textbook, Professor Townley cites Willig and concludes that:

In practice, changes in consumer surplus provide a reasonable approximation of these measures [CV and EV] as long as the absolute value of the income elasticity of demand

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<sup>11</sup>Lawrence P. Schwartz, "The 'Price Standard' or the 'Efficiency Standard' ? Comments on the Hillsdown Decision" Canadian Competition Policy Record 13 (September, 1992) p.46

<sup>12</sup>If the experiment were to involve changing two or more prices simultaneously (for example, calculating the welfare effect of levying a tax on a number of products), the absolute value of the resulting change in consumer surplus may not be bracketed by EV and CS. Michael Burns shows how to calculate the change in consumer surplus resulting from multiple price changes and argues that, in most cases, it will be bracketed by EV and CV. He further argues that any differences between EV, CV and the change in consumer surplus are of little practical importance. See Michael E. Burns "A Note on the Concept and Measure of Consumer's Surplus" American Economic Review 63 (June, 1973) pp.335-44.

<sup>13</sup>Robert D. Willig, "Consumer's Surplus Without Apology" American Economic Review 66 (September, 1976) pp.589-97.

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for the good in question is small.<sup>14</sup>

25. Application of Willig's methodology in the present case shows that, given even generous estimates of the share of the customers' budgets accounted for by propane expenditures, the income elasticity of demand for propane and hypothetical post-merger price increases, Compensating Variation probably is unlikely to exceed the absolute value of the loss in consumer surplus by as much as one percent (see Appendix 1).

26. The argument that the change in consumer surplus is an approximation applies to three (total surplus, consumer surplus, weighted surplus) of the four alternative interpretations of section 96 considered by Professor Townley. The only one it does not apply to is the price standard. The price standard does not require the use of any surplus measures of any kind because it would forbid any merger which resulted in higher prices to consumers.

27. Professor Townley repeats his argument that it is theoretically inappropriate both to take an unweighted sum of individual losses in consumer surplus to obtain an aggregate loss in consumer surplus (or an aggregate CV or EV) and to take an unweighted sum of individual shareholder gains to obtain an aggregate shareholder gain and compare the two as the total surplus standard requires. Dr. Townley reserves this criticism for the total surplus standard and does not mention that it applies to three of the four alternative interpretations of section 96 (total surplus, consumer surplus standard, weighted surplus standard) he considers, as well as to practical cost-benefit analysis as a whole. In the case of the fourth alternative, the price standard, there is no need to aggregate either consumer losses or shareholder gains because the two are not compared. The price standard avoids the necessity of comparing aggregate consumer losses and aggregate shareholder gains only by forbidding any merger that would make consumers worse off (as consumers) regardless of both the other benefits realized by this group and the benefits realized by others. If public projects and mergers that make some individuals worse off as well as making others better off are going to be considered, aggregate gains and losses have to be compared. Indeed, the only data typically available are aggregate data. If these data are going to be used at all, there is no alternative to assuming that individual consumers and individual shareholders attach the same value to a given increase or a decrease in their respective incomes.

28. Professor Townley argues that the total surplus approach might yield particularly misleading results in the case of necessities. He begins by noting that, for a given price increase, the total surplus standard is easier to satisfy the lower is the price elasticity of demand for the product concerned. The reason that mergers in price inelastic markets are more likely to increase total surplus is that these mergers yield their technical efficiencies without distorting the allocation of resources. That is, the higher price does not induce customers to alter their purchasing

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<sup>14</sup>Peter G.C. Townley, Principles of Cost-Benefit Analysis in a Canadian Context (Scarborough, Prentice Hall Canada, 1998) p.87.

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behaviour, adopting less efficient alternatives. From an efficiency perspective mergers in price-inelastic markets are "win-win." They achieve their efficiencies in production and distribution without distorting market decisions. But increases in the price of a product with a low price elasticity of demand could raise an equity (distributional) issue if this product also had a low income elasticity of demand and therefore accounted for a higher fraction of the budget of a poor household than of a wealthy household. Presumably, it would also be necessary for expenditures on the product concerned to account for a non-trivial fraction of the budgets of poor households and for the price increase involved to be significant. If all these conditions are satisfied, a merger yielding modest (technical) efficiency gains might pass the total surplus test even though it had a material adverse impact on poorer households (as consumers). Dr. Townley asserts that ignoring the redistributive consequences of an increase in the price of a product with these characteristics would be inconsistent with "accepted tax treatment of such goods." To support his case, he asserts that even though demand for it is inelastic and a tax would raise revenue efficiently (without distorting the allocation of resources), bread is not taxed (it is exempt from PST and GST) because such a tax would be "perceived to be inequitable."

29. Price inelasticity of demand may be necessary but it is certainly not sufficient to support an inference that a price increase will have an adverse distributional impact. With respect to the present case, propane production and distribution is subject to a variety of taxes including GST and fuel tax when used as a motor fuel. Presumably we can infer from this that the governments involved do not put propane and bread in the same class with respect to distributional concerns. More generally, Professor Townley's proposal that the level of government distributional concern about the pricing of a given product be inferred from the presence or absence of certain taxes is somewhat myopic. The prices of products in the market are affected by many levels of government and many government actions. Tariffs, quotas, anti-dumping duties, regulatory entry barriers and government-sanctioned monopolies all raise prices paid by some or all consumers. Indeed, that is their purpose. Fluid milk is not subject to PST and GST but it is produced by government-sanctioned monopoly milk marketing boards. These boards raise prices above the competitive level.<sup>15</sup> They transfer surplus from milk consumers to dairy farmers. The continuing existence of these transfers implies that the governments involved attach a lower weight to consumer surplus losses than to the increased surplus accruing to dairy farmers. There are two lessons from this. First, distributional weights cannot be inferred merely from the presence or absence of certain commodity taxes. Second, although the overall thrust of public policy may be egalitarian, it need not be so in all instances. Governments may rank the improvement of productive efficiency above the pursuit of income equality in some cases and section 96 may be one of them. Governments may also pursue efficiency with one instrument, in this case competition policy, and distributional equality with others.

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<sup>15</sup>G. Van Kooten, "Economic Impacts of Supply Management: Review and Comparison of Alternative Measures of Consumer Welfare Loss" Canadian Journal of Agricultural Economics 36, 1988: 425-441.

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30. Professor Townley questions whether any adverse distributive consequences of a merger could costlessly be offset by tax and transfer policies. As a practical matter, most taxes distort and entail their own deadweight loss triangles. The theoretical magnitude of the distortion increases more than proportionately with the tax rate. An implication of this is that if the amount of redistribution contemplated is small relative to the tax base, the tax rate required would be relatively low and the associated deadweight loss would be relatively small. In his textbook, Professor Townley is more optimistic about the ability of governments to redistribute income through taxes and transfers:

At the same time, many economists agree that if a government wishes to redistribute income, it is best advised to do so directly through a tax and transfer system rather than through other forms of intervention including project selection.<sup>16</sup>

### *(b) The Price Standard*

31. A section 96 defence would succeed under the price standard if (technical) efficiencies were large enough to keep the market price from rising post merger. In essence, the price standard would rule out any merger which makes consumers worse off (as consumers) no matter how much it benefitted them in other ways or how much it benefitted other members of society. Indeed, the price standard could result in the disallowance of mergers that make all individuals better off (a Pareto Improvement) because some individuals are made worse off strictly as consumers. Professor Townley concedes that the price standard would disallow some mergers that are potentially welfare-enhancing and concludes that it would seem unreasonable to rule against a merger that involved slight price increases but massive cost savings.

32. While I do not presume to have any special insight as to how Parliament intended that section 96 be interpreted, it seems, as a matter of logic, that Parliament would not have taken the trouble to include section 96 in the Competition Act if all it meant was that the Tribunal should not disallow mergers that do not cause prices to rise or that make anyone worse off.

33. In a recent speech, Gwilym Allen, Assistant Deputy Commissioner of Competition at the Competition Bureau reiterated the Competition Bureau's view that, unlike the practice in the United States, the price standard is not the appropriate interpretation of Section 96:

In the US, efficiencies are incorporated into the analysis of competitive effects resulting from the merger. Therefore, if after the consideration of efficiencies the merger is still believed to raise price, the merger would not be approved. This approach is of course a big departure from the one used in Canada since the Bureau evokes a trade-off when a

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<sup>16</sup>Peter G.C. Townley, Principles of Cost-Benefit Analysis in a Canadian Context (Scarborough, Prentice Hall Canada, 1998) p.82.

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merger creates efficiencies along with a price increase.<sup>17</sup>

### *(c) The Consumer Surplus Standard*

34. The consumer surplus standard defines the anti-competitive effect of a merger as the entire loss in surplus, whether deadweight loss or transfer, experienced by consumers as a result of a post-merger price increase. It would require that the technical efficiency gains attributable to the merger exceed the anticompetitive effect for a successful section 96 defence. It is important to distinguish between the consumer surplus standard and the consumer welfare standard. The term "consumer welfare standard" is used in the United States to describe what Professor Townley and I are calling the total surplus standard.

35. The consumer surplus standard treats the transfer from consumers to producers as being entirely lost to the economy even though it isn't. It is not lost to the economy but rather is transferred from one set of individuals in the economy (e.g. consumers) to another (e.g. producers) or perhaps even between the pockets of the same individuals (e.g. those who are both consumers and producers/shareholders). Because it treats all transfers from consumers to producers as losses, this approach could result in the disallowance of mergers that increase the total surplus of the economy as a whole.

36. The consumer surplus standard is schizophrenic. It gives full weight to an extra dollar paid by an individual for the product(s) concerned, but zero weight to any of that dollar returning to the same individual in the form of dividends, capital gains or other income.

37. As Dr. Townley notes, the consumer surplus standard has no apparent basis in welfare economics. It would allow some mergers which would fail the Pareto Improvement Criterion (i.e. mergers which would make some consumers worse off as consumers) and disallow some mergers which would pass the Potential Pareto Improvement Criterion (i.e. mergers in which those who gained could readily compensate those who lost). Moreover, it is inflexible. Regardless of their respective wealth or other characteristics, a dollar transferred from a consumer to a producer is deemed to have a value of a dollar in the hands of the consumer and a value of nothing in the hands of the producer. It does not afford the decision maker the discretion to deal with a (potentially common) situation in which consumers and shareholders are roughly similar as far as wealth or other characteristics that might be deemed relevant to the choice of distributional weights are concerned.

### *(d) The Weighted Surplus Standard*

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<sup>17</sup>Gwilym Allen, "The Treatment of Efficiencies in Merger Analysis" (speech prepared for the "Meet the Competition Bureau" conference, Toronto, May 3, 1999)  
<http://strategis.ic.gc.ca/SSG/ct0154e.html>

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38. The weighted surplus standard allows the assignment of different weights to increases in profits (shareholder gains) and consumer losses. A successful section 96 defence under the weighted surplus standard would require that shareholder gains times its weight exceed consumer losses times its weight.

39. The balancing weight approach suggested by Dr. Townley is a version of a weighted surplus standard. Rather than specifying distributional weights *a priori*, he suggests solving for the weights at which shareholder gains and consumer losses will sum to zero and deciding whether they are reasonable.

40. The weighted surplus approach suffers from significant, if not crippling, operational problems. In order to calculate the total consumer loss we assume that all consumers value a dollar foregone equally. In order to calculate shareholder (and employee) gains, we assume that all shareholders and employees value an additional dollar received equally. Having assumed that a dollar is a dollar for all consumers and a dollar is a dollar for all shareholders, we then turn around and assert that a dollar lost by consumers, *as a group*, is worth more than a dollar gained by direct and indirect shareholders, *as a group*, when there may be substantial overlap between the two groups. If there is overlap, the weighted surplus standard has the absurd implication that the same individual values a dollar paid out more highly than a dollar received. Even if there is no overlap, we don't know how, if at all, the two groups differ with respect to income levels and other characteristics governments may deem relevant. Even if we did have information on the wealth of individual consumers and shareholders, this could imply a variety of potential weighting schemes, none of which may approximate the implicit weights that the political process might generate in the situation involved.

41. The discretion afforded the adjudicator by the weighted surplus standard opens up a new set of problems. Unlike the other standards, it raises the possibility of choosing a different set of weights for each application of section 96. The weight accorded perceived differences in income between consumers and producers is likely to vary and other social characteristics of the groups involved are likely to come into play. Consistency, predictability and focus would be lost and new layers of complexity would be added. Moreover, once the principle of distributive weighting is accepted, there is no reason why a total surplus-reducing merger (deadweight loss exceeds the gain in technical efficiency) might not be allowed if the beneficiaries of that merger were regarded as being particularly deserving.

42. The weighted surplus standard has the further disadvantage of treating each dollar of shareholder gain the same regardless of its source. If it also weighs shareholder gains less heavily than consumer losses, this means that a one dollar earned by increasing the overall productive capacity of the economy is given less weight than a dollar transferred within the economy between two possibly fictitious groups called "consumers" and "producers." This could also have the effect of ruling out efficiency-enhancing mergers among firms deemed, for some reason, to have

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vulnerable or otherwise high-weight customers. This seems counter-productive.

### III. Conclusion: the role of distributional weights

43. For the foregoing reasons, in my opinion it would be wrong to attempt to incorporate differential distributional weights into trade-off analysis itself. First, I am skeptical whether as a practical matter, it is possible to improve on the total surplus standard. Second, by introducing non-efficiency considerations into trade-off analysis, it is possible to do much worse.

### IV. Conclusion: is there an adverse distributional impact in this case?

44. What of distributional weights in this case? Professor Townley suggests possible distributional concerns in connection with residential and commercial customers. My understanding is that residential customers account for approximately 14 percent of propane consumption. According to the CMR study cited by Professor Townley, residential propane customers spend an average of just over 2 percent of their annual income on propane (\$977/\$46,000). A five percent price increase in the price of propane would increase their propane costs by one-tenth of one percent (0.1%) of their annual income. This would not appear to constitute a material adverse distributional impact. Of course, the redistributive effect depends on the post-merger price increase assumed. It might be higher or lower than 5 percent.<sup>18</sup> Professor Townley also expresses concern regarding commercial customers. My understanding is that commercial customers account for almost 16 percent of propane sales. The CMR study cited by Professor Townley reports that commercial customers spend, on average, \$4,917 annually on propane. A conservative estimate of their mean annual revenues would be \$220,000 implying that propane expenses are also roughly 2 percent of the revenues of Superior's commercial customers.<sup>19</sup> These commercial customers are likely to pass a portion of any increase in the cost of propane on to their customers about whom nothing is known. Material adverse distributional consequences to commercial customers do not appear likely on the basis of the evidence cited by Professor Townley.

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<sup>18</sup>In their report, Professors Globerman and Schwindt conclude that residential heating is one of the lines of business in which small scale entry is most feasible because of the "relatively modest" sunk costs involved (p.34). If so, this would limit the ability of the merged entity to raise price.

<sup>19</sup> I have calculated this using the frequency distribution of revenues of commercial respondents in the appendix of the CMR study. I use income class midpoints except in the largest income class where I use the class lower boundary.



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### Appendix 1

#### Change in Consumer Surplus as a Proxy for Compensating Variation

Willig, Boadway and Bruce and others show that the difference between the absolute value of the change in consumer surplus,  $|\Delta CS|$ , and the compensating variation, CV, resulting from an increase in the price of a product depends on the income elasticity of demand for that product,  $e_Y$ , the square of the change in consumer surplus and the income of the consumers involved.<sup>20</sup> Algebraically, this is:

$$|\Delta CS| - CV = \frac{1}{2} e_Y \frac{\Delta CS^2}{Y} \quad (1)$$

Equation (1) can be rearranged to show that the ratio of Compensating Variation to the change in consumer surplus depends on the income elasticity of demand,  $e_Y$ , the proportion of income accounted for by expenditures on the product concerned,  $s_Y$ , and the rate of increase in the price of the product concerned,  $\Delta P/P$ . Algebraically this is:

$$\frac{CV}{|\Delta CS|} = \left( 1 + \frac{1}{2} e_Y s_Y \frac{\Delta P}{P} \right) \quad (2)$$

According to the Statistics Canada family expenditure data reported by Dr. Townley, expenditures on propane account for .23 percent of family income on average and 1.7 percent of income for the lowest family income quintile. I found an estimate of the income elasticity of residential demand for propane of .207 in the literature.<sup>21</sup> Assuming that  $s_Y$  is .03,  $e_Y$  is 0.5 and  $\Delta P/P$  is .05, .10 or .15, we have the ratio of CV to  $|\Delta CS|$  ranging from 1.000375 to 1.001125. Thus, the two measures are identical for practical purposes.

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<sup>20</sup>Robin W. Boadway and Neil Bruce, Welfare Economics (New York, Basil Blackwell, 1984) pp.216-9.

<sup>21</sup>Christopher Garbacz, "Residential Demand for Liquid Petroleum Gas" Economics Letters 15 (1984) Table 3, p.348.