ASSOCIATION OF POWER PRODUCERS OF ONTARIO
COMPENDIUM
FOR
ENBRIDGE AND UNION AMALGAMATION AND
RATE-SETTING APPLICATIONS

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INDEX

CRA Charles River Associates

Memorandum

To: Oliver Borgers, Jonathan Bitran (McCarthy Tétrault)
Cal Goldman, Richard Annan (Goodmans)

From: Margaret Sanderson, John Hayes, Hitesh Makhija

Date: February 8, 2017

Subject: **ENBRIDGE/SPECTRA: SECTION 96 TRADE-OFF ANALYSIS**

Further to your request, this memorandum discusses the application of the Canadian *Competition Act* section 96 efficiencies trade-off provision to the proposed merger of Enbridge Inc. ("Enbridge") and Spectra Energy Corp. ("Spectra" or "Union" when referring to its affiliate) (the "Proposed Transaction").

A number of submissions have been provided to the Competition Bureau ("Bureau") discussing competitive alternatives to the merging firms' merchant storage services at Dawn.[1] While merchant storage services are stand-alone services provided by the merging firms, customers are ultimately interested in acquiring natural gas. For many customers, natural gas can be obtained without the need for storage at Dawn. For example, some customers can choose to buy gas as needed, on a seasonal basis, so that no physical storage capacity is required. This purchasing option explains why the market price of storage tracks the seasonal value of natural gas, as measured by summer-winter spreads. Alternatively, customers can purchase balancing services from pipelines like TransCanada Pipeline or Vector. For customers who want to purchase storage, there are alternatives to the merging firms such as storage outside Ontario in neighbouring U.S. states such as Illinois, Michigan and New York, or storage purchased through marketers. Given the variety of options available for most customers of merchant storage, the Proposed Transaction is unlikely to materially increase prices for merchant storage services at Dawn, so there will be no resulting anticompetitive effects.

If, notwithstanding these submissions, the Bureau is concerned that there are some merchant storage customers at Dawn who do not have adequate access to alternatives and could be subject to a post-merger price increase (such as Ontario power generators), it remains the case that even for these customers there are unlikely to be any material quantifiable anticompetitive effects. First, changes in Ontario's electricity markets are expected to reduce Ontario power generators' need for committed storage at Dawn, such that Ontario power generators will be no

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1 Including "Analysis of Merchant Natural Gas Storage Competition in Ontario," Michael Sloan, ICF, January 30, 2017 [hereafter referred to as the "ICF Report"], and "Statistical Analysis of Dawn Hub Gas Prices", memorandum from Margaret Sanderson, John Hayes and Hitesh Makhija to Oliver Borgers, Jonathan Bitran (McCarthy Tétrault), Joe Matelis (Sullivan Cromwell), Cal Goldman, Richard Annan (Goodmans), January 31, 2017.

different than marketers, traders and LDCs in their lack of need for storage at Dawn. Second, even if Ontario's electricity markets remain as they are today there are unlikely to be any material allocative inefficiencies or deadweight loss associated with any possible price increase to Ontario power generators (assuming this is possible) because the quantity of storage is unlikely to be materially reduced.[2] Under either scenario, modest efficiencies from the Proposed Transaction would very likely offset and outweigh any anticompetitive effects arising from the Proposed Transaction, should the Bureau have concerns about pricing to some customers.

As Mr. Steve Baker discussed at our meeting with the Bureau, if Ontario's electricity markets change in the manner that is expected given the government's desire to: (i) reduce gas-fired generation capacity in order to reduce greenhouse gas emissions; and (ii) increase competition among generators bidding into the power grid, Ontario power generators will have less need for committed storage at Dawn. The changes that are likely to be made to Ontario's electricity market will no longer require power generators to commit to meeting any bid into the power grid if the generator is called upon to supply power to the grid at a given hour. With a more flexible system in place to supply and bid power into the grid, Ontario power generators are expected to be less committed to having merchant storage at Dawn to meet any possible bid requirements. Ontario power generators will then be like marketers, traders, and local distribution companies ("LDCs") in their need for merchant storage, which increases their options beyond Ontario and beyond physical storage.

Under the second scenario that assumes Ontario's electricity markets remain as they are today and assuming that Ontario power generators are committed to using merchant storage at Dawn, the efficient level of storage is likely to be contracted with these customers even if the merged firm could operate as a monopolist supplier of storage at Dawn to these customers (which we do not believe is likely). The reasons for this conclusion are summarized below.

1) There are a limited number of merchant storage customers that may not have adequate access to alternatives to physical storage at Dawn. We understand that the Bureau's concerns are focused on Ontario power generators because they may have sufficiently high deliverability requirements that commit them to using merchant storage at Dawn. There are a total of eight Ontario power generator customers contracting with Enbridge or Union.

[2] Whenever demand curves slope downward, any increase in price that may result from a merger is associated with a lower quantity demanded, and hence a lower quantity purchased at higher prices. The lower quantity that is purchased at the higher post-merger price generates two allocative inefficiencies, which are referred to as "deadweight loss." First, consumer deadweight loss represents the value of lost consumer surplus due to buyers reducing their purchases in response to the higher price, notwithstanding that buyers were willing to make purchases at pre-merger prices. The consumer deadweight loss is measured as the area under the demand curve that lies between the pre-merger and post-merger price levels and between the pre-merger and post-merger quantities purchased. Second, producer deadweight loss represents the value of lost producer surplus due to buyers reducing their purchases in response to the higher price when producers previously earned a variable margin on the forgone purchases at pre-merger price levels. The producer deadweight loss is measured as the variable margin earned on the pre-merger quantity multiplied by the change in the quantity demanded due to the higher post-merger price.

2) Only two of the eight Ontario power generator customers at Dawn have used both Enbridge and Union [redacted][3] With respect to the other five Ontario power generators, the rates that they currently pay are unlikely to be related to competition between Enbridge and Union because (i) many contracts with Union were entered into before Enbridge was a material provider of merchant storage services; and (ii) [redacted]

3) The combination of (1) and (2) means that any potential reduction in quantity demanded due to a post-merger price increase (and hence any resulting deadweight loss) would be restricted to a very limited number of potentially affected customers.

4) If there were to be no change in Ontario's electricity markets, we expect little to no change in the storage quantity demanded by Ontario power generators[4] even if their bargaining position vis-à-vis the merging firms is altered post-merger. Without any change in the quantity demanded, there is no deadweight loss. Various reasons exist for why storage quantities would be unlikely to change if there were to be no change in Ontario's electricity markets.

    a) Storage costs represent a fraction of any affected power generator's costs of natural gas and a smaller fraction of the customer's total costs of operation, which makes demand for storage less responsive to small changes in storage prices (i.e., demand is relatively inelastic).

    b) Storage prices are set through negotiations between the merging firms and Ontario power generators over contracts that include both fixed and quantity-based payments. We expect such bargaining to result in the efficient quantity of storage services being supplied, regardless of the number of supply options available to the customer.[5] To the extent that the Proposed Transaction removes some customers' ability to threaten to shift suppliers from Union to Enbridge, or vice versa, this would only change the negotiation of the fixed price component without affecting the per-unit pricing or contracted quantity of storage.

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3 Greenfield Energy Centre purchases storage from both Enbridge and Union. Greenfield South Power Corporation purchases storage from Enbridge [redacted]

4 If the Bureau concludes that the customers of concern have few alternatives to merchant storage at Dawn then these customers cannot switch to other storage locations or to using alternatives to storage. For those customers who have access to alternatives to merchant storage at Dawn, their demand for storage at Dawn will be more elastic.

5 If the merging firm and customers do not negotiate the efficient quantity, then they will not have maximized the joint surplus available to them, when they have every incentive to do so. They can bargain over the division of the maximum joint surplus by varying the fixed payment and leaving the per-unit price at a level that induces consumption of the efficient quantity of merchant storage.

c) Regulatory incentives limit the merging firms' ability and incentive to reduce the capacity available for merchant storage services at Dawn.

5) In addition to there being limited to no deadweight loss associated with any possible price increase, there is also no socially adverse wealth transfer because Ontario power generators are large corporate entities. Any wealth transfer from these customers to shareholders of the merging firms would not be considered "socially adverse" under the Competition Tribunal's standard adopted in the *Superior Propane Redetermination* case.[6]

6) With no quantifiable anticompetitive effects owing to no deadweight loss and no socially adverse wealth transfer, any efficiencies associated with the Proposed Transaction will satisfy the requirements of the section 96 efficiencies defence under the *Competition Act*.

7) There are cognizable, merger-specific efficiencies associated with the Proposed Transaction, including cost savings from merging the companies' merchant storage lines of business. With respect to Ontario merchant storage, Enbridge estimates that the Proposed Transaction will allow it to eliminate the majority of three of its administrative functions – Sales/Marketing, Contracting and Customer Administration – for its merchant storage line of business without reducing the quantity of merchant storage available or the number of merchant storage customers. There are also very substantial synergies associated with the Proposed Transaction overall.

We elaborate on this summary below.

Limited Pre-Merger Competition between Enbridge and Union

Most natural gas storage at Dawn is used by the parties to supply natural gas to their regulated utilities.[7] There is no competition between Enbridge and Union to provide this storage to their regulated utility customers.[8]

With respect to merchant storage, Union has been the predominant supplier at Dawn since the Ontario Energy Board, in its 2006 NGEIR decision, determined that such services could be provided on an unregulated basis.[9] Union has 79.9 Bcf of merchant gas storage capacity at Dawn. Enbridge remains a small player in the supply of merchant gas storage services at

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6 *Commissioner of Competition v. Superior Propane Inc. and ICG Propane Inc.* [2002]. "Reasons and Order Following the Reasons for Judgment of the Federal Court of Appeal Dated April 4, 2001." Competition Tribunal.

7 ICF Report, p. 16. Enbridge informs us that 85 percent of its storage is under regulated rates as part of its use for In-Franchise customers.

8 Merchant storage capacity cannot be physically separated from the storage used for regulated services.

9 Ontario Energy Board Decision with Reasons, EB-2005-0551 Natural Gas Electricity Interface Review (NGEIR Decision), November 7, 2006.

Dawn,with only 16.3 Bcf of merchant gas storage capacity. Thus, Enbridge's merchant storage capacity share at Dawn is 17 percent, while Union has the remaining 83 percent.

Reflecting its smaller share of third-party capacity, Enbridge has not bid on many merchant storage contracts. Enbridge's bid database, which includes all contracts on which a customer has solicited a formal RFP from Enbridge, includes only six bids since 2010.[10] In contrast, Union has bid on 34 contracts since 2010.[11]

Very Small Number of Potentially Affected Customers

Focusing on the merchant storage customers in Ontario, which we are informed is the set of customers of potential concern to the Bureau, the ICF Report finds that 21 of 42 customers[12] also hold storage contracts with other storage providers in Michigan, New York, Illinois, or Iowa.[13] These customers appear to have ready access to alternative storage services, so the Proposed Transaction is unlikely to materially increase prices to these customers.[14]

The remaining 21 customers that may only hold storage contracts at Dawn[15] purchased a total of 31.2 Bcf storage capacity from Union and 8.44 Bcf storage capacity from Enbridge, accounting for 36.2 percent of the storage capacity sold by Enbridge and Union (see Exhibit 1). Of these 21 customers, only two [redacted] are included in the Enbridge bid database, [redacted] Customers that have only used Union [redacted] may not experience a change in their competitive options due to the Proposed Transaction (see Exhibit 2).

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10 These six bids relate to [redacted]

11 The Union bid data file contains all storage requests received by Union from January 1, 2010 to November 1, 2016 via a formal RFP or other communication method, including email.

12 Exhibit 4-2 of the ICF report lists 43 customers that purchase merchant storage from Union or Enbridge. From this list of 43 customers, we have excluded Centra Gas and Energy Source Natural Gas from our analysis. We understand that Centra Gas is a subsidiary of Union Gas. Enbridge is co-developing a storage pool with Centra. We also understand that Energy Source Natural Gas has not contracted for any merchant storage capacity at Enbridge or Union. Energy Source Natural Gas purchases 0.03 Bcf of excess utility space at Union. Finally, the St. Clair Energy Service purchases market deliverability from Union and is included in our analysis but is not listed in Exhibit 4-2 of the ICF report. We understand that St. Clair Energy Service does not purchase any storage from FERC regulated storage providers.

13 Most of the customers with storage capacity contracted outside Ontario are marketers and traders. We understand that the Bureau has indicated that it does not have competition concerns with respect to marketers and traders. We understand that marketers and traders hold capacity at multiple locations and also hold a very significant share of the pipeline capacity into and out of Ontario. This gives the traders and marketers greater flexibility to serve Ontario markets and to compete against Union and Enbridge.

14 ICF Report, at v.

15 Some of these customers may also hold storage contracts outside Dawn, which ICF was unable to verify.

Ontario power generators, which we understand are the only merchant storage customers in Ontario that have a need for higher deliverability, make up a small fraction of Enbridge and Union merchant storage customers. Enbridge has two power generator customers and Union has seven power generator customers[16] (see Exhibits 3A and 3B), for a total of eight unique customers across Enbridge and Union.[17] These customers accounted for only 6.1 percent of Enbridge's merchant storage revenues in 2016 (January – October) and only 15.6 percent of Union's merchant storage revenues in 2016 (January – October),[18] as reported in Exhibit 4. Combined, Ontario power generators represented 14.5 percent of Enbridge and Union merchant storage revenues in 2016 (January – October), amounting to annualized 2016 storage revenues of CAD$16.1 million.[19]

Among the eight unique power generator customers at Dawn, only two have used Enbridge and Union, [redacted][20] These two customers paid a total of CAD$2.3 million for merchant storage to Union and Enbridge in 2016 (January – October), which represents only 2.5 percent of the parties' combined total merchant storage revenues.

In summary, any possible competition concerns with respect to merchant storage prices at Dawn are limited to very few customers and involve very little revenue.

Demand for Storage Is Unlikely to Change with a Change in Price

For any power generator customers requiring storage at Dawn, storage costs represent a fraction of the costs of acquiring natural gas and an even smaller fraction of a customer's overall costs of operation. While we do not have details on customers' operating costs, it is likely that the costs of storage at Dawn are a small fraction of these firms' total costs of operation. It is well understood in economics that the demand for a component that represents a small share of total costs and that is used to produce a highly valuable end product will be relatively inelastic. We expect this to be true for merchant storage. Relatively inelastic demand is generally associated with a smaller deadweight loss, although we note that inelastic demand also allows for larger price increases relative to more elastic demand.

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16 Union's power generator customers include two customers (St. Clair Energy Service and TransCanada Power) that have no contracted storage capacity but have contracted maximum daily injection and withdrawal capacity.

17 Greenfield Energy Centre purchases storage from both Union and Enbridge.

18 We only have Enbridge and Union merchant storage revenue data for the first 10 months of 2016.

19 January – October 2016 revenues for Union contracts with Ontario power generators were CAD$12.65 million, which is an average of CAD$1.265 million per month. Thus, the annualized amount over 12 months is CAD$15.18 million. According to Enbridge, 2016 revenues from Ontario power generators were CAD$0.873 million. Hence, combined Enbridge and Union 2016 revenues from Ontario power generator were $15.18 million + $0.873 million = CAD$16.1 million.

20 Greenfield Energy Centre purchases storage from both Enbridge and Union. Greenfield South Power Corporation purchases storage from Enbridge [redacted]

Negotiated Contract Structure Implies No Quantity Reduction

The structure of the contracts negotiated between the merging parties and their Ontario power generator customers provides another reason why the quantity of merchant storage would not be reduced below the efficient level, even if the merger resulted in a price increase to some customers. The contracts negotiated by providers of storage services and individual customers include both a fixed payment and a variable, or quantity-based, payment. Economists call this type of payment a "non-linear" price or a "two-part tariff." In markets where a small number of buyers and sellers negotiate individualized contracts with two-part tariffs, economists expect the negotiating parties to reach agreements to buy and sell the efficient quantity.[21]

Merchant storage contracts with Ontario power generators provide for maximum storage capacity, as well as maximum daily and hourly injection and withdrawal rates depending on each customer's specific requirements. As such, contracts are highly individualized. Pricing terms have a fixed and variable component. The variable component of Union's contracts with power generator customers has been the same amount since the NGEIR decision and is the same across customers, at CAD 0.7 cents per GJ,[22] while the fixed component of the contract (which Union refers to as the "demand rate") varies across customers and over time.

Only the variable component of the storage costs will influence the quantity of merchant storage demanded by Ontario power generators because the fixed costs are independent of the quantity chosen.[23] Regardless of the number of supply options, a merchant storage seller and its customer will always have the incentive to negotiate payment terms that result in the efficient quantity of storage being consumed because this is the storage quantity that maximizes the joint surplus available for the negotiating parties to share. The division of that surplus can then be adjusted by manipulating the fixed component of the payment. Indeed, as explained above, Union's contracts feature the same, low variable cost of CAD 0.7 cents per GJ, while the fixed components vary across customers and over time. There is no reason to believe the merger would alter that variable cost. Instead, if the Proposed Transaction were to increase the bargaining power of one of the merging parties in negotiations with certain power generators, we would expect the increased bargaining power to result in a higher fixed payment. When this

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21 An "efficient" outcome is one that involves trade, or a purchase, such that the sum of the customer's consumer surplus and the supplier's producer surplus is maximized. That is, trade is efficient if there is no deadweight loss.

22 Union informs us that the CAD 0.7 cents/GJ is reflective of the fuel charged in Union's MPSS rate schedule and the M12/C1 rate schedules. The variable rate is composed of the commodity rate on the MPSS rate schedule of CAD 0.6 cents/GJ plus CAD 0.1 cents/GJ for dehydration (CAD 0.4 cents/GJ x 90 days average usage / 365 days = CAD 0.7 cents/GJ. The fuel and commodity cost is the same for long-term storage and power generator customers. These costs can be considered a proxy for the marginal cost of existing storage.

23 The fixed component of storage costs will affect the overall profitability of the power generators, but a negotiation should not result in fixed costs so high as to drive a power generator out of business because this would not be in the interest of either the generator or the merging parties, who would lose a valuable customer.

happens, the effect of any merger-related price increase is entirely a "transfer" from buyers to sellers with no associated deadweight loss.[24]

Storage prices are negotiated by sophisticated purchasers and suppliers of merchant storage services, so we would expect the parties to be capable of bargaining to reach economically efficient outcomes. Otherwise, they are missing out on potential surplus that they could easily capture by restructuring the contract to have a higher fixed payment and lower variable cost. Storage is a stable technology and Union and Enbridge have been providing service to most of the same customers for some time. Therefore, informational asymmetries that can sometimes prevent the negotiation of efficient quantities are not present in this case. Contracts provide for long-term commitments by both parties to meet the buyer's storage, injection and withdrawal requirements. Contracts are entered into at different times with different customers and have lengthy initial terms.[25] Union's contracts with its power generator customers are 10 or 20 year contracts.[26]

Moreover, even if the merging parties and the power generators were not necessarily negotiating efficient contracts, the Proposed Transaction would be unlikely to impact many Ontario power generator customers because their current contracts were negotiated without competition between Union and Enbridge. Four of Union's seven contracts with Ontario power generators were entered into in 2008 and 2009,[27] before Enbridge was an active supplier of third-party storage at Dawn, and as such the contract terms for these customers are unlikely to have been influenced by Enbridge. Three of Union's Ontario power generator contracts expire in 2022, 2027 and 2028, respectively, and as such these customers would not have the opportunity to use Enbridge as an alternative storage supplier to Union for some time to come.[28] The three Union Ontario power generator contracts with near-term expiry dates generated storage revenues of CAD$5.1 million in 2016 (January – October).[29] This puts an upper bound on the volume of

25 Renewal terms may be much shorter than the initial contract length.

26 Union's contracts with Thorold CoGen, Greenfield Energy Centre, Portlands Energy Centre, and York Energy Centre have 10 year terms. Union's contract with Goreway Station Partnership has a 20 year term.

27 Union's contracts with Thorold CoGen, Greenfield Energy Centre and Goreway Station Partnership were entered into in 2008. Union's contract with Portlands Energy Centre was entered into in 2009. Union's contract with York Energy Centre was entered into in 2012.

28 Union's contract with York Energy Centre expires on October 31, 2022, its contract with St. Clair Energy Service expires on October 31, 2027 and its contract with Goreway Station Partnership expires on October 31, 2028.

29 Union's contract with Greenfield Energy Centre expires on October 31, 2018. Union's contracts with Thorold CoGen and Portlands Energy Centre expire on March 31, 2019.

Union customer revenues that could potentially be impacted by the Proposed Transaction. In the case of Enbridge, its two Ontario power generator contracts expire in the next two years.[30]

Non-linear and non-uniform pricing that is established between a sophisticated buyer and a sophisticated seller through a negotiation that covers a lengthy term will be flexible enough to meet a variety of future market conditions and will result in an efficient outcome. There is no reason to believe the current contracts are inefficient despite the fact that most were negotiated without bids from both Union and Enbridge. We fully expect the efficient outcomes following the Proposed Transaction, for these Ontario power generator customers as well as others. In sum, there would be no (or very little) change in the quantity of merchant storage services acquired at Dawn even if the Proposed Transaction alters the bargaining position that Union and Enbridge have with the limited number of customers of concern to the Bureau.[31]

Regulation Limits Incentive and Ability to Remove Storage Capacity

While the OEB has forborne from regulating the rates for merchant storage at Dawn, there remain some regulatory conditions that limit the parties' incentive and ability to reduce the storage capacity that is available in the merchant market. Of particular relevance, the parties are required by the OEB to post operating capacity and contracted capacity publicly.[32] As a result, customers can monitor the removal of storage capacity and can lodge a complaint with the OEB if they are unable to contract because storage has been withdrawn.

No Socially Adverse Anti-Competitive Effects

Ontario power generators, which we understand are the customers of concern to the Bureau, are large corporate entities. As such, any wealth transfer from these customers to the merging firms would not meet the requirements of the Competition Tribunal for a "socially adverse" anticompetitive effect.

Moreover, the magnitude of any wealth transfer from Ontario power generators to the merging firms would be small. As noted above, Enbridge and Union's combined merchant storage revenues from Ontario power generators using Dawn amounted to CAD$16.1 million on an annualized basis for 2016. Not all of these customers – or even any of these customers – are

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30 Enbridge's contract with Greenfield Energy expires on March 31 2018 and its contract with Greenfield South expires on August 31 2019.

31 We have also considered the possibility that demand is not perfectly inelastic such that there would be some small change in the quantity of storage purchased by Ontario power generators in the event of a price increase. If we assume a demand elasticity equal to -0.10 or -0.25, and assume variable margins of 50% or 70%, the annual deadweight losses (in consumer and producer surplus) are below the annual expected cost savings (using the midpoint of 2016 and 2017 cost savings) even if prices were to increase by 20% across all Ontario power generator customer revenues of CAD$16.1 million. As we expect that prices would not increase by this amount and would not increase to all Ontario power generator customers, and that demand is likely to be very inelastic (closer to -0.10 than -0.25), the quantifiable anticompetitive effects will certainly be less than the quantifiable efficiencies even if there is some change in the quantity demanded.

32 OEB's Storage and Transportation Access Rule (December 9, 2009), sections 4.1 and 4.2.

likely to face higher prices for their storage at Dawn following the Proposed Transaction for the reasons described herein. Even if we assume a 5 percent increase in price across all eight Ontario power generator customers this would result in a transfer of CAD$802,884 from Ontario power generators to the merging firms.

If a 5 percent increase impacted only the three Ontario power generator customers with Union contracts that expire in the next two years, it would result in a transfer of about CAD$304,279 to the merging firms on an annualized basis in 2016.[33] The two Ontario power generator customers with Enbridge contracts that either use Union as well [redacted] generated Enbridge storage revenues of CAD$0.873 million in 2016. A 5 percent increase in price for these customers would result in a transfer of about CAD$43,650 to the merging firms.

Whether one considers just the Ontario power generators with near-term expiring contracts or all Ontario power generators, any transfer associated with a 5 percent increase in price (assuming a price increase of 5 percent is even possible) would be small in magnitude relative to the value of the Proposed Transaction. Furthermore, any such transfers would be payments from one set of large corporate entities – the Ontario power generators – to another – the merging firms. As a result, the transfers would not be considered socially adverse for the reasons discussed herein.

We have also considered the hypothetical possibility that socially adverse consequences could arise if changes in the price of storage were to affect power prices in Ontario.[34] We find that this hypothetical is implausible and should be of no concern to the Bureau. Though gas power generators are marginal suppliers of power during some hours and, therefore, set the market price at some hours of the day, it is highly unlikely that a change in storage costs at Dawn would change the gas power generators' bid prices of power.

As noted above, Ontario power generators' storage contracts have a fixed and variable component. Economic theory predicts that only the variable component of the cost of storage (which would be part of the marginal cost of supplying electricity) would be directly passed through in power generators' offers to sell electricity. Fixed storage charges should not affect power generators' marginal costs or bid prices for electricity.

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33 The three Union Ontario power generator contracts with near-term expiry dates generated storage revenues of CAD$5.1 million in 2016 (January – October), which is an average of CAD$0.51 million per month. Thus, the annualized amount over 12 months is CAD$6.1 million. A 5% increase in price would be 0.05*$6.1 million, which is CAD$304,279.

34 Our understanding of this issue has benefitted from information provided by Mr. George Vegh of McCarthy Tétrault and Mr. Robert Cary, Senior Consultant to CRA. Mr. Vegh is the head of McCarthy Tétrault's Toronto energy regulation practice. Prior to joining McCarthy Tétrault, Mr. Vegh was General Counsel of the Ontario Energy Board. Mr. Cary has more than 20 years of experience in the electricity industry and has been instrumental in the development and advancement of a number of Canadian provinces' electricity markets. Prior to founding his own consulting practice, Mr. Cary held positions at Westcoast Power, AGRA Monenco, and Darchem Limited.

The fixed component of contract terms with power generators is by far the largest cost. For Union, storage revenues from Ontario power generators associated with fixed charges amount to 99 percent of total revenues from these customers. Union's total variable revenues in 2016 (January – October) were only CAD$114,862. Similarly for Enbridge, the fixed component of contract terms with power generators is the largest. Storage revenues from Ontario power generators associated with variable charges amount to 7 percent of Enbridge's 2016 (January – October) revenues from these customers. Enbridge's variable revenues from Ontario power generator contracts in 2016 (January – October) were only CAD$48,333.

To the extent that generators were to incorporate increased variable merchant storage charges into their electricity offers, and that these higher offers were to result in higher electricity market prices when such generators were the marginal suppliers of electricity, the end effect on consumers would be strongly muted, and in any event would not result in materially higher costs of electricity for residential and other small customers. Electricity consumers pay two components of energy generation costs: the energy market price (often referred to as the Hourly Ontario Electricity Price or "HOEP"), which is set by the market; and the Global Adjustment ("GA"), which covers all the costs for payments under long-term supply contracts. The long-term energy supply contracts are all structured so that the net payments are reduced as the HOEP increases, all else equal. Therefore, the combined total of HOEP and GA would be substantively unchanged by the addition of variable storage costs into generator offers. The GA's charge mechanism allocates proportionately more of the GA cost to energy used by small consumers than to that used by large consumers. The net effect of an increase in the HOEP would thus be at worst a small redistribution of total cost from small consumers to large consumers. In the competition trade-off analysis, the only electricity consumers that might be affected are large, enterprise customers and any transfer from such consumers would not be considered to be socially adverse.

Anticipated Cost Savings

Enbridge's merchant storage line of business is not large, as already noted. Enbridge runs this business using part of the time of three employees for a total of two full-time equivalents ("FTEs"). Given Union's larger operations, it is Enbridge's expectation that Union can readily absorb managing the terms of the Enbridge contracts without any need for the two FTEs within Enbridge. As a result, all salary, benefit, travel, supply and miscellaneous expenses associated with these individuals would be saved. Below we provide a breakdown of these costs for Enbridge in 2016 and Enbridge's 2017 budget without the transaction.[35] The 2016 costs are based on six months of actual costs and six months of forecast costs, as this is how Enbridge reports the figures.

[35] Some expenses have been reclassified between categories for Enbridge between 2016 and 2017.

Enbridge Cost Saving Categories, 2016 Costs and 2017 Budget

	2016 Costs (CAD)	2017 Budget (CAD) [no transaction]
All salary and benefits costs	[redacted]	[redacted]
Temporary labour	[redacted]	[redacted]
Computer software, supplies, postage, reproduction services	[redacted]	[redacted]
Legal fees	[redacted]	[redacted]
Travel + conferences (airfare, accommodation, sponsorships)	[redacted]	[redacted]
Internal expense allocations and charges associated with the expenses for merchant storage line of business	[redacted]	[redacted]
Total	[redacted]	[redacted]

In addition to the costs described in the table, there are two other categories of expenditures with potential savings. First, Enbridge had professional consulting services costs of [redacted] in 2016 with a planned 2017 budget of [redacted] At this juncture, Enbridge does not know how much of this category would be saved under the Proposed Transaction. Second, a portion of the regulated business' costs for managing injection and withdrawal are allocated to the merchant storage business based on usage. To the extent that the merger allows the combined entity to optimize its management of injection and withdrawal, these charges would be reduced. The costs for managing injection and withdrawal that were allocated to the merchant storage business were [redacted] in 2016 and are budgeted at [redacted] in 2017.

While the efficiencies that can currently be quantified are modest in totality, they represent [redacted] of Enbridge's 2017 budget for its merchant storage business that would be saved through the Proposed Transaction. Moreover, as noted above, there are no (or extremely limited) quantifiable anticompetitive effects from the Proposed Transaction given the lack of deadweight loss and the lack of any socially adverse wealth transfer.

Exhibit 1

Ontario Storage Customers Purchasing Merchant Storage at Michigan, New York, Illinois, or Iowa

As of January 2017

	Customers		Capacity	
	Count	**Share of Total**	**Amount (Bcf)**	**Share of Total**
Ontario Storage Customers That Don't Purchase Storage at Michigan, New York, Illinois, or Iowa	21	50.0%	39.64	36.2%
Ontario Storage Customers That Also Purchase Storage at Michigan, New York, Illinois, or Iowa	21	50.0%	69.84	63.8%
Enbridge Storage Customers That Don't Purchase Storage at Michigan, New York, Illinois, or Iowa	6	46.2%	8.44	51.7%
Enbridge Storage Customers That Also Purchase Storage at Michigan, New York, Illinois, or Iowa	7	53.8%	7.87	48.3%
Union Gas Storage Customers That Don't Purchase Storage at Michigan, New York, Illinois, or Iowa	19	50.0%	31.2	33.5%
Union Gas Storage Customers That Also Purchase Storage at Michigan, New York, Illinois, or Iowa	19	50.0%	61.97	66.5%

Notes:

[1] Centra and Energy Source Natural Gas have been excluded from this analysis.

[2] St. Clair Energy Service purchases market deliverability from Union and is included in this analysis but is not listed in Exhibit 4-2 of the ICF report.

Sources:

[a] ICF, Analysis of Merchant Natural Gas Storage Competition in Ontario, January 30, 2017, Exhibit 4-2 and supporting worksheets.

[b] Union Gas Data.

Exhibit 2

Enbridge and Union Gas Customers With Storage at Dawn Only

As of January 2017

Customer Name	Union Gas 2016 Revenues ($ CAD)	Enbridge 2016 Revenues ($ CAD)	Used Both EGD & Union In 2016	Uses Union, [redacted]	Uses Enbridge, [redacted]
AltaGas	$2,863,404	$0	No		
Exelon Generation	$942,032	$0	No		
Freepoint Commodities	$450,433	$0	No		
Gaz Metro	$8,377,813	$0	No		
[redacted]					
Greenfield Energy Centre LP		$511,699	Yes		
Greenfield South Power Corporation	$0	$146,132	No		
Iberdrola Energy Services	$0	$4,426,729	No		
MIECO INC	$596,545	$0	No		
NextEra Energy Power Marketing	$61,358	$0	No		
NJR Energy Services Company	$1,322,951	$0	No		
Noble Americas Gas & Power Corp.	$771,697	$0	No		
Petrochina International	$1,074,291	$952,040	Yes		
[redacted]					
Powerex Corp.	$5,528,679	$0	No		
[redacted]					
St. Lawrence Gas	$286,649	$262,035	Yes		
[redacted]					
TransCanada Power	$897,600	$0	No		
Utilities Kingston	$209,669	$85,618	Yes		
York Energy Centre LP	$1,977,043	$0	No		

Notes:

[1] Enbridge customer revenue converted from US Dollars to Canadian Dollars using data on average montly exchange rates published by Bank of Canada.

[2] Uniong Gas 2016 revenues and Enbridge 2016 revenues refer to the January - October 2016 time period.

Sources:

[a] ICF, Analysis of Merchant Natural Gas Storage Competition in Ontario, January 30, 2017, Exhibit 4-2.

[b] Union Gas Data.

[c] Enbridge Data.

Exhibit 3A

Enbridge Merchant Storage Contracts With Ontario Power Generators

As of January 2017

Customer Name	Contracted Storage Capacity (Bcf)	Contracted Peak Deliverability (Mcf)	Contract Start Date	Contract End Date
Greenfield Energy Centre	0.12	11,999	1-Jun-08	31-Mar-18
Greenfield South Power Corp.	0.15	15,571	1-Apr-16	31-Aug-19

Source:

[a] ICF, Analysis of Merchant Natural Gas Storage Competition in Ontario, January 30, 2017, Exhibit 1-6.

Exhibit 3B

Union Gas Merchant Storage Contracts With Ontario Power Generators

As of January 2017

Customer Name	Contracted Storage Capacity (Bcf)	Contracted Peak Deliverability (Mcf)	Contract Start Date	Contract End Date
Goreway Station Partnership	0.57	121,321	1-Jul-08	31-Oct-28
Greenfield Energy Centre	0.20	40,000	1-May-08	31-Oct-18
Portlands Energy Centre	0.47	37,913	1-Jan-09	31-Mar-19
St. Clair Energy Service	0.00	26,092	1-Jan-13	31-Oct-27
Thorold CoGen	0.16	41,704	1-Nov-08	31-Mar-19
TransCanada Power	0.00	33,264	1-Oct-14	14-Jan-20
York Energy Centre	0.17	83,080	1-Apr-12	31-Oct-22

Note:

[1] St. Clair Energy Service purchases market deliverability from Union and is included in this analysis but is not listed in Exhibit 1-6 of the ICF report.

Sources:

[a] ICF, Analysis of Merchant Natural Gas Storage Competition in Ontario, January 30, 2017, Exhibit 1-6.

[b] Union Gas Data.

Exhibit 4

Share of Enbridge and Union Gas Storage Revenue Associated with Ontario Power Generators

January 2016 - October 2016

Company	Revenues (Thousands of CAD)		Share of Revenue Associated With Power Generators [c]=[a]/[b]
	Power Generators [a]	All Customers [b]	
Enbridge	$ 658	$ 10,842	6.1%
Union Gas	$ 12,654	$ 81,062	15.6%
Total	***$ 13,312***	***$ 91,904***	***14.5%***

Note:

[1] Enbridge customer revenue converted from US Dollars to Canadian Dollars using data on average montly exchange rates published by Bank of Canada.

Sources:

[a] ICF, Analysis of Merchant Natural Gas Storage Competition in Ontario, January 30, 2017, Exhibit 1-6.

[b] Union Gas Data.

[c] Enbridge Data.

A practical guide to efficiencies analysis in merger reviews

Draft for Public Consultation

This consultation takes place between March 20, 2018 and May 3, 2018 (30 days later).

Table of contents

Part 1: Introduction

Consistent with the Commissioner of Competition's (the "Commissioner") commitment to transparency, this document is intended to inform businesses and their advisors of the Competition Bureau's (the "Bureau") most recent experience conducting the trade-off analysis in accordance with section 96 of the *Competition Act* (the "*Act*") and in what circumstances the Commissioner may exercise his discretion to not challenge an otherwise anti-competitive merger due to efficiency gains [1]. The guidance provided herein is focused on the Bureau's internal assessment of section 96 prior to making an enforcement decision.

The vast majority of merger transactions do not raise competition concerns under the *Act*. The Bureau's approach is to expeditiously identify those few transactions that may raise material competition concerns and provide quick clearance for remaining transactions to provide commercial certainty and allow parties to achieve any efficiencies as quickly as possible [2]. Only a minority of cases raise potential material competition concerns and therefore require the production of documents pursuant to a Supplementary Information Request ("SIR") or an order of the Court pursuant to section 11 of the *Act*. In an even narrower subset of cases, an analysis of efficiency claims will be required. The guidance provided herein is primarily intended to apply to this small subset of cases given the significant complexity of the analysis involved [3].

1.1 Overview of the Trade-Off Analysis

Section 92 of the Act allows the Competition Tribunal ("Tribunal") to make an order when it finds that a merger "prevents or lessens, or is likely to prevent or lessen, competition substantially." A substantial prevention or lessening of competition ("SPLC") results only from mergers that are likely to create, maintain or enhance the ability of the merged entity, unilaterally or in coordination with other firms, to exercise market power [4].

Section 96 of the *Act* provides an efficiency exception to the provisions of section 92. Where efficiency gains that are likely to be brought about by the merger are greater than, and offset, the anti-competitive effects, the Tribunal shall not make an order under section 92. This trade-off involves a cost benefit analysis that assesses whether the alleged efficiency gains from the merger, which result from the integration of resources, outweigh the anti-competitive effects, which result from the prevention, reduction or elimination of competition caused by the merger [5]. In matters brought before the Tribunal, the Bureau bears the burden of establishing any anti-competitive effects of a merger, while the merging parties bear the burden of establishing any relevant efficiency gains [6] and that such efficiency gains are likely to be greater than, and will offset, the likely anti-competitive effects of the merger [7].

Although the *Act* is structured such that efficiency gains arising from an otherwise anti-competitive merger may be raised as a defence, where the Bureau has determined that a merger is likely to result in an SPLC and the merging parties have made efficiency claims, where possible the Bureau will seek the information necessary to perform the trade-off analysis before the Commissioner decides whether to challenge the merger, accept a remedy [8], or take no action. Practically speaking, this analysis generally means analyzing the anti-competitive effects associated with the merger, determining the appropriate remedy, and trading the anti-competitive effects off against the cognizable efficiencies that will be lost as a result of the remedy.

The decision of the Supreme Court of Canada in *Tervita* provides guidance on the application of section 96. Additional guidance on the application of section 96 has been provided by the Federal Court of Appeal and the Tribunal, including in the *Superior Propane* series of decisions [9].

1.2 Process Considerations

In appropriate cases and when provided with timely and sufficient information validating claimed efficiencies, the Bureau may assess the trade-off internally and will not necessarily resort to the Tribunal for adjudication of the issue [10]. The trade-off analysis is typically a very complex exercise and an iterative process that can have an impact on the overall timing of the Bureau's review. Further, where the merger is being reviewed in other jurisdictions, a thorough assessment of alleged efficiency gains has the potential to result in a misalignment on timing and outcome [11].

Parties asserting an efficiency defence are encouraged to provide their initial efficiencies submissions and available supporting information at an early stage, recognizing that additional information will be required as the Bureau's analysis progresses. This will allow the Bureau sufficient opportunity to analyze potential effects and efficiencies concurrently. It is up to the merging parties to decide whether to assert efficiency gains from the merger, and how and when to engage with the Bureau on efficiencies. However, providing the Bureau with sufficiently detailed information regarding efficiency claims at an early stage of the process will facilitate the preparation of focused information requests and/or the targeted use of other information gathering mechanisms. The Bureau does not view the merging parties raising efficiency claims as a concession that anti-competitive effects are likely to result from the merger, and will continue its analysis of the likelihood of anti-competitive effects.

In other instances, merging parties have waited for a definitive conclusion as to whether or not the merger is likely to result in an SPLC before providing detailed information about efficiencies. This approach typically lengthens the Bureau's review process since the assessment of efficiencies claims is iterative, and the provision of a submission is only the first step in this assessment. While merging parties might seek to hold back a submission until the Bureau has made determinations regarding the scope of the potential remedy or narrowed the scope of a merger that is under review, this will come at the cost of time that could have otherwise been spent engaging on the efficiencies claims. For notifiable transactions where the Bureau has concluded that the transaction will likely result in an SPLC and a consideration of efficiencies continues past the expiry of the statutory waiting period, the Commissioner will seek a commitment from merging parties to not close the transaction, enabling the Bureau to focus on the trade-off analysis rather than pursuing an application with the Tribunal to challenge the merger.

In the Bureau's experience, in certain instances, merging parties have not been either willing or able to provide efficiencies-related information or submissions at an early stage of the review. This may arise because of information restrictions during the due diligence phase, which could result in parties having insufficient certainty relating to efficiencies to be in a position to make submissions to the Bureau at an early stage. Where this is the case,

the Bureau will test efficiency claims as sufficiently detailed information becomes available; however, the Commissioner will not delay making an enforcement decision where parties have not substantiated their claims with evidence in a timely manner, particularly in the absence of a timing agreement.

1.2.1 An order under s.92

To be considered under subsection 96(1), it must be demonstrated that the efficiency gains "would not likely be attained if the order (before the Tribunal) were made." [12] This involves considering the nature of potential remedies, and assessing the anticipated efficiency gains to determine whether these gains are likely to be attained if the potential remedy is implemented.

Parties asserting an efficiency defence are encouraged to provide their initial efficiencies submissions and supporting information early in the merger review process. Practically speaking, since the relevant efficiencies depend on the nature of the remedy, in most cases efficiency claims cannot be fully assessed until the Bureau has determined whether the merger is likely to result in an SPLC and, if so, identified the appropriate remedy. Accordingly, as remedy discussions are ongoing, it will be necessary to continue the efficiencies analysis to reflect the impacts on claimed efficiencies of any proposed remedies. It is likely that further information will be required by the Bureau as this analysis is underway, as the merging parties are best placed to provide information regarding the impacts on efficiencies that any potential remedy would have.

In the Bureau's experience, a helpful approach is to consider in an initial submission the efficiencies that would be lost in the case of a remedy involving a full block, while providing the calculations and supporting information at the most disaggregated level practicable. In many cases, this would mean providing information at the location or facility level. This will allow the Bureau and the merging parties to update the efficiencies analysis as the Bureau's review progresses.

Another potential approach has been for the merging parties to consider potential orders and calculate the efficiencies that would be lost. This approach is typically most applicable where there are fewer product and geographic markets at issue and therefore fewer potential remedies to consider, or where the merging parties have also sought to quantify anti-competitive effects.

1.3 Quantitative versus Qualitative Evidence in the Trade-Off

Assessing the likely anti-competitive effects resulting from a merger, as well as assessing the likely efficiencies being realized from a merger, are both predictive exercises, the results of which can be supported by quantitative evidence, qualitative evidence, or both.

If the merging parties assert an efficiency defence, the Bureau will undertake to quantify, by estimation, all anti-competitive effects that are reasonably quantifiable. There are a variety of methodologies that Bureau staff and experts use to quantify anti-competitive effects. Factors such as the availability of data, the reliability of that data, particular market characteristics (e.g. specifics as to how firms are competing), theories of harm, and the availability of natural experiments or other means of identifying causal relationships from the data will dictate which quantification methodology or methodologies are used and their reliability. However, since these models are predictive, they always carry some associated margin of uncertainty. All quantification exercises can be affected by the choice of methodology, and any assumptions that, to varying extents, are subjective. Consequently, the Bureau places importance not only on the estimates themselves, but also on the legitimacy of the underlying methodology, the quality of the data, the precision of the estimates, and the robustness of the overall quantification exercise. Accordingly, qualitative evidence is also informative, even where the Bureau quantifies anti-competitive effects.

Section 96 does not require the Bureau to exhaust every option to estimate anti-competitive effects empirically. In cases where anti-competitive effects of a merger are not reasonably measurable, the Bureau may place more weight on an assessment of anti-competitive effects based on qualitative evidence, since in these cases a well-developed assessment based on qualitative evidence may be more probative than an unreliable assessment of effects based on quantitative evidence.

Efficiencies analyses, similar to analyses of anti-competitive effects, are forward looking estimations and therefore are associated with varying degrees of uncertainty. Empirical studies have found that synergies can be overstated, and/or implementation costs can be underestimated [13]. For example, integration plans may be based on the best information available to the buyer (or to the merging parties parties); however there are restrictions as to what information the buyer (or each party) has access. As a result, an efficiencies analysis often involves subjective assumptions regarding how the acquired company (or the respective merging companies) operates. Even where more complete information is attainable, unforeseen circumstances can arise such as incompatible equipment or software, difficulties in terminating supply or employment contracts, or incompatible internal cultures, that reduce the likelihood that efficiencies will be achieved in the quantum estimated, or possibly even at all in specific areas.

The same scrutiny applied to estimates of anti-competitive effects will apply to estimates of efficiencies. Given the importance of objectivity, efficiencies claims based upon the subjective assumptions of management will typically not be sufficient to substantiate efficiencies claims. For the Bureau to decide not to challenge an anti-competitive merger or portion of a merger, it requires verifiable estimates of efficiencies with sufficient supporting information to assess their likelihood, to understand underlying assumptions, and to perform sensitivity tests on any models or forecasts used to derive the estimates. Part 3 outlines the type of information that will allow the Bureau to assess the merging parties' estimates.

In conducting the trade-off analysis, where the bulk of the anti-competitive effects and efficiencies are quantifiable, a trade-off assessment supported by quantified evidence of effects and efficiencies will often be dispositive and a thorough analysis of non-quantifiable effects and efficiencies may not be necessary. However, in other cases there may be substantial non-quantifiable effects or efficiencies that affect the trade-off analysis, in which case the Bureau will assess both the qualitative and quantitative evidence of effects and efficiencies.

Part 2: Analysis of Anti-Competitive Effects

An SPLC finding under section 92 results from mergers that are likely to create, maintain or enhance the *ability* of the merged entity, unilaterally or in coordination with other firms, to exercise market power [14]. The SPLC test is therefore, not confined to assessing the likelihood of price increases. Market power can manifest in ways other than an increase in price. Determination of the relevant anti-competitive effects depends upon the particular circumstances of the merger in question and the markets affected by the merger. The Bureau examines all relevant price and non price effects, including negative effects on allocative, productive and dynamic efficiency; redistributive effects; and effects on service, quality and product choice. A non-exhaustive list of potential anti-competitive effects that can result from a merger can be found in paragraphs 12.21-12.31 of the MEGs. [15]

One anti-competitive effect considered under section 96 is the deadweight loss [16] associated with a likely increase in price. While a price increase may provide evidence for a finding of an SPLC under section 92, [17] in the context of a section 96 trade-off analysis, the Bureau will, when reasonably possible, also estimate the associated deadweight loss, and socially adverse transfers associated with the price increase [18].

Another potential anti-competitive effect may arise where the gains to one group may not offset losses to another. In those circumstances there may be a social loss to be considered in the context of a section 96 trade-off analysis, sometimes referred to as a “socially adverse wealth transfer”. The portion of the wealth transfer that may be considered as being socially adverse will depend on the specific groups which may be harmed by the merger. In addition to wealth transfers from lower income groups as considered in *Superior Propane*, the Bureau has, for example, considered wealth transfers from government-funded entities to constitute socially adverse wealth transfers [19]. What portion of the wealth transfer may be considered socially adverse will vary from case to case.

2.1 Examples of Common Methodologies to Quantify Effects

In certain cases merging parties have also sought to quantify effects. Where parties choose to do so, they should ensure they are using the same models as the Bureau. Appendix A includes a non-exhaustive list of models that have been used by the Bureau to estimate anti-competitive effects of a merger.

2.2 Non-Price Effects

Standard models of competition focus on price and quantity. However, market power can manifest itself in a number of other ways. An SPLC resulting from a merger can lead to non-price effects in the form of a reduction in service, quality, product choice, incentives to innovate or other dimensions of competition that customers value [20]. Non-price effects can exist independently or in conjunction with price effects. The economic literature recognizes the role and impact of non-price competition in a market. Non-price competition arising from product differentiation continues to be a focus in economics.

Traditional static demand estimation and simulation techniques may in some cases be useful in quantifying non-price effects, such as the repositioning of existing products. Natural experiments may also be useful to evaluate whether differences in an indicator of quality or service could be explained by differences in competition between the parties. Some indicators of quality may be translatable into dollar terms by making use of available statistical or survey data. For example, a movie theatre may be more inclined to upgrade its seats, projectors, and sound equipment in response to competition and it may be possible to estimate what those competition-driven improvements are worth to consumers based on observed differences in sales or willingness to pay.

There may be indicators of quality that are available but may not be expressible in dollar terms. For example, the estimated response time to deliver on customer orders may be an indicator of service or quality. The Bureau may be able to do empirical analyses to assess if these indicators vary with competition between the parties, but may not always be able to translate any anti-competitive effects related non-price factors into consumer or and producer welfare terms as can be done with price effects on a dollar-for-dollar basis.

Availability of data is an added complication in the quantification of the non-price effects of a merger. For example, data regarding consumer preferences for particular attributes of a good may not be available.

An analysis of non-price effects was conducted on files such as McKesson/Katz, Postmedia/Quebecor, Transcontinental/Quebecor, Cineplex/Landmark/Empire, among others. As described in greater detail in part 1.3, if a non-price anti-competitive effect is not reasonably measurable, the Bureau may assess it using qualitative evidence.

2.2.1 Dynamic Competition and Innovation

Dynamic competition refers to the successive introduction of new or better products or processes over time. Static analyses of competition take the existing set of products and market participants as given and describe competition in terms of factors that can be varied in the short term, such as pricing. In contrast, dynamic analyses of competition allow for longer term changes, such as the creation of new products or processes, and potentially also new markets. Dynamic competition can overturn the existing competitive dynamics in a market, resulting in changes to the way firms compete. As a result, effects resulting in a loss of dynamic competition by their nature may be inherently more difficult to predict and to quantify, but no less important to consider.

Economic theory generally supports the notion that competition spurs innovation because firms under competitive pressure will strive to differentiate themselves from their competitors by producing better or more cost-efficient products and services than their rivals [21]. However, economic theory also places importance on the extent to which a firm can capture the value created by its innovation, known in the literature as the “appropriability” of the innovation [22]. The ability to protect the competitive advantage gained through innovation will increase the incentive to innovate. This is particularly true of markets in which competition is manifested in the development of new products and services rather than price or output [23]. While some have argued that higher market concentration may increase appropriability and innovation, more recent empirical study casts doubt on this conclusion [24]. A larger market share also increases the cost to a firm of creating a product that cannibalizes its existing sales which reduces the incentive to innovate, all else being equal [25]. Accordingly, dynamic competition can have impacts on both the competitive effects and efficiencies sides of the trade-off. Dynamic efficiencies will be discussed in part 3.7.

Quantifying the effects from a loss from dynamic competition can present a number of additional difficulties over and above those associated with quantifying static effects. When innovations are highly differentiated from the products already in the market it is difficult to predict the impact of the innovation. Given the difficulties of quantification, when appropriate the Commissioner may rely on qualitative evidence to assess the harm resulting from a loss of dynamic competition. As described in greater detail in part 1.3, if an anti-competitive effect is not reasonably measurable, the Bureau may assess it with qualitative evidence. An analysis of potential effects resulting from a loss of dynamic competition was conducted on Dow/DuPont.

Part 3: Analysis of Efficiencies

To conduct the trade-off analysis with sufficient rigour such that the Commissioner may make an informed enforcement decision, information supporting efficiency claims should be provided on a with prejudice basis and be sufficiently detailed to enable the Bureau to ascertain the nature, magnitude, likelihood and timeliness of the asserted gains, and to credit (or not) the basis on which the claims are being made. Further, what may be often considered a business cost saving or synergy may not be cognizable, meaning it would not be recognized as an efficiency under *Act*. Therefore, efficiencies submissions should explain how any claimed efficiencies pass the five cognizability screens outlined in part 3.6.

The information required to assess merging parties' efficiencies claims will vary depending on the structures of the parties' businesses, how they plan to integrate them and the industry. The types of information the Bureau may require to assess efficiencies is listed in Appendix B. Normally, much of this information will be set out in a submission provided to the Bureau by merging parties, describing the efficiencies they expect to realize through a transaction. Efficiencies should be quantified where reasonably possible, and supported by a clear methodology described in detail in the submission such that the Bureau has a sufficient degree of certainty that the efficiencies are likely to be achieved over the time period claimed. Parties seeking to rely on qualitative efficiencies as part of a section 96 defence will need to explain why they are not reasonably measurable.

Along with submissions, it is important that the underlying evidence is also provided to the Bureau, including all supporting documentation, models and calculations, such that the Bureau is able to verify how efficiencies were calculated and perform sensitivity tests on any models or forecasts used to derive the estimates. Information that is helpful to the Bureau in its assessment of efficiencies claims includes, but is not limited to, detailed calculations of the quantum of efficiencies (ideally in native format), and documents supporting the inputs into those calculations. Documentation supporting efficiency claims can come from a variety of sources, including any internal analysis leading to the decision to pursue a merger. This may include internal efficiencies projections, third-party studies, and any relevant due diligence materials. Where the merging parties have relied on underlying business or operational planning models in their calculations, the Bureau will require access to these models. The Bureau will also require information related to the reliability of these models, such as information regarding the past application of these models by the merging parties (or others), and their predictive success. Any assumptions being relied upon should be clearly set out and explained in detail, including why the assumptions are reasonable (or, if asserted, conservative).

When questions relate to business rationales or integration planning, as well as internal accounting methodologies and financial analysis, it may be helpful to have relevant business people address the efficiency claims. In addition to engaging with merging parties, and experts retained by the merging parties, the Bureau also may use its own outside experts to advise on potential efficiencies arising from the merger or may test these types of efficiency claims with market contacts. Outside experts may include industry, economic or accounting experts.

The efficiencies claimed must be net of the cost of achieving them, including integration costs, severance costs, and agreement (such as lease agreement) break fees. Submissions should also clearly set out the projected timing over which efficiencies will be realized as well as when the associated implementation costs that will be incurred.

3.1 Past Transactions

Submissions will often cite synergies from past transactions of varying relevance to defend their projections. However, an analysis of a previous transaction is not determinative on its own. Such an analysis is more likely to be compelling when the previous transaction is comparable to the merger in question (or to the aspect of the merger impacted by a remedy in cases where a partial order may be sought). Analyses of synergies achieved in previous transactions are more persuasive when they include information about the methodology and data used to measure those synergies. Prior transactions that involve similar parties, are relatively recent, or involve analogous product and geographic markets will also tend to be more persuasive. Analyses of synergies in previous transactions can only support, rather than replace, efficiencies estimates based on specific integration plans arising from the transaction in question.

An assessment of management's performance in achieving synergies in previous transactions may provide support for efficiency claims, or may raise doubts as to the likelihood that efficiencies will be achieved depending on their success rate.

3.2 Access to Key Employees

The merging parties bear the burden of proof for any claimed efficiencies and are uniquely situated to provide this information as only they have access to the information necessary to estimate and evaluate projections, including access to company employees who are responsible for planning and implementing the merger integration. Where appropriate, the Bureau may interview these employees voluntarily or through an order of the Court pursuant to section 11 of the *Act* [26].

3.3 Buyer Costs

Costs that would be incurred by a likely buyer of the assets related to the remedy are not considered to be efficiencies that would be lost as a result of an order. Cognizable efficiencies are those that arise through the integration of resources between the merging firms, through the act of merging. Any other costs associated with the implementation of a remedy are not forgone efficiencies that are to be counted in the trade-off as they are not attributable

to the merger, but rather to the implementation of the divestiture order.

3.4 Gains from Trade

Section 96(2) requires the Tribunal to consider whether the claimed efficiency gains will result in a significant increase in the real value of exports; or a significant substitution of domestic products for imported products. To assist this analysis, firms operating in markets that involve international trade should provide the Bureau with information that establishes that the merger will lead them to increase output owing to greater exports or import substitution [27].

3.5 X-inefficiency

"X inefficiency" typically refers to the difference between the maximum (or theoretical) productive efficiency achievable by a firm and actual productive efficiency attained. Mergers that prevent or lessen competition substantially can also reduce productive efficiency, as resources are dissipated through x inefficiency and other distortions. For instance, x inefficiency may arise when firms, particularly in monopoly or near monopoly markets, are insulated from competitive market pressure to exert maximum efforts to be efficient. Subject to availability of data, when the Bureau is considering the potential for x-inefficiency effects resulting from a proposed merger it may study previous, analogous mergers.

3.6 Cognizability Screens

Parties should explain how the claimed efficiencies pass the five cognizability screens outlined below and provide supporting evidence. The evidence required to support such claims varies between different efficiencies, and so it is important that submissions explain how each group of efficiencies claimed passes each screen. While certain of the screens could in some cases be satisfied with simple explanations, certain others will require support from the merging parties' internal documents or analyses from the merging parties' experts. Typically, the Bureau will ask detailed and transaction-specific follow-up questions to probe how the claimed efficiencies pass the screens.

3.6.1 Categories of Efficiencies

To be cognizable under the Act, efficiencies must be productive, dynamic or allocative. Productive efficiencies are those that lower the cost of producing a given level of output, such as plant or location rationalization, distribution and transportation savings, administrative cost savings, overhead savings, or the elimination of redundant staff [28]. The majority of efficiencies raised by merging parties are productive. Dynamic efficiencies, as discussed in part 3.7, arise from the introduction of new or improved products or production processes arising from the merger. Allocative efficiencies involve an improvement in the allocation of society's resources due to the merger. This could include, for example, output enhancing efficiencies, meaning efficiencies that result in an increase in output from the same number of inputs [29].

3.6.2 Likely to be brought about by the merger

The second screen narrows the claimed efficiencies to those that the Bureau is satisfied are likely to be brought about by the merger. Efficiencies that are uncertain or speculative may either be discounted or excluded at this stage. If some or all of the efficiencies are not "merger specific", meaning that they are likely to be achieved in the absence of the merger, they do not pass this screen.

For example, if the party being acquired was undergoing or was likely to undergo a restructuring, certain headcount reductions claimed as efficiencies would likely have occurred absent the merger. Another example is, where the party being acquired was sold through a competitive bidding process, and the likely alternative winning bidder would not raise the same competition concerns, but would achieve some or all of the claimed efficiencies, the efficiencies that would be achieved by the alternate buyer would likely be achieved in the absence of the merger.

Where productive efficiency claims arise from transferring superior production techniques and know-how from one merging party to the other, merging parties must demonstrate that they would not likely be sought and attained through alternate means [30].

3.6.3 Redistribution of Income

The third screen filters out claimed efficiency gains that would be brought about by reason only of a redistribution of income between two or more persons. To be cognizable under the *Act* efficiencies must represent a gain to the Canadian economy, as opposed to a gain to one party at the expense of another, or a "redistribution of wealth". For example, tax savings may be a synergy that the business expects to achieve through a merger, but would not be an efficiency under the *Act* in some cases owing to the fact that it likely constitutes a redistribution of wealth between the merging firms and a government body. However, if the reduction in taxes is as a result of consuming fewer resources the tax reduction may pass the cognizability screen. Similarly, the ability to extract volume discounts from suppliers due merely to greater bargaining leverage is not cognizable since this is a transfer of wealth between two companies. However, if the merger results in a supplier incurring lower costs, savings passed on to the merged entity may be valid efficiencies since this would represent an actual resource saving to the economy.

Efficiencies that result solely from a reduction in output, service, quality or product choice will not be counted as they are a redistribution of wealth from the consumer to the merging parties. For example, in industries where products are delivered, if the centralization of dispatching functions results in longer delivery times or the elimination of valued services, such as emergency or next day delivery, they may not be considered as efficiencies.

3.6.4 Accrue to Canada

Under the fourth screen the Bureau will exclude efficiency gains that are achieved outside Canada, unless parties can establish that these efficiencies will accrue to Canada, for example to Canadian customers or shareholders. Savings related to operations in Canada that ultimately benefit foreign shareholders will not be accepted. Further, efficiency gains cannot simply relate to a product that is sold in Canada. The Bureau will focus on testing whether a sufficient nexus between claimed efficiencies and benefits to the Canadian economy exists.

3.6.5 Order-specific

Frequently, efficiencies relating to selling, general, and administrative expenses or overhead type savings are not “order specific” where the SPLC relates only to a particular business segment; however, the Bureau recognizes that this may not always be the case. Submissions that go beyond attributing efficiencies to a business segment based on revenue, capacity, or another general measure would be most effective to address this issue. For example, if it is claimed that efficiencies related to head office staff would be lost as a result of a potential divestiture, it is recommended that merging parties provide an analysis of why specific head office redundancies would no longer persist as a result of an order due to the specific role or reporting requirements of the employees concerned, rather than submissions based on the total claimed efficiencies prorated to the relative size of the business unit to be divested.

Lastly, it is important to note that when a more narrow remedy is sufficient to remedy the SPLC, the order specific screen may rule out a significant portion of head office and overhead efficiencies.

3.7 Dynamic Efficiencies

Mergers can create dynamic efficiencies which can offset anti-competitive effects, thus allowing an otherwise anti-competitive merger to go forward on the basis of future product or process innovation. In this context, a merger may encourage the introduction of new products, the development of more efficient productive processes, and the improvement of product quality or service.The particular set of facts will vary in each case and therefore needs to be assessed on a case-by-case basis.

Dynamic efficiencies are inherently less certain than productive efficiencies. This is particularly true where the new product or production process is highly differentiated from what already exists in the market. Certain types of information may be helpful to the Bureau's assessment of a merger's impact on innovation as they relate to, for example, verifiability, likelihood of success, and timeliness. This would include projections from documents regarding the anticipated timelines of achieving the efficiencies, the steps involved, and any risks and costs of achieving them. Further, historical information on the effect of previous mergers in the industry on similar dynamic efficiencies may be informative to corroborate the likelihood and potential timelines associated with achieving dynamic efficiencies. Such information may relate to a merger's impact on the nature and scope of research and development activities, innovation successes relating to new or existing products or production processes, and the enhancement of dynamic competition.

In merger transactions, most dynamic efficiency claims relate to complementarities. Such claims hold that the combination of different and complementary assets and/or abilities will likely result in the introduction of new products or production processes that would not likely have been achieved absent the merger. In considering the cognizability of dynamic efficiencies related to claims of complementarities the Bureau will assess the appropriability of the innovation (i.e., the extent to which the innovator will fully capture the gains from its innovation). Practically, that means the Bureau will assess how a merger creates the incentive for the merged entity to engage in certain innovative activities that the firms independently would not otherwise undertake. In that regard, the Bureau will take into consideration documents demonstrating that parties recognize the complementarities in their capabilities and have taken steps to assess the likelihood of realizing those complementarities and appropriating their value outside of a full merger.

Increased investment is not necessarily an efficiency, and can in fact result in allocative inefficiencies if the increased investment is made in the place of other opportunities that would generate greater returns to society. In order to quantify the impact of a proposed investment and/or efficiency, parties are encouraged to demonstrate the predicted impact on producer and consumer surplus. A quantification based on the cost of the investment is unlikely to be persuasive.

The same basic cognizability screens apply in assessing dynamic efficiencies as for assessing productive efficiencies, with a particular focus on the likelihood of achieving the dynamic efficiencies, and whether the dynamic efficiencies would be realized absent the merger or if an order were made short of a prohibition or dissolution of the merger.

Where quantification is reasonably possible, it should demonstrate that an innovative production process would reduce the merged entity’s costs, or that an innovative new product made possible by the merger would increase total surplus.

Paragraph 12.18 of the MEGs contains additional detail on the types of information that can substantiate dynamic efficiency claims.

Part 4: Conducting the Trade-Off Analysis

While the court in *Tervita* prescribed a multi-stage test with distinct steps governing the process to be followed, when the Bureau is conducting the trade-off internally, the process followed is typically highly iterative and integrated with the assessment of effects and efficiencies. In the Bureau’s experience, the trade-off may initially consist of assessing ranges of both efficiencies and anti-competitive effects. There may be a range of anti-competitive effects estimates that vary based on, for example, a reasonable range of elasticity estimates. For efficiencies, there may be ranges based on the relative certainty that each type of claimed efficiencies will be achieved in light of the evidence made available to the Bureau or information available to the merging parties’ experts at that time. The estimates are updated over time as the trade-off analysis is refined and more information becomes available, including information regarding the potential remedies.

Depending on the industry, and the assets being sold as part of the transaction, the manner in which the trade-off is conducted can vary. As a simplistic example, you could imagine a scenario where a transaction relates only to the sale of one asset resulting in an SPLC and the appropriate remedy is a full block of the transaction. In those circumstances, the appropriate estimates to compare would be the totality of the anti-competitive effects resulting

from that asset being sold, with the totality of the efficiencies generated by the merger. However, in practice transactions are typically much more complex than this simple example, and so, the trade-off process will vary based on the particular assets involved. As a result, conducting the trade-off is much more nuanced in practice, and therefore will vary based on the specific fact scenario being assessed in relation to a particular transaction.

As a more realistic illustration of the trade-off, one approach the Bureau has previously taken where a merger involved multiple geographic markets was to identify the markets in which there was a likely SPLC, and then identify the anti-competitive effects and cognizable efficiencies in each of those markets [31]. The Bureau did not require a remedy in respect of the markets where the efficiencies were clearly greater than and offset the effects. To the extent that the merging parties were able to demonstrate that efficiencies outside of a particular product or geographic market will be lost as a result of an order pertaining to that market, such as for example some head-office level efficiencies, the Bureau included those efficiencies in the trade-off. This approach maximized the total surplus arising from the merger. However, in this case, the majority of both the anti-competitive effects and efficiencies were highly divisible due to the nature of the assets and geographic markets, making a local market specific trade-off analysis possible. This will not always be the case and each such assessment will require specific consideration based on the particular industry and assets involved.

4.1 Marginal Cost Savings

In some cases there may be cost reductions, or other efficiencies likely to be attained through a merger that may increase competition in certain ways, such as by enabling the merged entity to better compete with its rivals. In the case of a marginal cost reduction, there should be no “double counting” of such efficiencies when it is determined that the merger in question is likely to prevent or lessen competition substantially and a trade-off assessment is then conducted under section 96. By incorporating an explicit exception for efficiency gains, Parliament has indicated that the assessment of the competitive effects of the merger under section 92 of the Act is to be segregated from the evaluation of efficiency gains under section 96.

4.2 Anti-competitive Effects in the Trade-off

In estimating the anti-competitive effects that are weighed against efficiencies in the trade-off analysis the Bureau considers the totality of the effects resulting from the merger. The Bureau does not limit the effects included in the trade-off analysis to the portion of effects that would remove the substantiality of the lessening or prevention of competition. This approach follows the language in section 96 which refers to “the effects of **any prevention or lessening of competition** that will result or is likely to result from the merger or proposed merger” [emphasis added].

4.3 Temporal Differences

To enable appropriate comparisons to be made, timing differences between measured future anticipated efficiency gains and measured anti-competitive effects are addressed by discounting to the present value [32].

Appendix A: Examples of Common Methodologies to Quantify Effects

Price-Competition Regressions

Regression analysis can be used to estimate the relationship between prices and competition, controlling for other variables that may affect prices. This approach was prominently used in the United-States Federal Trade Commission’s Staples / Office Depot case (1997) [33]. Regressions comparing prices under different market conditions, such as different market structures across geographic markets or changes in market structure over time, can provide an important predictor of the effect of a merger. To calculate anti-competitive effects with this type of estimation, assumptions need to be made regarding the empirical specification of demand. This type of estimation methodology was used on files such as Canadian Tire/Pro Hockey Life, Loblaw/Shoppers, and BCE/MTS among others.

Merger Simulation

A merger simulation predicts the impact of a merger by specifying and estimating a model of the industry, changing certain parameters (most notably firm ownership) to reflect post-merger conditions, and then obtaining the implied post-merger equilibrium prices and quantities. With estimates of price and quantity changes, as well as marginal costs, changes in consumer surplus and total surplus (i.e. deadweight loss) can be calculated assuming the form of demand.

Different models can describe different industry characteristics, such as markets with firms setting prices or markets where prices are set in auctions. Differences can also arise based on how the models are estimated. Notably, patterns of customer substitution may be calibrated from pre-merger conditions such as candidate market shares or own- and cross-price elasticities may be estimated from the data.

The Bureau has used a variety of approaches, including estimating a merger simulation model in First Air/Can North/Calm Air, and Heinz/Kraft; calibrating a merger simulation model in an auction market in Iron Mountain/Recall; and calibrating a merger simulation model in a price setting market in Superior / Canwest, Couche Tard/CST/Parkland, and Parkland/Pioneer.

Appendix B: Potential Information Requirements to Quantify Effects

Information required to quantify effects will primarily be gathered through the Bureau’s investigation, including its market contacts and information provided by the merging parties, including documents and data provided pursuant to the SIR. The requirement for the Commissioner to quantify anti-competitive effects wherever reasonably possible increases the likelihood that the Commissioner will need to seek third-party information during merger

reviews. The Bureau will seek information from third parties by formal means when it considers it appropriate to do so. Considerations may include the timeliness and reliability of information available by other means, and the value of the third-party information to an accurate quantification of effects.

The types of data generally sought from parties and third parties in order to quantify the effects of a merger include the following:

1. asset and location lists;
2. transaction level prices, quantities, costs and characteristics;
3. customer characteristics (often found in loyalty data, e.g. age, income, geographic location, etc.);
4. product characteristics (e.g., SKU-level differences, size and type);
5. customer preferences (e.g. surveys and internal studies);
6. information to estimate “diversion ratios” between firms (e.g. customer retention, win-loss data);
7. quality measures (e.g. delivery times, customer satisfaction studies); and
8. product and geographic market level financial statements.

This list is not exhaustive as data requirements are largely dictated by the specifics of each merger review as well as the theory of harm being evaluated.

In addition to data from merging parties and third parties, the Bureau case team will often obtain and construct data on market characteristics (e.g., distribution of relevant demographic variables) from publicly available sources (e.g., Statscan).

With respect to non-horizontal mergers that potentially raise serious competition issues, the Bureau will typically model the related markets in which the merging parties participate in order to quantify the effects of the merger.

Appendix C: Potential Information Requirements to Quantify Efficiencies

The information obtained through SIRs and voluntary requests for information may not be sufficient for the Commissioner to make an enforcement decision on a case where the merging parties are likely to claim efficiency gains. In such circumstances, it may be necessary for the Commissioner to seek an order of the Court pursuant to section 11 of the *Act*. The information required for this exercise varies from industry to industry and transaction to transaction, depending on the structure of the merging parties’ businesses and how they plan to integrate them.

The types of information underlying efficiencies submissions that the Bureau has received from merging parties and their experts include the following:

- integration plans, such as presentations to the Board, including all underlying data and calculations
- an understanding of what is driving the merger, possibly including public sources such as analyst and industry reports;
- a detailed description of the merging parties’ assets and their locations (including relative distances between each location), capacity utilization by facility, constraints on production, and product mix;
- where inputs are sourced;
- headcount and information about roles and responsibilities of relevant employees;
- the nature of expenses by facility;
- past integrations;
- industry specifics, such as the particulars of typical customer and supplier agreements;
- industry models or forecasts;
- models or other analyses that quantify the efficiencies, as well as support for the assumptions underlying those analyses; and
- forward-looking costing (fixed vs variable) and capital expenditures.

Importantly, information from the merging parties may need to be sourced at the location or facility level.

This list is not exhaustive as data requirements are largely dictated by the efficiency claims being raised by the merging parties on a particular case.

Footnotes

1 This document does not supersede the Merger Enforcement Guidelines (“MEGs”), which set out the Bureau’s general approach to merger review, and is not a binding statement of how the analysis is carried out in any particular case. The specific facts of a case, as well as the nature of the information and data available, will determine how the Bureau assesses a transaction and may sometimes require methodologies other than those noted herein. The Bureau may revisit certain aspects of these guidelines based on new case experience analyzing efficiencies under different factual circumstances. The Bureau may also revisit certain aspects of these guidelines in the future based on amendments to the *Act*, decisions of the Tribunal and the courts, and developments in the economic literature. The MEGs can be found at the following link: http://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/03420.html#s2_3.

2 Noted in paragraph 12.1 of the MEGs.

3 While some of the guidance contained herein will apply to merger reviews more generally, it is primarily intended to apply to cases where the parties have raised efficiency claims. The MEGs provide general direction on the Bureau’s analytical approach to merger review.

4 Noted in paragraph 2.1 of the MEGs.

5 Subsection 96(2) lists whether the claimed efficiency gains will result in a significant increase in the real value of exports or a significant substitution of domestic products for imported products as factors to be considered in assessing efficiency claims.

6 As described further in paragraph 12.6 and 12.13 of the MEGs, to meet their burden the merging parties must establish the nature, magnitude, likelihood and timeliness of efficiency gains. Merging parties must also demonstrate how their efficiency claims pass the cognizability screens.

7 As noted in paragraph 12.6 of the MEGs, whether or not a case proceeds to litigation, the Bureau can seek information where appropriate from the merging parties and other sources to evaluate gains in efficiencies and anti-competitive effects.

8 Remedy can be read throughout as one or more remedies.

9 *Canada (Commissioner of Competition) v CCS Corp*, 2012 Comp Trib 14 *Tervita* Comp Trib]; *Tervita Corp v Canada (Commissioner of Competition)*, 2013 FCA 28, [2014] 2 FCR 352 [*Tervita* FCA]; *Tervita Corp v Canada (Commissioner of Competition)*, 2015 SCC 3, [2015] 1 SCR 161 [*Tervita* SCC]. *Canada (Commissioner of Competition) v Superior Propane Inc*, 2000 Comp Trib 15, 7 CPR (4th) 385 [*Superior I* Comp Trib]; *Canada (Commissioner of Competition) v Superior Propane Inc*, 2001 FCA 104, [2001] 3 FCR 185 [*Superior II* FCA]; *Canada (Commissioner of Competition) v Superior Propane Inc*, 2002 Comp Trib 16, 18 CPR (4th) 417 [*Superior III* Comp Trib]; *Canada (Commissioner of Competition) v Superior Propane Inc*, 2003 FCA 53, [2003] 3 FC 529 [*Superior IV* FCA].

10 Noted in paragraph 12.2 of the MEGs.

11 In Canada, the consideration of efficiencies in merger review differs from other jurisdictions in that efficiencies are considered as part of a formal multi-stage process, in which first a merger is determined to be anti-competitive but may potentially not be prohibited or otherwise remedied on efficiency grounds. By contrast, in other jurisdictions, efficiency claims are taken into account as part of a holistic analysis of competitive effects.

12 The order specificity cognizability screen will be discussed further in part 3.6.5.

13 See for example, Gugler, Klaus Peter and Mueller, Dennis C. and Yurtoglu, B. Burcin and Zulehner, Christine, The Effects of Mergers: An International Comparison (May 16, 2003). International Journal of Industrial Organization, Vol. 21, No. 5, 2003. Available at SSRN: https://ssrn.com/abstract=2061218 (“Our results suggest that those mergers that decrease profits and efficiency account for a large proportion. However, we can also identify mergers that increase profits by either increasing market power or by increasing efficiency. The first conclusion seems to be a more likely explanation for large companies, whereas the latter is likely to be true for small firms.”) .Mueller, D. C. and Sirower, M. L. (2003), The causes of mergers: tests based on the gains to acquiring firms' shareholders and the size of premia. Manage. Decis. Econ., 24: 373–391: http://onlinelibrary.wiley.com/doi/10.1002/mde.1103/full (“[T]he authors go on to claim support either for a hypothesis about how mergers increase efficiency, or for one that claims they do not...Little or no support is found for the hypothesis that mergers create synergies and that shareholders of both the acquiring and acquired firms share gains from these synergies.”).Blonigen, Bruce A., and Justin R. Pierce, “Evidence for the Effects of Mergers on Market Power and Efficiency,” Finance and Economics Discussion Series 2016-082. Washington: Board of Governors of the Federal Reserve System, https://doi.org/10.17016/FEDS.2016.082 (“We find that evidence for increased average markups from M&A activity is significant and robust...In contrast, we find little evidence for plant- or firm-level productivity effects from M&A activity on average, nor for other efficiency gains often cited as possible from M&A activity, including reallocation of activity across plants or scale efficiencies in non-productive units of the firm.”). “Where Mergers Go Wrong”, McKinsey Quarterly (May 2004) http://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/where-mergers-go-wrong (“the average acquirer materially overestimates the synergies a merger will yield.”); and, “Why Some Merging Companies Become Synergy Overachievers”, Bain Brief (Aug. 13, 2014), available at: http://www.bain.com/publications/articles/why-some-merging-companies-become-synergy-overachievers.aspx (“In a Bain & Company survey of 352 global executives, overestimating synergies was the second most common reason for disappointing deal outcomes”). “Post merger integration: Hard data, hard truths”, Deloitte Review, Issue 6 (2010), available at: http://dupress.deloitte.com/dup-us-en/deloitte-review/issue-6/post-merger-integration-hard-data-hard-truths.html (“empirical studies indicate that one of every two PMI [Post Merger Integration] efforts fares poorly”).

14 Unilateral and coordinated effects are described in greater detail in Part 6 of the MEGs.

15 As outlined in paragraph 12.23 of the MEGs, in addition to direct effects in the relevant market, the Bureau also considers price and non-price effects in interrelated markets. For example, mergers that are likely to result in increased prices and lower output can impair industries that use the merged firm's products as inputs.

16 Deadweight loss is described in paragraphs 12.25-12.27 of the MEGs.

17 In determining whether an SLPC is likely to be substantial, the Bureau will consider the magnitude, scope and duration of the anti-competitive effects.

18 As discussed in in paragraph 12.27 of the MEGs, this includes losses in producer surplus that arise when market power is being exercised in the relevant market prior to the merger.

19 See the Competition Bureau's statement regarding Superior Plus LP's proposed acquisition of Canwest Propane from Gibson Energy ULC: http://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/04307.html

20 MEGs at 2.2 and the Bureau's submission to the OECD on "On The Role and Measurement of Quality in Competition Analysis": http://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/03769.html

21 K.J. Arrow, Economic *Welfare and the Allocation of Resources for Invention*, in The Rate and Direction of Inventive Activity: Economic and Social Factors, 1962, p. 609-625.

22 Carl Shapiro, *Competition and Innovation. Did Arrow Hit the Bull's Eye?*,in Josh Lerner and Scott Stern: The Rate and Direction of Inventive Activity Revisited, 2012, p. 361-410.

23 J.A. Schumpeter, *Capitalism, Socialism and Democracy*, 1942.

24 Carl Shapiro: *Competition and Innovation. Did Arrow Hit the Bull's Eye?* in Josh Lerner and Scott Stern: The Rate and Direction of Inventive Activity Revisited, 2012, p. 361-410.

25 Carl Shapiro: *Competition and Innovation. Did Arrow Hit the Bull's Eye?* in Josh Lerner and Scott Stern: The Rate and Direction of Inventive Activity Revisited, 2012, p. 361-410.

26 In some cases, third-parties may have information required to substantiate efficiency claims, in which case this may also apply to third-parties.

27 Noted in paragraph 12.12 of the MEGs.

28 Additional information regarding productive efficiencies can be found in sections 12.14-12.16 of the MEGs.

29 These may also be considered productive efficiencies as they reduce the cost of production.

30 As described in paragraph 12.15 of the MEGs.

31 This approach is outlined in the Superior/Canwest position statement at the following link: http://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/04307.html

32 Noted in section 12.34 of the MEGs.

33 See *FTC v. Staples, Inc.*, 970 F. Supp. 1066 (D.D.C. 1997).

Date modified:
2018-03-20

Ontario Energy Board

Commission de l'Énergie de l'Ontario

EB-2005-0551

NATURAL GAS ELECTRICITY INTERFACE REVIEW

DECISION WITH REASONS

November 7, 2006

EB-2005-0551

IN THE MATTER OF a proceeding initiated by the Ontario Energy Board to determine whether it should order new rates for the provision of natural gas, transmission, distribution and storage services to gas-fired generators (and other qualified customers) and whether the Board should refrain from regulating the rates for storage of gas.

BEFORE: Gordon Kaiser
Presiding Member and Vice Chair

Cynthia Chaplin
Member

Bill Rupert
Member

DECISION WITH REASONS

November 7, 2006

EXECUTIVE SUMMARY

INTRODUCTION

This proceeding was initiated by the Ontario Energy Board in late 2005 in response to issues first raised in the Board's *Natural Gas Forum Report* and more fully explored in the OEB staff report, *Natural Gas Electricity Interface Review*. The key issues addressed in this proceeding were:

- Rates and services for gas-fired generators
- Storage regulation.

The hearing participants, which included gas-fired generators and consumer groups, reached settlements with Union Gas Limited (Union) and Enbridge Gas Distribution Inc. (Enbridge) on most of the issues related to services for gas-fired generators, and the Board has approved those settlements. The oral hearing and this Decision addressed the issues which were not settled and the issue of storage regulation.

SERVICES FOR GAS-FIRED GENERATORS

The need to examine new services for gas-fired generators arises because of the increasing number of so-called "dispatchable" gas-fired power generation plants that are planned or in operation. These plants operate in response to five-minute dispatch instructions from the Independent Electricity System Operator (IESO), and, as a result, their gas consumption profiles are more volatile and difficult to forecast than the relatively stable profiles of residential, commercial and industrial gas consumers. Flexible and responsive gas services, including high-deliverability gas storage, can ensure the reliable operation of these plants and allow the plant operators to manage the financial risk of the business.

Based on the settlements, the Board has approved a number of new services aimed at the needs of the gas-fired generators, including:

- new distribution rate structures for high-volume gas consumers
- more frequent nomination windows for the distribution, storage and transportation of gas
- the inter-franchise movement of gas
- redirection of gas to different delivery points on short notice
- simpler processes for title transfers of gas in storage
- high-deliverability storage services.

There was no agreement on the price at which high-deliverability storage services should be offered. The generators argued for a regulated framework, while the utilities argued for a competitive framework. The key consideration is to ensure that new innovative services are developed. The Board concludes that the public interest is best met by refraining from regulating these services. This will stimulate the development of these services, by utilities and other providers. The Board will accordingly refrain from regulating the rates for high-deliverability storage services.

The Board has a duty to protect the interests of consumers using these services with respect to price and reliability and quality of service. The crucial factor is the availability of the service itself – namely its reliability and quality. The Board expects Enbridge and Union to fulfill their commitments respecting the offering of these services. Pricing considerations are relevant, but competitive options will provide appropriate price protection. The Board will also be developing a reporting mechanism and complaint process to deal with any issues which arise.

NATURAL GAS STORAGE REGULATION

Union and Enbridge operate large underground gas storage facilities in southwestern Ontario. Those facilities, which are connected to multiple gas transmission pipelines,

are part of what is known as the Dawn Hub, one of the more important natural gas market centres in North America.

The issue in this hearing was whether the Board should refrain from regulating the prices charged for storage services. Section 29 (1) of the *Ontario Energy Board Act, 1998* states:

> On an application or in a proceeding, the Board shall make a determination to refrain, in whole or in part, from exercising any power or duty under this Act if it finds as a question of fact that a licensee, person, product, class of products, service or class of services is, or will be, subject to competition sufficient to protect the public interest.

Competition in Storage

The Board has concluded that Ontario storage operators compete in a geographic market that includes Michigan and parts of Illinois, Indiana, New York and Pennsylvania. The Board finds that the market is competitive and that neither Union nor Enbridge have market power.

Price Regulation

The Board will cease regulating the prices charged for the following storage services:

- all storage services offered by Union and Enbridge to customers outside their franchise areas;
- new storage services offered by Union and Enbridge to their in-franchise customers; and,
- all storage services offered by other storage operators, including storage operators affiliated with Union and Enbridge.

Rates for storage services provided to Union's and Enbridge's distribution customers will continue to be regulated by the Board on a cost-of-service basis.

Union's existing storage capacity is well in excess of the current needs of its in-franchise customers and has been for many years. The Board has decided that Union will reserve approximately two-thirds of its existing capacity for in-franchise needs. At current rates of growth, that amount limit will satisfy in-franchise needs for several decades. Enbridge currently purchases storage from Union for a portion of its requirements. The Board has decided that Union will continue to provide these services at cost through a transition period ending in 2010.

Sharing the Premium on Ex-Franchise Sales

The sale of storage services by Union and Enbridge at market-based rates to ex-franchise customers has generated revenues well in excess of the cost of providing those services. Until now, the Board has required that most of the profits be used to reduce distribution rates. The Board has concluded that this sharing should continue for short-term storage deals. These are storage transactions that use storage space that is temporarily surplus to in-franchise needs. All of the profits on these transactions, less small incentive payments to the utilities, will be for the benefit of ratepayers.

The Board finds, however, that Union will not be required to share the profits on long-term storage transactions that use storage space not needed to serve in-franchise needs because that capacity now constitutes a "non-utility" asset for which the shareholders appropriately bear the risk. The sharing of these profits will remain unchanged for 2007 and then be phased out over the period to 2011.

Impact on Consumers

The Board's decisions are expected to have virtually no effect on consumers' bills in 2007. The impact after that cannot be precisely quantified because it will depend on future storage prices, the profit on ex-franchise storage sales, and the amount of gas consumed. While a precise forecast is not possible, bills are likely to increase by a small amount – perhaps around 1% for the typical residential consumer.