ONTARIO ENERGY BOARD

IN THE MATTER OF a proceeding initiated by the Ontario Energy Board to determine methodologies for commodity pricing, load balancing and cost allocation for natural gas distributors.

Board Staff Submission

EB-2008-0106

May 13, 2009

Introduction

The issues under review in this proceeding relate to the three main areas identified in the Board's Notice of Proceeding, dated May 29, 2008. The three areas are:

A. Review of the Quarterly Rate Adjustment Mechanism ("QRAM");
B. Review of the methodology for load balancing; and
C. Cost allocation between delivery and gas supply across natural gas distributors.

The Board issued an Issues List on August 8, 2008, identifying the specific issues under review in this proceeding in each of the above areas. In addition to the three areas noted above, the Board also included issues relating to the standardization of the billing terminology and implementation matters stemming from the various proposals.

Pursuant to the Board's Procedural Order No. 2, Union Gas Limited ("Union"), Enbridge Gas Distribution ("EGD") and Natural Resource Gas ("NRG"), filed their evidence on November 14, 2008. The Gas Marketer Group ("GMG") (represented by Direct Energy Limited, Ontario Energy Savings LP and Superior Energy Management LP), filed its evidence on January 15, 2009 and is the only other party that filed evidence in this proceeding.

This submission focuses primarily on the review of the QRAM methodology for Union and EGD. Board staff notes that NRG's current QRAM methodology is similar to the methodologies being proposed by EGD and Union. With the exception of certain changes to its filing requirements, NRG is proposing no change to its existing methodology for many of the reasons noted by Union and EGD. NRG's proposal is summarized in response to Board staff interrogatory no. 1.

Review of QRAM for Natural Gas Distributors

Discussion and Submission:

The Board in its Decision in the RP-2000-0040 proceeding endorsed eight principles that form the basis of EGD's QRAM methodology[1]. These principles include:

[1] EGD Argument-in-Chief, page 2

- pricing reflective of market prices on an ongoing basis;
- market price transparency;
- mitigation of large adjustments to customer bills;
- fairness and equity among all customer groups;
- limit customer confusion; and
- cost effective implementation.

Further, in determining an appropriate pricing structure for the regulated gas supply, the Board in the Natural Gas Forum ("NGF") Report noted that "the Board must consider the trade-off between a price signal that accurately reflect market prices and price stability".

Board staff submits that the above principles should continue to guide the Board in its deliberation in this proceeding.

The Board's review of the QRAM methodology includes specific issues relating to the appropriateness of further standardizing the various elements of the current QRAM methodology. The elements of the QRAM methodology under review are:

- Trigger mechanism;
- Price adjustment frequency and forecast periods;
- Methodology for calculation of reference price;
- Deferral account disposition methodologies;
- Effect of a change in the reference price on the revenue requirement;
- Implications/costs of standardizing mechanism; and
- Filing requirements.

Union and EGD argue that the current QRAM methodology is largely standardized and after incorporating their respective proposals, their methodologies will be virtually identical[2].

Board staff's submission will address the trigger mechanism, price adjustment frequency and forecast periods, deferral account disposition methodologies, effect of a change in the reference price on the revenue requirement; and filing requirements.

[2] Union Gas pre-filed evidence, Exhibit E2, page 3

Trigger Mechanism for changing the reference price or clearing the purchase gas variance account

Currently, Union's methodology does not have a trigger mechanism. In comparison, EGD's uses triggers to prompt changes to the reference price and/or clear the Purchased Gas Variance Account ("PGVA") balance. In this proceeding, EGD is proposing to eliminate the use of triggers and align its methodology with that of Union. The GMG indicated its support of the elimination of the trigger mechanism as an element of the rate adjustment methodology.[3]

EGD stated that at the inception of the QRAM methodology in 2002, the rationale for the triggers was to allow for regulatory efficiencies and some level of rate stability.[4] Since adopting the trigger mechanism, EGD advised that there have only been three instances where the trigger to effect a change in the reference price was not reached and five instances where the PGVA disposition trigger was not exceeded. However in each of these instances, at least one of the triggers was exceeded, thereby prompting a rate change.

Board staff observes that EGD's experience indicates that even with a trigger mechanism, EGD has in effect operated as if there was no trigger. The Board may wish to consider eliminating EGD's trigger mechanism and adopting an automatic adjustment to the reference price and disposition of PGVA balances. Board staff notes that a trigger mechanism in relation to the clearing of the PGVA balances could result in higher balances if the account balances are not cleared periodically. The elimination of the trigger mechanism would also reflect market prices on an ongoing basis and achieve further standardization of the QRAM methodology.

Price adjustment frequency and forecast periods

The utilities stated that the QRAM provides an appropriate balance between price stability, market sensitivity, and administrative efficiency. The utilities also submit that the forecast period for calculating the price of gas must match the disposition period of the deferral account balances.

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[3] GMG pre-filed evidence, page 23

[4] EGD pre-filed evidence, Exhibit E1, page 7, paragraph 27

With respect to the forecast period, EGD argued that the current 12 month forecast of the price of natural gas using a 21-day strip is appropriate as it reflects the manner in which the utility incurs gas supply costs.

The GMG expressed the view that the QRAM is not appropriate, and supported a monthly rate adjustment mechanism ("MRAM") similar to the methodology followed in Alberta. The GMG argued that Union and EGD act as default suppliers in the Ontario market and as such the commodity price for system customers should reflect the trends in the short-term gas market.[5] The GMG also supported a mechanism where the deferral account disposition period matches the gas forecast period. The GMG was of the view that since the utilities procure their gas on a monthly basis, the forecast period should also be based on a one month forward price, thereby reflecting a more accurate estimate of the actual cost of gas.

The Board is presented with two different methodologies. Board staff observes the following with respect to the MRAM methodology:

- *The MRAM may expose system supply consumers to higher price volatility compared to the QRAM method;*
- *The MRAM may not be appropriate given the different operational characteristics of Ontario utilities, especially with respect to the use of storage; and*
- *The benefits to customers do not appear to be commensurate with the incremental costs of implementing a MRAM.*

The MRAM may expose system supply consumers to higher price volatility compared to the QRAM method.

Under the MRAM method, natural gas utilities would be required to forecast the price of gas every month. The difference between the actual and forecast cost of gas in a given month would be captured in deferral account(s) and cleared over the following month irrespective of the magnitude of the balances.[6] The GMG argues that a shorter time

[5] GMG pre-filed evidence, page 2
[6] GMG pre-filed evidence, page 20

frame for price setting would minimize price distortion and deferral impacts.[7] Board staff observes that the evidence provided by the utilities suggests otherwise.

To test if a better alternative to the QRAM was available, Union conducted an examination of alternative rate adjustment mechanisms. A better alternative was defined as one that offers improved balance between price stability and market price sensitivity. Using different price adjustment scenarios, Union prepared an analysis of what the Empress reference price and the price adjustment (rate rider) would have been, if these mechanisms had been in place over the last four years. The scenarios considered were:

1. Monthly Updates with a 12-month Outlook period and a 12-month Deferral Disposition Period.
2. Quarterly Updates with a 3-month Outlook period and a 3-month Deferral Disposition Period.
3. Monthly Updates with a 1-month Outlook period and a 1-month Deferral Disposition Period.

Union analysed the performance of these three scenarios with respect to price accuracy and market price sensitivity over a four year period. Price stability was measured through a volatility calculation, defined as the range in which prices occurred within one standard deviation of the mean, or 68 percent of the time. Market price sensitivity was measured by calculating the absolute difference between Union's actual cost of gas and the rate approved each quarter through the QRAM process.

The analysis indicates that the current QRAM methodology has resulted in a volatility level of $2.00/GJ, meaning that the range of customer rates, including both the change in the reference price and the rate rider, occurred within $2.00 of the mean rate 68 percent of the time. In comparison, the monthly rate adjustment scenario (scenario 3) exhibits a higher volatility level at $3.97/GJ. A review of the level of market price sensitivity indicates that current QRAM rates were, on average, $1.98/GJ different than the monthly actual cost of gas. In comparison, the monthly rate adjustment scenario (scenario 3) resulted in a larger average variance of $2.11/GJ. Based on these results, Union argues that the QRAM methodology provides the best balance between market

[7] GMG pre-filed evidence, page 10

price sensitivity and price stability amongst all the methods tested. Similarly, EGD in response to the GMG's interrogatory no. 6, indicated that the QRAM methodology is more accurate and more stable than a monthly rate adjustment mechanism.

With regard to the results of the above analyses, the GMG argues that the volatility of future prices is not known and is incumbent on the vagaries of the wholesale market[8]. Board staff agrees that while the future volatility of prices cannot be determined with any certainty, the above analysis indicates that had a monthly rate setting and disposition methodology been in place over the 2004 to 2008 period, system gas consumers would have experienced a higher level of volatility compared to that experienced during the same period under the QRAM method.

Based on the empirical analysis described above, Board staff agrees that the QRAM methodology provides an appropriate balance between a price signal that accurately reflects market prices and price stability.

The MRAM methodology may not be appropriate given the operational characteristics of Ontario utilities, especially with respect to the use of storage.

In this proceeding, the GMG is proposing that the Board adopt a MRAM modelled on the methodology used in Alberta.[9] Board staff notes that in Alberta, the regulated supply provider is prohibited from relying on storage to provide service to system supply customers.[10] In contrast to the market design in Alberta, Ontario utilities rely on long haul transportation and storage. This means that gas purchased in a particular month or quarter may not be consumed in the same month or quarter, however, over a twelve month period the quantity of gas purchased and sold is equal.[11] In contrast, the GMG's proposed methodology is based on the principle that pricing estimates should align themselves with the costs that the utilities can reasonably expect to incur within the period.[12] Given the significant differences between the Alberta and the Ontario gas market with respect to the use of storage, Board staff is concerned with the suitability of the MRAM methodology in the Ontario market.

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[8] Transcript Vol. 3, page 53, lines 8 -15
[9] Transcript Vol. 3, page 29, line 13
[10] GMG response to Board staff interrogatory no. 3 (iii)
[11] EGD pre-filed evidence, page 9, paragraph 31
[12] GMG pre-filed evidence, page 2

In response to interrogatories from the utilities, most intervenors and Board staff, the GMG subsequently refined its pre-filed methodology to reflect the utilities' use of storage in Ontario.[13]

The GMG provides two approaches to dealing with gas in storage. Under the GMG proposal, purchases in excess of consumption would be injected into storage. The monthly index during the summer would be a monthly default rate, while at the start of the winter season (November) the monthly price would include the cost of gas withdrawn from storage, leading to a "blended" WACOG (WACOG II). Under the second alternative, storage balances would be re-priced monthly at prevailing prices, and customers would be either charged or credited for the difference.[14]

Board staff notes the following with regard to the alternatives being proposed by the GMG. First, it appears that the revised MRAM methodology is doing exactly what the QRAM methodology is being criticised for.[15] In response to Union's interrogatory no. 8 (b), the GMG recognizes that the resultant effect of these alternatives is that "price signals may be muted by the use of storage". Given that one of the fundamental reasons advanced by the GMG for proposing a change to the current QRAM is that it has the effect of distorting price signals[16], Board staff notes that the revised MRAM may not provide customers with improved price signals.

The GMG's second alternative with respect to dealing with storage would require utilities to revalue gas in storage on a monthly basis. Board staff is concerned that this approach could expose customers to higher volatility as explained by Union's witness –

> MS. PIETT: The second one [alternative] absolutely would not work.
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> MS. CAMPBELL: Why not?
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> MS. PIETT: Because what would happen is this requires that we revalue inventory each month. And if you think in the summertime, when we have a lot of gas in storage, we could have 30 pJs in storage in

[13] Transcript Vol. 3, page 48, lines 25 - 28
[14] GMG response to Union interrogatory no. 8 (a)
[15] Transcript Vol. 3, page 50, lines 1 – 50
[16] GMG pre-filed evidence, page 21

> September, and if we were required to revalue that, then we would possibly be passing on a three dollar price change to customers in one month, which would be $90 million.
>
> And to do that in a rate rider spread over very little consumption, you would end up with, for sure, a negative price. So it simply wouldn't work. We would have to give money back to customers in August based on their consumption, and it would be ridiculous.

In that regard, Board staff is concerned that this approach may create customer confusion and would not result in enhanced market transparency.

The benefits to customers do not appear to be commensurate with the incremental costs of implementing a MRAM.

Under the MRAM, utilities would be required to prepare and file a rate application with the Board every month, effect rate changes in the billing system, and communicate them to all customers. This change to a more frequent rate adjustment period will result in incremental costs. The utilities estimate these costs to be approximately $2.45 million per year in the case of Union[17] and about $2 million per year in the case of EGD. Board staff is concerned that the costs of implementing a MRAM appear to be material, while the benefits that customers would receive are unclear.

A breakdown of EGD's and Union's estimated incremental costs of moving to a MRAM are provided in Board staff interrogatory no. 1 and undertaking J 1.1. The utilities have noted that these are high level estimates and given the complexities of implementing a MRAM, these costs could be higher.

At the oral hearing, the GMG identified the benefits of moving to a monthly rate adjustment mechanism.[18] These benefits as noted by the GMG are:

- Reduced carrying costs
- Improved cost causality
- Better price signals to promote conservation

[17] Undertaking J1.1

[18] Transcript Vol. 3, page 101, line 19 – page 103, line 9

With respect to the benefits noted by the GMG, Board staff submits that these appear to be limited. For example, Board staff notes that currently deferral account balances accrue interest at the Board prescribed short-term interest rates. In principle, customers should be indifferent to the timing of the disposition of the deferral accounts since the short term interest rates capture the time value of money. With respect to the ability of the MRAM to improve cost causality, Board staff observes that the utilities have provided evidence to suggest that the 12 month disposition period is consistent with the manner in which the utilities procure gas. The utilities explained that due to the Ontario market's reliance on storage, the gas purchased in any given month is not necessarily consumed in that same month, and recovering deferral account balances on the basis of consumption could result in large rate riders and would not be consistent with the procuring practices of the utilities.

Lastly, with respect to the claim that the MRAM would provide appropriate price signals to encourage conservation, Board staff notes that no party in this proceeding has conducted market/customer research to test if high volatility in commodity prices would necessarily encourage customers to conserve more.

Deferral account disposition methodologies

Currently, Union and EGD's deferral account disposition methodologies, as they relate to gas costs, differ. Union automatically clears deferral accounts balances by means of rate riders over a rolling 12-month period. Since Union currently maintains separate deferral accounts to capture variances in gas supply commodity prices, TCPL tolls and fuel, inventory revaluation and spot-gas/load balancing, Union directs the recovery or remittance of deferral account balances to the appropriate customer groups. In comparison, EGD's PGVA disposition methodology includes the use of a trigger mechanism and the projected year-end PGVA balance for each quarter is cleared by means of a rate rider. The rate rider is derived by dividing the projected year-end PGVA balance by the budgeted sales volumes for the remaining months of the fiscal year. In deriving this rate rider, EDG assumes that the accumulated price variances in the PGVA are solely attributable to the commodity and therefore, the rate rider only applies to sales service customers or customers on system supply. At the end of the fiscal year, EGD performs a true-up whereby the year-end PGVA balance is separated into variances attributable to commodity, transportation and load balancing. These

variances are then allocated to the appropriate customer groups based on cost causality.

EGD is proposing to adopt Union's method of disposing deferral account balances over a 12 month rolling period by means of rate riders. EGD states that this change would reduce the volatility of the rate riders, especially during the third and last quarters where the volumes over which the balances are spread out are smaller. EGD also indicates that this would eliminate the need for a year-end true up since EGD would apportion price variances between commodity, transportation and load balancing.

The GMG states that "the 12 month disposition period further distorts the price signals"[19] and leads to "a mismatch between the costs incurred by a specific set of customers and the customers that actually receive system service".[20] The GMG argues that the advantage of a monthly disposition is that it provides customers with more accurate price signals and will better match the recovery of the PGVA balances from customers who cause them. Board staff notes the following with respect to this argument.

First, based on the analysis provided by Union and EGD, a monthly deferral account disposition methodology has the potential to exacerbate the underlying volatility in natural gas commodity prices, thereby exposing customers to an effective price that can be significantly different from the actual price of the commodity.[21]

In that regard Board staff observes that the graph on page 18 of Union's pre-filed evidence, which represents monthly rate adjustments based on a 1-month Outlook period and a 1-month Deferral Disposition Period, illustrates that when a monthly rate rider is added to the reference price (represented by the thin red line), the resultant monthly effective price (represented by the thick red line) can be significantly different from the actual price (represented by the shaded grey area) and the effective price generated by the QRAM method (represented by the thick blue line). Further, the swings in the monthly effective price range from $15.50/GJ to -$1/GJ during the July 2008 and October 2008 period. In contrast, during the same period, the actual price exhibited far less volatility and was in the range of $10/GJ to $6/GJ. The effective price

[19] GMG pre-filed evidence, page 21
[20] GMG pre-filed evidence, page 22
[21] Transcript Vol. 2, page 42, line 12

resulting from the QRAM methodology fluctuated in the range of $8.50/GJ to $8/GJ and better resembles the actual price. EGD provided similar results in response to GMGs interrogatory no. 6.

EGD also opined that a monthly disposition period is not appropriate because of the manner in which gas is procured. EGD explained that an MRAM would not reflect the use of spot gas, which is priced on a daily basis. The difference between the cost of gas purchased at the spot price and the cost using a monthly index price (settled in the previous month) would need to be cleared over the following month's volumes. If, for example, the spot gas purchases would occur in March when volumes are generally much lower, the result could be a sizeable rider in April.[22]

Second, the GMG argues that a monthly disposition methodology would more accurately recover the balances from those customers who caused the variance to be incurred. In contrast, the utilities explained that gas purchases in any month are not necessarily made to be consumed in that same month[23] and disposing of PGVA balances over a 12 month period is consistent with that approach. EGD provided the following explanation:

> MS. GIRIDHAR: I think we need to keep in mind the fact that purchases in any month are not necessarily made to be consumed in that same month.
>
> So to the extent that gas was purchased from April to November or if you want to take quarter from July 1 to September 30th, and you have a customer who is actually consuming over those three months, it is not appropriate in our view that all of those variances, in terms of dollar amounts, should only flow to the customers who consume in that month because, as we already stated, some of the gas purchased over that quarter will actually be stored for consumption in the wintertime.
>
> Therefore, it is appropriate to take each quarter's in balances, in terms of price variations, but then spread them over 12 months because we do not have a model whereby purchase in a month equals consumption in a month.[24]

[22] Transcript Vol. 2, page 35, line 6 – 19
[23] Transcript Vol. 2, page 41, line 7 – 9
[24] Transcript Vol. 2, page 41, lines 7 – 22

Considering the above, the Board may wish to consider EGD's proposal to adopt Union's method of disposing deferral account balances over a 12 month rolling period by means of rate riders. Board staff suggests that this method is more reflective of cost incurrence in comparison to a monthly disposition approach, and maintains fairness and equity among customer groups.

Effect of a change in the reference price on the revenue requirement

A change in gas price has other related financial impacts in addition to the change in gas costs. These include changes in carrying costs of gas in inventory, working cash allowance, capital taxes, and unaccounted for gas ("UFG").

Currently EGD includes these changes in the delivery-related revenue requirement as part of the QRAM. A summary of these changes is provided in Exhibit E1, page 21. In comparison, Union records in the Intra-Period WACOG deferral account the change in the carrying costs of gas in inventory, compressor fuel and UFG. This account is reviewed and cleared annually. As a result, Union's delivery rates are not adjusted through the QRAM process.

In order to standardize the methodologies, Union is proposing to adopt EGD's approach. Union proposes to eliminate the Intra-Period WACOG deferral account, and adjust delivery rates quarterly to account for changes in the carrying costs of gas in inventory, compressor fuel and UFG.

The GMG supports delivery-related changes arising from a change in gas price.[25] However, it is unclear how these changes would be reflected in a MRAM. At the oral hearing, the GMG explained that "that would be part of the implementation stakeholder discussions, we would think".[26] Board staff has two concerns with GMG's proposal.

First, Board staff notes that the utilities have indicated that more frequent rate changes may require the utilities to add more lines and pages to its bills[27], thereby increasing the cost and complexity of the billing process. This change could also cause customer confusion. In this respect, Union stated the following:

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[25] GMG pre-filed evidence, page 26
[26] Transcript Vol. 3, page 37, lines 21 – 24
[27] Undertaking J 1.1

> "For example, if a customer's meter was read on December 15, Union would prorate the consumption from November 15 (the last meter read date) to December 15 using heating degree days. The prorated consumption for each period, November 15 to November 30 and December 1 to December 15 would be invoiced at different rates adding multiple lines for each charge item on the bill. This would result in a bill that on an ongoing basis would be cluttered and confusing to customers".[28]

Board staff's second concern is with the limited detail provided in the MRAM proposal with respect to how the delivery related changes would be reflected. The GMG proposes that this issue be determined through "stakeholder discussions". Given that this issue has financial and customer acceptance implications, Board staff submits that this issue should be adjudicated by the Board. However, the filing requirements could be determined through stakeholder discussion.

Filing requirements

Union and EGD support standardized filing requirements to the extent possible. The utilities also propose to further streamline the regulatory approval process. The GMG also supports standardized filing requirements. Specifically, with respect to the MRAM, the GMG is proposing that the Board adopt the filing requirements and a regulatory review process similar to the one followed by the Alberta Utilities Commission. The proposed filing requirements are presented at Appendix A of the GMGs pre-filed evidence.

Standardized Filing Requirements:

Union and EGD submit that due to operational differences between the two utilities, it is not possible to have identical filing requirements. In EGD's view, identical filing requirement (i.e., with identical inputs, format, number of lines or pages, etc.) would not provide any incremental benefit to ratepayers. Similarly Union argues that unique operating areas, rate designs and service options will continue to require different schedules between natural gas utilities. However, both utilities support a collaborative

[28] Union pre-filed evidence, Exhibit E2, page 27

approach where the utility and stakeholders would determine which information, and in what order, should be presented by utilities in their respective QRAM applications.

EGD submits that at a minimum, the filings should contain information pertaining to the determination of the QRAM reference price, derivation of the rider, change in annualized revenue requirement, derivation of rates, and rate handbook. Union states that at a minimum, a QRAM application should contain schedules relating to gas commodity price forecast calculations, gas cost deferral amounts and disposition, general service bill impacts and working papers relating to delivery rate changes, and other non-routine changes such as approved TCPL toll changes. Appendices to the QRAM rate order should include (i) changes to the approved rates, (ii) approved rate schedules, (iii) customer notices.

Given the operational differences between Union and EGD, the QRAM filings of the two utilities cannot be identical, however, a level of standardization can be achieved. Board staff submits that at a minimum, the QRAM applications should contain all the areas proposed by the utilities. These areas have been part of the existing applications and are well understood by parties in the QRAM proceeding.

Proposed Timelines:

The QRAM process (from the end of the 21-day strip to the effective date) takes 45 calendar days. Union and EGD are proposing to reduce this lag from 45 calendar days to 30 calendar days. The utilities propose to achieve these efficiencies by reducing the time required to prepare the QRAM applications and by streamlining the regulatory process (i.e. from the time the application is filed to the date a decision is issued) from 21 days to about 14 days.

Currently the regulatory review processes for the two utilities are different. EGD follows a process where once the application is filed with the Board, copies are e-mailed to all parties in EGD's most recent rates proceeding for review and comment. One week is allotted for this step. EGD files its reply comments with the Board and serves intervenors within a week. The Board issues its decision within a week from the date reply comments are filed. From the time the application is filed with the Board to the date a decision is issued typically takes about 21 calendar days. EGD is proposing to

shorten this review period to about 14 calendar days by reducing the time for comments to 5 calendar days, and the time for EGD's reply comments to 2 calendar days.

In the case of Union's QRAM applications, the Board issues a Notice of Written Hearing and Procedural Order ("Notice") once the application is filed. The Notice is not published, however, it is e-mailed to all parties in Union's last main rate case. The Notice sets time for comments on the nature of the hearing, intervenor comments and Union's reply. Thereafter, the Board issues its decision. This review process also takes 21 calendar days. Union is proposing to shorten this 21 calendar day period to about 14 calendar days. The efficiencies proposed by Union are at page 38 of its pre-filed evidence.

NRG's QRAM applications follow a process similar to Union's.

Board staff submits that if the Board were to approve the proposal of the utilities to reduce the 45 day lag to 30 days, the Board may wish to also consider adopting a consistent regulatory approval process. Board staff submits that the process currently followed by EGD is more efficient than that of Union's as the application is automatically forwarded to all parties and the dates for comments and replies are pre-determined. Adopting the EGD process would eliminate the need for the issuance of a Notice and would further standardize the regulatory review process.

All of which is respectfully submitted