

NATURAL RESOURCE GAS LIMITED

EVIDENCE

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.

INTRODUCTION TO NATURAL RESOURCE GAS LIMITED

1. Geography

Natural Resource Gas Limited (“NRG”) is a small, privately owned natural gas distribution company located on the shores of Lake Erie in Southern Ontario, south and east of London (see Appendix A hereto).

The territory served by NRG is mainly rural. NRG currently has approximately 635 kilometres of pipeline in service (slightly more than 58 km of which are in the Town of Aylmer). The largest town served by NRG is Aylmer, with a population of just over 7,000. Other communities served by NRG include Belmont, Port Bruce, Port Burwell, Straffordville, Springfield, Vienna and Copenhagen.

2. Customers and Volumes

For the last year for which data is available (Fiscal 2007, period ending September 30, 2007), NRG’s total throughput was approximately 23,000 103 m3 and it provided service to just under 6,600 customers.

The economy of the area served by NRG is mainly agricultural based. Nearly 24% of the total through of NRG for Fiscal 2007 was directly related to agriculture. Specifically these volumes were related to tobacco curing and processing, grain drying, food processing and greenhouses. Much of these volumes are also seasonal in nature. Two other large institutional accounts

1 accounted for a further 7% of NRG's total throughput. The remainder of the annual throughput
2 is related to residential, small commercial and small industrial customers.

3
4 NRG has recently added a large customer to its system. The addition of this customer is
5 expected to more than double the total throughput of the company.

6
7 **3. Sources of Distribution Supply**

8 NRG is embedded within the Union Gas distribution system. NRG receives gas from the Union
9 Gas system at seven different locations along the franchise boundaries between the two
10 distributors. NRG also receives gas from local production in its franchise territory.
11 Approximately 40 producing wells are connected to the NRG distribution system. This local
12 production accounted for approximately 38% of the gas transported on NRG's system in Fiscal
13 2007.

14
15 As noted above, NRG has recently added a large volume customer. This customer will require
16 the addition of another supply point from Union Gas and the addition of approximately 28,500
17 metres of pipeline to the NRG distribution system.

18
19 **4. Distribution Service from Union Gas**

20 NRG takes service from Union Gas under Union's M9 rate. Under this rate, NRG receives a
21 bundled delivery, storage and load balancing service from Union. The charges paid to Union
22 include a monthly demand charge based upon a contracted demand, and a delivery commodity
23 charge based on volumes delivered to NRG.

24
25 All volumes transported to NRG by Union are included under the M9 distribution contract. This
26 includes both gas purchased by NRG for its system gas customers and the volumes consumed by
27 NRG's direct purchase customers.

1 **5. Direct Purchase**

3 **(a) NRG**

4 NRG is a direct purchase customer on the Union Gas system. It has been assigned upstream
5 transportation capacity on the TransCanada Pipeline (“TCPL”) system. In addition to gas
6 purchased at the Alberta border and transported to Ontario on its assigned capacity on TCPL,
7 NRG also purchases gas on a firm daily basis at Parkway.

8 NRG is required to balance its total supply with its total demand on the Union Gas system on an
9 annual basis to within +/- 4%, at the time that the direct purchase contract with Union Gas is
10 renewed. This may entail NRG purchasing Ontario delivered gas or shedding excess gas in order
11 to avoid penalties for failing to remain within the contract parameters. As a direct purchase
12 customer, NRG is obligated to deliver a fixed amount of gas to Union each day. This is referred
13 to as the daily contract quantity (“DCQ”).

14
15 In addition to the annual balancing requirement, NRG may be required to purchase additional
16 gas in the period leading up to Union’s winter balancing checkpoint at the end of February. If
17 consumption by NRG is greater than forecast, it will exceed its forecast banked gas account
18 winter balancing checkpoint. The Board approved this requirement for bundled-T customers on
19 Union’s system in RP-2003-0063 (Decision with Reasons, dated March 18, 2004).

21 **(b) NRG Customers**

22 A number of NRG customers are direct purchase customers themselves, either directly, or
23 through a marketer. These customers are served by a number of direct purchase contracts
24 between NRG and the customer or their representative. Each of these direct purchase contracts
25 has been assigned a DCQ that is a portion of the DCQ assigned by Union to NRG. In addition,
26 these customers have been assigned a portion of the TCPL capacity assigned by Union to NRG.

27
28 The direct purchase volumes transported by Union Gas to the NRG system are included in
29 NRG’s M9 distribution contract with Union.

6. NRG and the PGVA

NRG has a Board approved Purchased Gas Commodity Variance Account (“PGCVA”) and a Purchased Gas Transportation Variance Account (“PGTVA”). NRG also has a gas purchase rebalancing account (“GPRA”).

(a) PGCVA

The PGCVA includes the cost of gas purchased by NRG to serve its system gas customers. In addition, it includes the costs to deliver the gas to Ontario (where applicable). In addition to the cost of the commodity for gas purchased at the Alberta border and for gas purchased at Parkway, the costs include the TCPL capacity assigned to NRG from Union (net of the capacity assigned by NRG to its own direct purchase customers). Costs also include the purchase of the local production, and any costs associated with balancing gas purchases or sales.

The reference price associated with the PGCVA is adjusted quarterly through the QRAM process. The balance in the PGCVA is cleared prospectively to system gas customers only.

(b) PGTVA

The PGTVA includes the cost paid by NRG to Union Gas under their M9 contract. These costs are related to the delivery of the volumes to the NRG franchise area, including the related capacity costs, as well as the related storage and load balancing services provided by Union in the bundled M9 rate.

NRG currently reports on the balances in this account at each QRAM filing. However, NRG does not adjust the reference price associated with this account as part of the QRAM process. Nor does NRG request any disposition of the balances in this account as part of a QRAM filing.

The reference price for this account is set as part of a cost of service filing. NRG disposes of the balances in the account once a year as part of its annual filing dealing with its non-commodity deferral and variance accounts. The PGTVA is cleared to all customers, both system customers and direct purchase customers.

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(c) **GPRA**

In the RP-2002-0147/EB-2003-0286 According Order dated January 30, 2004, the Board approved the Gas Purchase Rebalancing Account to record the increase (decrease) in the value of the gas inventory available for sale to sales service customers due to changes in NRG's PGCVA reference price.

A. REVIEW OF QUARTERLY RATE ADJUSTMENT MECHANISM (“QRAM”) FOR NATURAL GAS DISTRIBUTORS

1. Trigger Mechanism for Changing the Reference Price or Clearing the Purchased Gas Variance Account (“PGVA”)

As part of the Alternate Dispute Resolution (“ADR”) agreement in E.B.R.O. 491 (Decision with Reasons dated April 19, 1996), a PGVA trigger mechanism was established for NRG. The trigger mechanism was a two-step threshold model that called for a report to the Board and interested parties when the forecast year-end balance in the PGVA exceeded \$20 for a typical residential customer. Based on the average consumption of a residential customer, this was equivalent to a change in the reference prices of just under one cent per cubic metre.

A further report was required when the forecast balance was forecast to exceed \$30. Based on the average consumption of a residential customer, this was equivalent to a change in the reference price of approximately 1.4 cents per cubic metre. In addition, the report was to contain an updated view of gas cost volatility and include a recommendation from NRG regarding disposal of the balance in the PGVA or an explanation of why this would be inappropriate.

As part of the ADR agreement in E.B.R.O. 499 (Decision with Reasons dated August 20, 1998), it was agreed that NRG would split the PGVA into commodity (PGCVA) and transportation (PGTVA) components and that the two-step threshold trigger mechanism would remain based on the aggregate amount of the PGCVA and PGTVA.

This methodology remained in place for NRG until January 1, 2004 when it moved to the current quarterly filing process. During the period in which this methodology was in place, NRG changed the PGCVA reference price at different frequencies, ranging from as frequently as two months to as lengthy as nine months.

Initially, the trigger mechanism only required NRG to forecast the cost of gas purchases to the end of the current fiscal year, as it was the projected year-end balance of the PGVA that was used to determine if one or both of the triggers had been exceeded.

1
2 However, the process soon evolved to include not only a forecast to the end of the current fiscal
3 year, but also a forecast of the gas costs on a twelve month forecast basis from the point of the
4 proposed reference price change. This was because NRG was required to provide an updated
5 view of gas cost volatility and a recommendation from NRG regarding the disposal (or not) of
6 the balance in the PGVA through a reference price change.

7
8 NRG only filed an application related to the PGCA reference price when the projected fiscal
9 year-end balance exceeded \$20. However, NRG monitored the impact on the projected fiscal
10 year-end on a monthly basis in order to determine whether or not the threshold was triggered.

11
12 **2. Price Adjustment Frequency and Forecast Periods**

13 NRG adjusts its PGCVA reference price, its GPRA rate and the gas commodity charge on a
14 quarterly basis as part of the QRAM process. These rate changes are effective January 1, April
15 1, July 1 and October 1 of each year.

16
17 The price adjustment is based on a combination of the most recent year-to-date PGCVA balances
18 available when the QRAM application and evidence is prepared, estimated costs for the
19 remainder of the historical period and a twelve month forecast of gas purchases and prices.

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21 As an example, NRG's most recent QRAM application to set new prices effective October 1,
22 2008 was based on actual gas purchases and prices up to and including July, 2008. The volumes
23 and costs for August and September, 2008 were based on estimates for those months, including
24 actual contracted prices if available. The forecasted volumes and prices for the period October,
25 2008 through September, 2009 were also used to determine the appropriate PGCVA reference
26 price, GPRA rate and gas commodity charge.

27
28 NRG has historically used a twelve month forecast period because it has a significant number of
29 customers and volumes that are seasonal in nature. The use of a shorter term forecast horizon
30 can often lead to more volatility in the reference price and rates charged on a quarter to quarter
31 basis. Volatility in the year-to-date prices can also be magnified if they are included in the

1 recovery through future prices over a shorter period. This volatility can result in the seasonal
2 customers paying a price that could be significantly higher or lower than the cost over a full year.

3
4 There are other problems associated with using a forecast period of less than twelve months.
5 First, use of a shorter period can transfer the cost of gas from one class of customers to another.
6 NRG has significant volumes that are agricultural in nature. These customers consume virtually
7 of their gas in the late summer and early fall. If the forecast period is less than twelve months,
8 any gas cost variance in this period would be recovered or returned to a different set of
9 consumers.

10
11 Second, NRG has a relatively small volume of consumption in the late spring and summer
12 months due to a lack of large industrial process loads. This means that NRG emerges from a
13 cold winter with a large debit in the PGCVA, the small volumes in the spring and summer could
14 result in a significant increase in the rates needed to clear the balance over a period that is shorter
15 than a full year. Similarly, a large PGCVA credit could significantly reduce the gas charge in the
16 spring and summer months. Again this could add significant volatility to gas prices.

17 18 **3. Methodology for the Calculation of the Reference Price**

19 NRG is a direct purchase customer on the Union Gas system. As a bundled transportation
20 customer, NRG is obligated to deliver a fixed amount of gas each day to Union. This amount is
21 based on the expected annual volume of consumption as determined by Union (in association
22 with NRG) divided by 365.

23
24 A portion of these deliveries to Union are deliveries at the Alberta border which are transported
25 to Ontario on TCPL capacity that Union has assigned to NRG. NRG also purchases gas on a
26 firm daily basis at Parkway as part of its obligation to deliver to Union.

27
28 NRG is also required to balance its total supply with its total demand on the Union Gas system
29 on an annual basis to within +/- 4%, at the time that the direct purchase contract with Union Gas
30 is renewed. This may entail NRG purchasing Ontario delivered gas or shedding excess gas in
31 order to avoid penalties for failing to remain within the contract parameters.

NRG also purchases a significant portion of its system gas needs from local production in its franchise area.

NRG reflects the contracted prices, where applicable, in the reference price calculations. NRG often has a combination of fixed price contracts and indexed price contracts in the twelve month forecast period.

NRG believes that it is appropriate for it to use the prices associated with its unique supply inputs in order to minimize the balances in the PGCVA. The use of a single Ontario-wide reference price would most likely result in large PGCVA credits or debits that would influence the prices going forward for prospective clearance. NRG does not believe this would be in the ratepayer or utility interest.

4. Deferral and Variance Accounts and Disposition

As noted above, NRG has a PGCVA and GPRA. These accounts capture the variances in commodity costs (including transportation costs to Ontario) and inventory revaluations, respectively. NRG does not have any load balancing capability. This service is part of the bundled service provided by Union under the M9 rate schedule. Variances in this cost is captured through NRG's PGTVA account and is recovered from both system sales and direct purchase customers on an annual basis.

NRG calculates its reference price as the price needed to set the PGCVA balance to \$0 at the end of the twelve month forecast period. This forecasted price reflects the different delivery points in the NRG supply portfolio (local production, Alberta border, Parkway and Ontario delivered, if necessary). The forecast price also reflects TCPL tolls, fuel ratios for the TCPL transportation, and the Board approved short term interest rate that is applied to the PGCVA balance. This reference prices also takes into account the actual (or estimated) PGCVA balance at the beginning of the twelve month forecast period.

NRG also sets the GPRA price so that at the end of the twelve month forecast period, the balance in this account is also \$0. It also takes into account the estimated GPRA balance at the beginning of the forecast period.

NRG disposes of the PGCVA and GPRA balances on a prospective basis by including the estimated balances in these accounts at the beginning of the twelve month forecast period and factoring these debits or credits into the reference price needed to bring the account balance to \$0 at the end of the forecast period. This eliminates the need for any retroactive charges.

This methodology means that the accounts are never cleared, but rather there is a continuous quarterly adjustment to the reference price to target a prospective \$0 balance in the account.

As noted above, seasonal consumption patterns for NRG customers are more pronounced than the simple seasonality associated with heating. NRG has several rate classes that consist of customers that use gas in certain periods of the year. By maintaining a year long forecast period, rate volatility is reduced and costs incurred during any one quarter and recovered over a full year rather than in the subsequent quarter.

5. Effect of a Change in the Reference Price on the Revenue Requirement

A change in the reference price currently has no impact on NRG's revenue requirement. This is because NRG does not have any gas in inventory. While there is an impact on the working cash allowance, this impact is relatively small. If NRG does have gas in inventory in the future, it would have to review how this cost would be included in the company's revenue requirement and whether or not it should be changed on a quarterly basis. This may be impacted by whether or not the utility is under cost of service regulation or under some form of incentive regulation.

1 **6. Implications/Costs of Standardizing Pricing Mechanisms Across All Natural Gas**
2 **Distributors**

3 The goal of a PGCVA reference price is to reflect the best forecast available to a utility of its
4 ultimate gas costs. This helps the utility to minimize the PGCVA balances and to minimize
5 reference price volatility on a going forward basis.

6
7 As such, the reference price should reflect the balance in the account at the beginning of the
8 forecast period. It should reflect the gas supply portfolio unique to each utility. It should also
9 reflect the fixed price contracts that a utility may have in place for a portion of its portfolio.

10
11 Until NRG is provided with the implications of a standard pricing mechanism across all natural
12 gas distributors, it is unable to estimate the costs of any such implications.

13
14 **7. Filing Requirements**

15 NRG's current QRAM evidence usually consists of approximately 11 pages of written evidence
16 and 11 schedules showing the monthly PGCVA calculations in two periods: the twelve months
17 leading up to the forecast period and the forecast period itself. These schedules provide the
18 monthly purchases by delivery point, the associated prices, the interest calculation on the
19 monthly balance and other factors affecting the prices such as the TCPL toll. The schedules also
20 show the calculation of the reference price that sets the balance in the account to \$0 at the end of
21 the twelve month forecast period.

22
23 The schedules also provide the calculation of the GPRA balances on a monthly basis and show
24 the calculations used to derive the rate needed to set this balance to \$0 on a twelve month
25 forecast basis.

26
27 The schedules also provide the current and twelve month forecast period projected balance in the
28 PGTVA. Finally, the schedules also provide the impact on an average residential customer on
29 both a quarterly and annual basis. The evidence also consists of appendices that include the

1 proposed rate schedules, the accounting entries for the PGCVA and a customer notice. A copy
2 of NRG's EB-2008-0284 application and evidence for the October 1, 2008 QRAM is attached.
3

1 **B. REVIEW OF LOAD BALANCING OBLIGATIONS FOR NATURAL GAS**
2 **DISTRIBUTORS**

3 NRG is subject to the load balancing obligations required by Union Gas. NRG requires its direct
4 purchase customers to balance their supply at contract year end to within +/- 4% of the
5 customer's contractual parameters with NRG.

6
7 NRG does not have any load balancing capability of its own, outside of the M9 service
8 contracted from and provided by Union.

1 **C. COST ALLOCATION**

3 **(a) Regulated Gas Supply**

4 NRG's system gas fee, which is included in the gas supply charge that is charged to its' system
5 gas customers is currently at a rate of 0.1828 cents per cubic metre. This rate was approved by
6 the Board in NRG's last cost of service application in EB-2005-0544 (Decision with Reasons
7 dated September 20, 2006).

9 The activities associated with the costs recovered through the system gas fee are primarily those
10 associated with purchasing the gas commodity and the regulatory costs associated with the
11 GRAM filings.

13 NRG functionalizes a portion of the costs associated with wages and benefits, regulatory costs
14 and consulting costs to the gas supply function. In addition to these costs a number of additional
15 costs are functionalized to gas supply, including general repairs and maintenance costs, utilities,
16 property taxes, insurance and depreciation expenses. These expenses are related to the assets
17 assigned to the gas supply function. These assets include a portion of the buildings, land and
18 office furniture.

20 Rate base assigned to the gas supply function also includes a portion of the working capital
21 allowance related to the O&M costs functionalized to gas supply and to the working capital
22 component directly related to the purchase of the gas commodity.

24 The return on rate base and the associated income taxes are also assigned to the gas supply
25 function based on the level of rate base functionalized to gas supply.

27 **(b) Load Balancing**

28 NRG does not provide any load balancing services to its customers other than what it receives
29 from Union Gas. The charges paid to Union for the M9 bundled delivery service are all
30 allocated to this load balancing/storage/Union delivery function. Because the M9 service is a
31 bundled service, NRG cannot disaggregate this cost into three separate components noted above.

1
2 In addition to this cost, there is a minor working capital allowance component of rate base that is
3 functionalized to these functions and is again based on the cost of the M9 service to NRG.
4

5 (c) **Direct Purchase**

6 NRG's direct purchase administration fee is made up of a new customer processing fee per
7 customer, a monthly fee per bundled-T contract and a monthly per customer fee. NRG's total
8 revenue from direct purchase administration fees is currently approximately \$6,000 per year.
9

10 NRG's direct purchase administration fee, including the current rates, was approved by the
11 Board in the E.B.R.O. 496-02 Order dated September 23, 1998. The fees were approved by the
12 Board based on an analysis of the time and labour costs associated with the processing of new
13 customers, contract and account maintenance. As part of that Order the Board directed NRG to
14 record the revenues and costs associated with the direct purchase administration system in a
15 deferral account.
16

17 In the RP-2002-0147/EB-2002-0446 Decisions with Reasons dated June 27, 2003, the Board
18 allowed NRG to recover the balance in this account from customers and close the account. The
19 amount in the account was a debit of less than \$9,000. At the time of the disposition of this
20 balance, NRG had a total of three direct purchase customers.
21

1 **D. BILLING TERMINOLOGY**

2 NRG has both non-contract customers and contract customers.

4 **(a) Non-Contract Customers**

5 Non-contract customers include residential and small commercial and small industrial customers
6 served under Rate 1 (General Service Rate). Non-contract customers also include seasonal
7 customers served under Rate 2 (Seasonal Service) and Rate 4 (General Service Peaking).

8
9 Non-contract customers pay a Monthly Fixed Charge and a Delivery Charge per cubic metre. If
10 applicable, these customers also pay a Gas Supply Charge.

11
12 The Monthly Fixed Charge is a fixed dollar amount per month, while the Delivery Charge and
13 Gas Supply Charge are billed on a per cubic metre basis.

14
15 **(b) Contract Customers**

16
17 NRG's contract customers are large customers that sign a contract that specifies a combined
18 daily contract demand for firm and interruptible service that exceeds a threshold and have an
19 annual volume in excess of a set amount. Contract customers include those served under Rate 3
20 (Special Large Volume Contract Rate) and those served under Rate 5 (Interruptible Peaking
21 Contract Rate).

22
23 NRG's contract customers pay a Monthly Customer Charge and a Monthly Demand Charge if
24 they have contracted for a daily contracted firm demand. There is also a delivery charge which
25 is composed of a Monthly Firm Delivery Charge and/or a Monthly Interruptible Delivery
26 Charge, as applicable. These customers also pay a Gas Supply Charge if they are receiving
27 system gas from NRG. Overrun Gas Charges are also applicable should the customer exceed
28 their contracted demand level.

29
30 The Monthly Customer Charge is a fixed dollar amount per month, while the Monthly Firm
31 Delivery Charge, Monthly Interruptible Delivery Charge and Gas Supply Charge are billed on a

- 1 per cubic metre basis. The Monthly Demand Charge is billed on the basis of the number of
- 2 cubic metres of the daily contracted firm demand.

1 **E. IMPLEMENTATION ISSUES**

2 Any changes to the methodologies currently used by NRG could result in significant cost
3 consequences. Because of the relatively small size of NRG these cost consequences could be
4 significant. Any changes to the methodologies currently used by Union Gas for load balancing
5 could also impact on the costs of NRG not only for its system gas customers, but also for its
6 direct purchase customers.

7
8 Depending on the type of changes that may be required, NRG may also need to make significant
9 changes to its billing and/or direct purchase tracking systems.

10
11 There may also be non-cost implementation issues for NRG depending on the type of changes
12 that may be required from implementing changes to the current methodologies.

13
14 NRG cannot quantify the costs or other implementation issues at this time without further detail
15 of the changes that may be required.