Ontario Petroleum Institute Inc.

555 Southdale Road East, Suite 203
London, Ontario N6E 1A2 ● Telephone (519) 680-1620
opi@ontariopetroleuminstitute.com ● www.ontariopetroleuminstitute.com

ONTARIO PETROLEUM INSTITUTE SUBMISSION

CONSULTATION TO REVIEW NATURAL GAS SUPPLY PLANS

ONTARIO ENERGY BOARD: EB-2019-0137

Prepared by:
The Ontario Petroleum Institute

Table of Contents

1.0 INTRODUCTION

Opening Statement and Purpose of Participation

Ontario natural gas producers have continued to reliably supply natural gas to Ontarians, for over a century. They appreciate this rare opportunity to make submissions as part of the EB-2019-0137 proceeding, which is set to address the gas supply plans for the next 5 years for Enbridge Gas Inc. ("EGI").

Ontario producers are eager to work with EGI now that it has merged with the Union Gas Limited ("Union") utility system operations. Producers see this proceeding as an opportunity to fix and ameliorate the chronic problems they have experienced with Union, now that a 'fresh canvass' will be in place, with EGI.

Ontario producers are naturally 'captive' to the geographic locations in which they are situate. Their gathering pipes from their wells are connected to the local utility pipes. As such, they are subjected directly and indirectly to various local regulatory and regional market conditions, some of which, as in any business, are manageable, and others less so, or even at times, unacceptable. Producers frequently find in this captive situation that they have no choice but to take the terms that they are handed by the utility. This gives rise to market and monopoly issues, which are canvassed further below.

The paramount purpose of these submissions to the OEB is twofold:

- to expose historic myths and abnormal, imposed supply conditions, which Ontario producers faced (and continue to face) for decades due to certain phantom, prejudicial gas supply policies of the former Union; and

- to make detailed recommendations, which will allow EGI, producers and the OEB to formulate a just and reasonable, transparent 're-set' to how local gas is transacted in Ontario in accordance with normal energy market conditions.

A key premise underlying the dual objectives in this submission is a recognition that 20 years ago, when the OEB Act was then revised, the statutory drafters were clear that sustainability in the gas (and electricity) industry is an important factor. Consider section 2, subsection 5.1 of the Act:

The Ontario Energy Board is guided by the following principle in Section 2 of the Act:

5.1 To facilitate the maintenance of a financially viable gas industry for the transmission, distribution and storage of gas.

OPI's members welcomed this amended, instructive and balanced language guiding the OEB. At the time, they were hopeful it would assist all stakeholders in ensuring that they measure their regulatory and market proposals against the principle of sustainability and *financial viability* for the benefit of the gas industry.

In 2003, the OEB heard a main rates application from Union Gas Limited ("Union"), at which time producers tried to raise certain difficult industry issues concerning, for example, the notional utility myth that Ontario-produced gas travels to and from Dawn, before it reaches a customer meter. The Dawn transportation myth as producers call it, has severe adverse cost consequences to local producers. Local gas industry interests had intervened to draw the board's attention to the problems of local gas producers trying to sell gas to the local utility monopoly. While the board seemed interested in hearing those submissions, it declined to rule at the time until more evidence was adduced to draw attention to the requested changes. The Board said:

"The Board considers the production and marketing of Ontario natural gas to be an important policy issue in the province's energy supply plan. The Board invites Energy Objective to participate in the Natural Gas Forum to have its concerns considered in a broader policy context. Alternatively, the Board would welcome further evidence touching on this subject in subsequent proceedings. In the interim, the Board accepts Union's position on these matters."

Ontario gas producers are therefore pursing this opportunity to openly discuss the current adverse monopoly and regulatory conditions, with the expectation that interested stakeholders, including EGI, are committed to resolve these outstanding issues.

Backgrounder on the Ontario Industry

The Ontario Petroleum Institute (OPI) is the industry association (www.ontariopetroleuminstitute.com) that represents the oil and natural gas exploration, production and hydrocarbon storage industries in Ontario. Ontario has been producing oil since 1858, and has continuous records of natural gas production dating back to 1890.

OPI was formed in 1963. It has a broad membership that includes commercial oil and gas production companies, drilling contractors, well and oilfield services, geologists, geophysicists and engineers, environmental consultants, financial/legal services, land services, trades and utilities.

The OPI's primary objective is to encourage responsible exploration and development of oil and natural gas here in Ontario. As part of the sector's contribution to the provincial economy, Ontario's oil and natural gas industry provides:[1]

- $77 million in direct oil and natural gas product revenues,
- annual investments of $25 - 30 million in capital expenditures,
- 700 full time jobs in local Ontario communities,
- $20 million in salary and wages
- 1500 additional indirect jobs
- $7 million in annual royalties, and
- significant yearly municipal and corporate taxes

[1]Fremeth, Adam. "Economic Profile of the Ontario Oil, Gas, and Salt Resources Industry" *Prepared for the Ontario Petroleum Institute.* Richard Ivey School of Business, March 2014

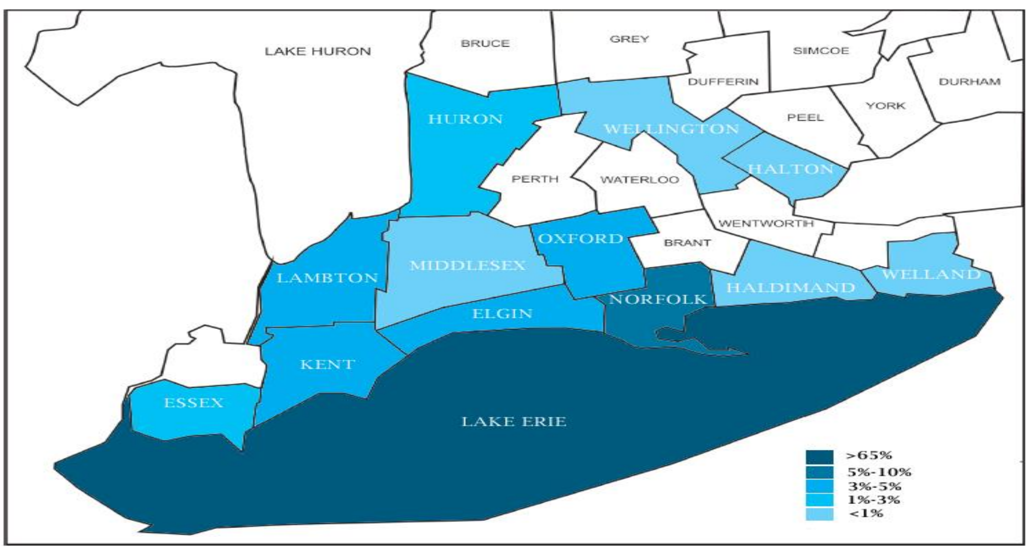
OPI is confident that all of these activities and attributes play a meaningful, ongoing role in the prosperity and well-being of Ontario's economy.

Natural Gas has been around as long as crude oil in Canada. Originally a by-product of oil production, the first Natural Gas plant was established in central Canada. By the early 1880s, it became widely used as a source of energy for power generation and heating.

Natural Gas production evolved with southwestern Ontario being the primary center for natural gas distribution; one of North America's most robust underground natural gas storage hubs is located in Dawn Township, connected to consumer needs in central Canada and the northeastern United States.

In 2018, southwestern Ontario upstream sector companies produced 132 Million cubic meters or 5,155 Terajoules of Natural Gas from over 1,500 wells producing Natural Gas on land, with a significant portion extracted from under Lake Erie from over 400 wells.

Natural Gas Production by County



Focussed Participation and Outcomes

Ontario gas producers are offering recommendations to establish fair and reasonable terms on which they are paid for their local natural gas supplies into the EGI distribution system.

The producers are seeking:

1. Payment for gas sales equal to the price EGI actually charges customers for the gas commodity;

2. Fair market gas pricing which recognizes that local Ontario gas is actually delivered at or near customer meters and is not physically delivered to and from Dawn, unilaterally forcing producers to pay for phantom transportation costs that do not exist; and

   Reasonable access to the utility pipeline network at new gas delivery points, which are built according to CSA and TSSA utility standards and not 'gold plated' by the utility and cost prohibitive to the point where gas production is shut-in.

2.0 ONTARIO INDUSTRY OPERATIONS

Most natural gas producers in Ontario operate conventional wells to deliver gas to treatment facilities and then to local utility pipelines. Ontario gas production in 2018 was 5,155 Terajoules and accounts for under 1.5% of Ontario's total gas consumption. Although declining, Ontario production in aggregate is steady and has been reliably producing for over 120 years. Ontario-produced natural gas offers several benefits over gas procured from outside jurisdictions for consumers and for the Province and its treasury.

Ontario-produced natural gas is delivered directly to customers from gathering lines, into local utility distribution networks which then flows to customers without passing through the majority of EGI infrastructure. This local injection into utility pipeline networks decreases the need for costly upstream utility infrastructure to transport gas from ex-Ontario sources. In addition, Ontario-produced natural gas enriches local economies through employment, providing royalties to landowners, and through municipal, provincial and federal taxes. Approximately 70% of the Natural Gas produced in Ontario comes from wells in Lake Erie for which the province of Ontario receives a 12.5% royalty.

The use of Ontario's natural gas resources over other jurisdictions offers environmental benefits. Locally produced gas has a reduced environmental footprint in that natural gas in Ontario is produced by conventional means and does not utilize controversial high-volume hydraulic fracturing techniques, which consume very large quantities of potable water. Locally produced gas also has a reduced carbon footprint because its proximity to the customer requires less transportation, compression and therefore less fuel gas, shrinkage and losses.

***The* Problem**

As the details in this Submission will demonstrate, Ontario producers have consistently and systematically been paid below-market prices for the natural gas they have supplied to Union, and now its successor EGI. This situation is unacceptable.

Ontario producers are and remain in a position where they have had little or no ability to negotiate price and the terms of service due to monopoly utility market dominance and inappropriate behavior of Union. The structure of all of the gas pricing manipulation, the gas purchase contracts, and related services has caused undue and unnecessary hardship for the Ontario petroleum industry, raising issues of inappropriate competitive behaviors and treatments in the marketplace.

In preparing for this stakeholder process, OPI consulted with experts specializing in the competition field. OPI will be seeking regulatory correction with the OEB if the one-sided approach to arriving at market prices for gas is not rectified directly with EGI. The current situation precludes the Ontario producer from competing on fair and non-discriminatory terms with out of province suppliers and does not take into consideration the location of Natural Gas deliveries into the system.

The Ontario producers are being inappropriately disadvantaged. The survival of the industry hinges on the ability to obtain transparent and fair market prices for locally produced gas.

Add any statement about projects not being developed and or production shut in due to

3.0 ISSUES LIST

ISSUE #1 – Price for Commodity

Preamble:

The Ontario producer is given two options when delivering Natural Gas into EGI's pipeline network in the Southern System Rate Zone. The producer can sell directly to EGI through a standard Gas Purchase Agreement ("GPA") or transport the gas to Dawn through a M13 contract. The price received by the Ontario producer for the commodity when selling under the GPA is the Canadian Gas Price Reporter ("CPGR") Dawn Index price. The method used to calculate the price is the 28 day forward strip for the upcoming month from the CPGR. The producers do not get the actual price, they receive the prices looking forward. There are no other options offered.

EGI provides storage, transportation and delivery services for Natural Gas consumers in Ontario. EGI charges all customers in its Southern System Rate Zone a Total Gas Supply Commodity Charge for the Natural Gas commodity delivered in the Southern System Rate Zone. This price is updated quarterly and is approved by the Ontario Energy Board ("OEB").

EGI's Southern System Total Gas Supply Commodity Charge consists of two components; Commodity and Fuel, and Commodity and Fuel – Price Adjustment. The Commodity and Fuel charge is the 12 months ahead forecast of the gas costs to be incurred by EGI for the Southern System customers including upstream transportation. EGI purchases Natural Gas from Appalachia, Chicago, Niagara, Western Canada and U.S. Mid-continent in addition to Dawn and all of these sources of gas including upstream transportation contribute to The Total Gas Supply Commodity Charge which is charged to customers in the Southern System Rate Zone. The Commodity and Fuel – Price Adjustment is used to adjust for actual Commodity and Fuel costs as balances accumulate in the Purchase Gas Variance Account.

The Mean difference in Total Gas Supply Commodity Charge versus the price received by the Ontario producer under the GPA contract from January 2015 through August 2019 is $0.032813 per cubic meter or $0.84 per gigajoule. Please see Appendix 1A and 1B for a table and graph showing the comparison.

Some Ontario producers deliver locally produced gas to EGI residential customers directly off of their own field gathering lines. These customers are termed 'field line' customers; they are EGI Small Volume General Service Rate customers, who are served directly by Ontario producers. EGI only has to provide a meter, regulator and meter/billing services. All other services are provided by the Ontario producer.

Submission:

Ontario producers believe that EGI is putting Ontario producers at an inappropriate disadvantage versus gas suppliers outside of the province. EGI will only pay the CGPR Dawn Index price for Ontario produced gas, and then sells that gas to customers at the Total Gas Supply Commodity Charge. Ontario producers know that their gas is delivered into EGIs Southern System Rate Zone downstream of Dawn and the majority if EGI's pipeline delivery assets. Locally produced gas is delivered very proximate to customers - in some cases directly to customers, and the market price for Ontario producer gas is the commodity price paid by customers of EGI, namely the Total Gas Supply Commodity Charge.

ISSUE #2 – Producers share of the Avoided Cost of Service (Delivery to you charges)

Preamble:

All Ontario producers produce natural gas into the Southern System Rate Zone with one exception where Natural Gas is delivered to EGI and is transported by the utility to the EGD rate zone. Most Ontario gas producers deliver Natural gas into EGI's local distribution and transmission network in the Southern System Rate Zone. Please see the table as Appendix 2A and map as Appendix 2B showing the location and pressure of several Ontario producer meter stations with gas deliveries to EGI.

There are two standard contracts under which Ontario producers are compelled to sell and transport gas in EGI's Southern System, namely the GPA and M13. Ontario Producers selling to EGI under a GPA are charged $90 per month for a station fee and $0.11 per GJ for gas balancing and transportation.

Producers selling under a M13 agreement are charged $957 per month for a station fee, $0.005 per GJ for a Delivery Commodity Charge, $0.035 per GJ for a Transmission Commodity Charge, several Balancing charges and a name change charge. These Charges can cost over $5,000 per station per month. Please see Appendix 2C and 2D showing an example of an Ontario producer GPA statement and M13 invoice. These Charges are excessive and are destroying the local industry.

The Ontario producer has continued, even post amalgamation, to be treated more favourably for its Natural Gas deliveries into the EGD system. For example, an Ontario producer delivers gas to EGI in the Southern System Rate Zone and the gas is then transported by EGI to its EGD rate zone. Under this gas exchange agreement, EGI receives gas from the Ontario producer at production station 85500A, 315 Farr Road, Lowbanks, ON and delivers the same quantity of gas back to the

Ontario producer at Dawn. Unlike the costs charged to a producer under M13 Contract, EGI does not charge the Ontario producer a station fee or any transportation charges. By contrast, EGI historically pays the Ontario producer $0.15 per GJ as a fee for service. This is approximately 70% of the 2019 third quarter OEB approved Transportation Dawn Charge per cubic metre of 0.8347 cents/m3 EB-2019-0155, which is $0.214 GJ. If the M13 or GPA contracts were to be imposed instead of the current pre-merger contract, it would be a clear indication of the exercise of monopoly powers.

There are also Ontario producers who deliver gas to EGI residential customers directly off of their field gathering lines. These customers are the Field Line Customers; they are EGI Small Volume General Service Rate customers, who are served by Ontario producers. For gas sold to field line customers, EGI pays the Ontario producer back the $0.11 per GJ that is charged for balancing and transportation, and EGI also pays an avoided cost of service of $1.422 per GJ. Please see Appendix 2E for an example of a GPA vendor statement showing Field Line payments. The OEB approved Small Volume General Service Rate effective 2019-07-01 for Delivery Charge, Delivery Charge – Price Adjustment and Storage combined is $1.5966 per GJ for the first 3.9 GJs, $1.5289 per GJ for the next 5.85 GJs, and 1.3542 per GJ for all over 9.75 GJs.

Submission:

The Ontario producer can attest that Ontario-produced gas is delivered into the EGI system *downstream* of EGIs storage assets and most of its infrastructure assets, at the ends of the utility distribution pipeline system. The Ontario producer submits that gas delivered into EGIs system cannot and does not ever physically pass through Dawn. There is a severe lack of continuity with respect to the GPA, M13, field line customers and EGD rate zone deliveries in comparison to EGI's avoided cost of service, and the balancing and transportation charged and, in some cases, paid to the Ontario producers.

This is the nub of what OPI is asking the OEB to direct the EGI to reconcile, fix, amend or whatever remedy is to be required, in order to reach a fair market price for gas delivered. Other customers who buy gas from Ontario producers simply pay a fair market price (ENGLP and cannabis customers) for gas delivered into their systems. This is what OPI's members are seeking in this proceeding.

The Ontario producer submits that all gas delivered into EGIs system under the GPA should not be subject to a $0.11 per GJ transportation and balancing charge because Ontario-produced gas is not ever transported to Dawn, but instead flows directly downstream to customers. Ontario producers believe that this precedent is properly set by EGIs reimbursement of the Balance and Transportation charge for field line customers. The precedent is strengthened by EGI paying the Ontario producer $0.15 per GJ for gas delivered close to the EGD Rate Zone and not charging any transportation charge.

OPI submits that gas delivered into EGIs system under the GPA should receive an avoided cost of service premium as it is delivered downstream of the majority of EGIs assets and does not require compression. This precedent is set by GPA field line customer Natural Gas sales receiving an avoided cost of service approximately equal to the EGI Small Volume Service Rate Delivery Charge, Delivery – Price Adjustment, and Storage Charge.

The Ontario producer submits that there is clear inconsistency in station charges under the GPA, M13 and EGD rate zone deliveries ranging from over $950 per station to $0 per station. OPI submits that there should not be any station charges because gas delivered by the Ontario producer is *at* market and negates the need for costly infrastructure to bring gas from afar. Ontario-produced gas also benefits customers and the province in several ways, including but not limited to, environmental benefits including greenhouse gas emissions, landowner royalties, municipal and provincial taxes.

ISSUE #3 – Access to Utility Distribution System

Preamble:

When Ontario producers would like to deliver gas into EGI's distribution and transmission network they must meet certain quality and pressure criteria. If these criteria can be met EGI performs a network analysis to determine if there is sufficient capacity in the local system to allow for Ontario produced gas to enter the system. If EGI deems that there is not sufficient capacity the Ontario producers Natural Gas is not accepted by EGI.

There have been a number of instances where producers have been effectively blocked and told by the utility that it cannot accept volumes or pressures, without justification. In many of these instances, historically, the system has not had constraints.

Submission:

Ontario producers submit that they should have some form of priority access when requesting to deliver local gas into the EGI system, subject to fair market pricing. Ontario producers should not be turned away from the EGI system due to the invocation of capacity constraints. Transparency should be required of EGI in determining capacity for Ontario production when access to the system is requested by local producers. Ontario production should be ranked above other EGI supplies for environmental and other local benefit reasons. EGI could and should be allowed to curtail ex-Ontario supplies to allow local Ontario production to flow to the benefit of the Province and allow for royalties to landowners. Ontario producers would like to understand how EGI determines whether, or not, there is available capacity and work with them to ensure that Ontario production is not blocked from the EGI system so that local gas can flow to Ontario customers.

ISSUE #4 – Costs for Installation of Connections to Utility

Preamble:

It is normal and accepted that when Ontario producers wish to sell their gas into EGI's distribution and transmission network, they must pay for the facilities constructed, owned and operated by EGI to meter and accept the gas: a Meter Station. This is standard utility practice.

The current practice is that EGI provides Ontario producers with a quote for the Meter Station with a summer and winter build price estimate, which includes a contingency. Ontario producers believe (know) that cost estimates received by EGI significantly exceed the reasonable cost to construct a Meter Station. Please refer to Appendix 3A for an example of Union now EGI Meter Station Estimate. Please refer to Appendix 3B for Union Gas station cost comparison using OPI member estimates.

Submission:

Ontario producers are most willing to work closely with EGI on the construction of suitable, high quality Meter Stations in accordance with all CSA and TSSA standards and inspections. They would like to have the opportunity to construct Meter Stations to reasonable industry/EGI specifications, if they believe EGI's budgeted costs to be unreasonable. The Ontario producer should have more detailed access to EGI Meter Station construction budgets, including quotations from more than one supplier and contractor. Lower facility costs benefit the gas customers too.

ISSUE #5 – Market Dominance of Utility

Preamble:

In EGI's 5 Year Gas Supply Plan, EB-2019-0137, Page 77, Table 24 Local Producers are forecast to provide 452-453 Terajoules of Natural Gas per year to the Union South zone from 2019 to 2024. Please see Appendix 4, 10 Year Total Ontario Producer Yearly Natural Gas Production. In 2018 Ontario production of Natural Gas totaled more than 5,155 Terajoules.

Historically, and to this day, deliveries into the EGD rate zone and the Union Southern rate zone have been treated differently by EGI. In the EGD rate zone Ontario producers are not charged transportation, balancing, hub or station charges but instead are paid for delivering Natural Gas close to the consumer. In Union Southern rate zone Ontario producers are charged transportation to the Dawn Hub along with balancing, station charges and are not rewarded for delivering Natural Gas close to the consumer.

Submission:

OPI's members believe that their contribution to the Ontario's natural gas supply is understated. Although currently some sales occur at Dawn, the physical commodity supplied by any Ontario producer is delivered through local distribution networks, directly to customers, and as stated above, does not ever pass through Dawn.

The Ontario producer currently sells gas at Dawn because of a lack of practical alternative options. The Ontario producer can either take the CGPR Dawn Index price with a transportation and balancing charge under the GPA or transport to Dawn under the M13. The terms and conditions as to how Ontario producer Natural Gas is delivered to EGI is dictated by EGI. The Ontario producer currently sells some of its gas under the M13 so that it can achieve some stability in revenues with forward sales of its gas.

The merger of Union and Enbridge Gas Distribution has effectively lessened competition when purchasing local Natural Gas, providing capacity for increased market dominance. Notwithstanding the above, Ontario producers are hopeful for a better working relationship EGI than they have had with Union in the past.

4.0 SUMMARY

Concluding Submissions

Economists and regulators would recognize that a strong local production industry provides Ontarians with many benefits. These include Ontario jobs, royalties and taxes paid in addition to a lower carbon footprint and security of supply. The stable 129 year Ontario gas production history has also benefitted the province by delivering local gas to the market in close proximity to customers, saving Ontarians millions of dollars in costly infrastructure by offsetting ex-provincially sourced gas.

Ontario producer pricing should more closely reflect the value and therefore the price of the gas delivered in the locale in which production occurs. The price dislocation between that of the Ontario producer and what the Ontario consumer pays for commodity and delivery is in excess of 100%. This is leading Ontario producers to seek alternatives to EGI in order to attain a price that recognizes the value of their distributed and *at* market production.

Ontario producers have been historically and effectively barred from competing for local gas customers by monopoly franchise and certificate of public convenience and necessity privileges granted to Union, now EGI. Instead of a competitive marketplace for Ontario produced gas, prices have been imposed on Ontario producers that are far lower than that which customers pay in proximity to the local production.

The OEB now has transparent evidence of commercially negotiated fair market prices, which are paid for locally produced gas by cannabis growers and by EPCOR, which the OEB sees and notices through its administrative regulatory oversight. Ontario producers only seek commodity and delivery prices that reflect the value of the local gas, delivered *at* market, downstream of most of EGI's infrastructure, but which offer many other benefits to Ontario and the ratepayer customers, as a whole. The inappropriate discrimination in purchasing local gas supplies is a factor that should be considered by the regulator. The OEB enjoys core statutory powers to supervise and set rates, and approve gas cost pass-throughs into rates, taking into account rate-related terms and conditions of services, affecting gas pricing, along that regulatory pathway.

OPI members are asking the OEB to facilitate a resolution to the above issues, in as timely a way possible, without the need for a hearing. If a formal proceeding is required by the Board, OPI will attend, and actively participate, with witnesses, adduce evidence and submit argument.

Final Recommendations:

1. Ontario producers are seeking the Union Southern Rate Zone Total Gas Supply Commodity Charge, approved by the OEB, for all Natural Gas delivered into Union Southern Rate Zone.

2. Ontario producers are seeking recognition and therefore compensation for EGI’s avoided cost of service when delivering Natural Gas downstream of major assets in the form of all, or a portion of, the Delivery charges as approved by the OEB.

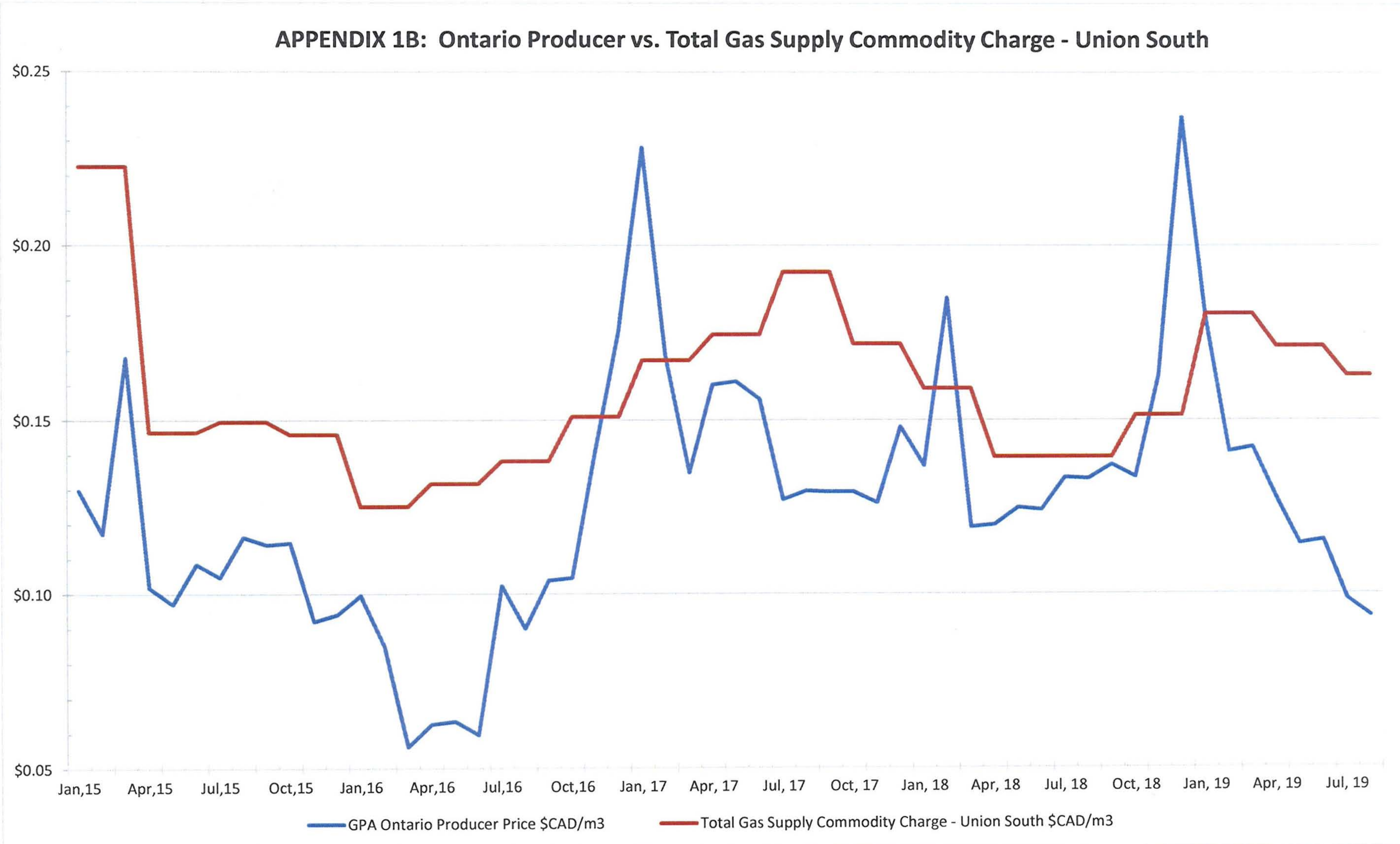
3. Ontario producers are seeking priority access for to the EGI system for deliveries. In addition, Ontario producers seek full transparency from EGI when determining available capacity for new production.

4. Ontario producers are seeking the opportunity to construct Meter Stations to reasonable industry-EGI specifications - if they believe EGI’s budgeted costs to be excessive.

5. Ontario producers are seeking a long-term solution which will allow for a more just, reasonable and pro-competitive working arrangement with EGI. This will allow the Ontario producers to compete fairly with suppliers from outside of the province. The ideal solution would be for EGI and Ontario producers to come to mutually acceptable arrangement. Failing this, the Ontario producer is seeking a regulatory solution imposed by the OEB.

APPENDIX 1A

Year and Month	GPA Ontario Producer Price	Total Gas Supply Commodity Charge - Union South	Price Difference
	$CAD/m3	$CAD/m3	Commodity less GPA
Jan,15	$0.129792	$0.222663	$0.092871
Feb,15	$0.117273	$0.222663	$0.105390
Mar,15	$0.167973	$0.222663	$0.054690
Apr,15	$0.101751	$0.146561	$0.044810
May,15	$0.097071	$0.146561	$0.049490
Jun,15	$0.108498	$0.146561	$0.038063
Jul,15	$0.104793	$0.149571	$0.044778
Aug,15	$0.116376	$0.149571	$0.033195
Sep,15	$0.114075	$0.149571	$0.035496
Oct,15	$0.114699	$0.145900	$0.031201
Nov,15	$0.092118	$0.145900	$0.053782
Dec,15	$0.094146	$0.145900	$0.051754
Jan,16	$0.099567	$0.125108	$0.025541
Feb,16	$0.084942	$0.125108	$0.040166
Mar,16	$0.056238	$0.125108	$0.068870
Apr,16	$0.062673	$0.131678	$0.069005
May,16	$0.063570	$0.131678	$0.068108
Jun,16	$0.059670	$0.131678	$0.072008
Jul,16	$0.102336	$0.138229	$0.035893
Aug,16	$0.090051	$0.138229	$0.048178
Sep,16	$0.103857	$0.138229	$0.034372
Oct,16	$0.104559	$0.150958	$0.046399
Nov,16	$0.141336	$0.150958	$0.009622
Dec, 16	$0.175188	$0.150958	-$0.024230
Jan, 17	$0.228228	$0.167188	-$0.061040
Feb, 17	$0.168480	$0.167188	-$0.001292
Mar, 17	$0.134862	$0.167188	$0.032326
Apr, 17	$0.160212	$0.174434	$0.014222
May, 17	$0.161109	$0.174434	$0.013325
Jun, 17	$0.156117	$0.174434	$0.018317
Jul, 17	$0.127062	$0.192334	$0.065272
Aug, 17	$0.129597	$0.192334	$0.062737
Sep, 17	$0.129246	$0.192334	$0.063088
Oct, 17	$0.129324	$0.171859	$0.042535
Nov, 17	$0.126087	$0.171859	$0.045772
Dec, 17	$0.148122	$0.171859	$0.023737
Jan, 18	$0.136851	$0.159153	$0.022302
Feb, 18	$0.184977	$0.159153	-$0.025824
Mar, 18	$0.119145	$0.159153	$0.040008
Apr, 18	$0.119847	$0.139327	$0.019480
May, 18	$0.124761	$0.139327	$0.014566
Jun, 18	$0.124137	$0.139327	$0.015190
Jul, 18	$0.133419	$0.139327	$0.005908
Aug, 18	$0.133146	$0.139327	$0.006181
Sep, 18	$0.137163	$0.139327	$0.002164
Oct, 18	$0.133653	$0.151421	$0.017768
Nov, 18	$0.162942	$0.151421	-$0.011521
Dec, 18	$0.237159	$0.151421	-$0.085738
Jan, 19	$0.179556	$0.180395	$0.000839
Feb, 19	$0.140946	$0.180395	$0.039449
Mar, 19	$0.142233	$0.180395	$0.038162
Apr, 19	$0.127530	$0.171237	$0.043707
May, 19	$0.114387	$0.171237	$0.056850
Jun, 19	$0.115479	$0.171237	$0.055758
Jul, 19	$0.098553	$0.162957	$0.064404
Aug, 19	$0.093561	$0.162957	$0.069396
		Mean difference Jan 2015-Aug 2019:	**$0.032813**



APPENDIX 1B: Ontario Producer vs. Total Gas Supply Commodity Charge - Union South
$0.25
$0.20
$0.15
$0.10
$0.05
Jan,15
Apr,15
Jul,15
Oct,15
Jan,16
Apr,16
Jul,16
Oct,16
Jan, 17
Apr, 17
Jul, 17
Oct, 17
Jan, 18
Apr, 18
Jul, 18
Oct, 18
Jan, 19
Apr, 19
Jul, 19
GPA Ontario Producer Price $CAD/m3
Total Gas Supply Commodity Charge - Union South $CAD/m3

APPENDIX: 2A Table Showing Gas Delivery Stations with Delivery Pressures

Map ID Number	Station Number	Location Address	Delivery Pressure
1	4F401	21229 Zion Road, Wheatley ON	150-200psi
2	5D501	722 Byrnedale Road, South Woodslee ON	600psi
3	6E503	11142 Essex 42, Lakeshore ON	100psi
4	6H401	7536 13 line, Charing Cross ON	150psi
5	7F502	25187 Jacob Rd, Grande Point ON	600-700psi
6	9G401	9524 Bush Line, Tupperville ON	170psi
7	10F305	1621 Lambton County Rd 2, Sombra ON	170psi
8	10G304	1380 Cuthbert Road, Dresden ON	170-190psi
9	10G501	2501 Lambton Line, Tupperville ON	400psi
10	10L602	13306 Dunbourgh Road, Dutton ON	105psi
11	10M203	12901 Willey Road, Iona Station ON	100-120psi
13	10T302	812 Forestry Farm Road, Walsingham ON	230psi
14	11S103	36 Norfolk County Road 30, Tillsonburg ON	250psi
15	12T503/12T501	740 Fertilizer Rd, Simcoe ON	500psi
16	16L101	69601 Grand Bend Line, Grand Bend ON	68psi
17	17L201	71186 Shipka Line, Dashwood ON	440psi
18	20M501	77170 London Road, Clinton ON	46psi
19	8K601	19623 Duart Road, Duart ON	44psi
20	9J302	14409 Zone Centre Line, Bothwell ON	120psi
21	10F601-91	189 Lambton Road 31, Wallaceburg ON	180psi
22	12W103/12W102	2173 Talbot Street East, Jarvis ON	405-430psi
23	12F104	206 Rokeby Line, Corunna ON	40psi
24	7K406	18681 McKinlay Road, Morpeth ON	750-780psi
25	12S403-01	Jackson side road, Tillsonburg ON	640-720psi

APPENDIX 2B: Map showing Ontario Producer Gas Delivery Stations

Appendix 2C: Ontario producer GPA Statement

ENBRIDGE

[redacted]

Payment Date: September 20th 2019

Vendor #: [redacted]

Month Ended: August 31st 2019

CGPR Dawn Index	**$2.509**	***per GJ***
Less Bal. & Trans. Chg.	**$0.110**	***per GJ***
Net Price Paid	**$2.399**	***per GJ***
Previous Month Price:	**$2.527**	***per GJ***

Station #	Meter #	Description	Quantity	uom	@ Rate ($)	Payment	HST	Total
[redacted]		Monthly Activity:	518.62685	GJs	$2.399 =	$1,244.19	$161.74	$1,405.93
		Station Charge:	1	Stn	-90.00 =	-90.00	-11.70	-101.70
		Other Charges:				$0.00	$0.00	$0.00
					Subtotal:	**$1,154.19**	**$150.04**	**$1,304.23**
		Monthly Activity:	347.21628	GJs	$2.399 =	$832.97	$108.29	$941.26
		Station Charge:	1	Stn	-90.00 =	-90.00	-11.70	-101.70
		Other Charges:				$0.00	$0.00	$0.00
					Subtotal:	**$742.97**	**$96.59**	**$839.56**
		Monthly Activity:	1,115.26748	GJs	$2.399 =	$2,675.53	$347.82	$3,023.35
		Station Charge:	1	Stn	-90.00 =	-90.00	-11.70	-101.70
		Other Charges:				$0.00	$0.00	$0.00
					Subtotal:	**$2,585.53**	**$336.12**	**$2,921.65**
		Monthly Activity:	827.38563	GJs	$2.399 =	$1,984.90	$258.04	$2,242.93
		Station Charge:	1	Stn	-90.00 =	-90.00	-11.70	-101.70
		Other Charges:				$0.00	$0.00	$0.00
					Subtotal:	**$1,894.90**	**$246.34**	**$2,141.23**
		Monthly Activity:	246.12800	GJs	$2.399 =	$590.46	$76.76	$667.22
		Station Charge:	1	Stn	-90.00 =	-90.00	-11.70	-101.70
		Other Charges:				$0.00	$0.00	$0.00
					Subtotal:	**$500.46**	**$65.06**	**$565.52**
		Monthly Activity:	1,102.08205	GJs	$2.399 =	$2,643.89	$343.71	$2,987.60
		Station Charge:	1	Stn	-90.00 =	-90.00	-11.70	-101.70
		Other Charges:				$0.00	$0.00	$0.00
					Subtotal:	**$2,553.89**	**$332.01**	**$2,885.90**
		Monthly Activity:	231.84378	GJs	$2.399 =	$556.19	$72.31	$628.50
		Station Charge:	1	Stn	-90.00 =	-90.00	-11.70	-101.70
		Other Charges:				$0.00	$0.00	$0.00
					Subtotal:	**$466.19**	**$60.61**	**$526.80**
		Monthly Activity:	0.00000	GJs	$2.399 =	$0.00	$0.00	$0.00
		Station Charge:	0	Stn	-90.00 =	0.00	0.00	0.00
		Other Charges:				$0.00	$0.00	$0.00
					Subtotal:	**$0.00**	**$0.00**	**$0.00**
		Monthly Activity:	0.00000	GJs	$2.399 =	$0.00	$0.00	$0.00
		Station Charge:	0	Stn	-90.00 =	0.00	0.00	0.00
		Other Charges:				$0.00	$0.00	$0.00
					Subtotal:	**$0.00**	**$0.00**	**$0.00**
		Monthly Activity:	4,388.5501	GJs	**Sub Total Deposit:**			**$11,184.89**

Monthly Summary:

	Quantity	uom	@ Rate	Payment / Charge	HST	Total
Monthly Activity:	**4,388.5501**	**GJs**	**$2.399 =**	**$10,528.13**	**$1,368.66**	**$11,896.79**
Stations:	**7**	**Stn**	**($90.00) =**	**($630.00)**	**($81.90)**	**($711.90)**
Other Charges:				**$0.00**	**$0.00**	**$0.00**
			Total Deposit:	**$9,898.13**	**$1,286.76**	**$11,184.89**

Ontario Producer M13 Invoice

Enbridge Gas Inc.
P.O. Box 2001
50 Keil Drive N.
Chatham, Ontario
N7M 5M1

Invoice # X [redacted]

Billing Period	July 2019
Date Rendered	August 07, 2019
Account #	[redacted]
Currency	$CAD

Invoice Inquiries Please Call: 519-436-5315

[redacted]

	Quantity	UOM	Rate ($)	Currency	HST	Billed Charge ($CAD)
Current Month Charges						
Contract SA 26919 - M13037POST						
M13 Balancing						
Firm Daily Variability	2,500	GJ	$1.4410000	$CAD	*	$3,602.50
Firm Injection Commodity Charge	10,208	GJ	$0.0500000	$CAD	*	$510.40
Firm Withdrawal Commodity Charge	9,525	GJ	$0.0500000	$CAD	*	$476.25
M13 Transportation						
Station Charge	3	STN	$957.5800000	$CAD	*	$2,872.74
Delivery Commodity Charge	196,892	GJ	$0.0050000	$CAD	*	$984.46
Transmission Commodity Charge	196,892	GJ	$0.0350000	$CAD	*	$6,891.22
					Subtotal	$15,337.57
Contract SA 26918 - HUB595POST						
HUB Name Change						
Name Change Charge (Dawn Facilities)	328,109	GJ	$0.0030000	$CAD	*	$984.33
Fee Cap Reduction	(44,777)	GJ	$0.0030000	$CAD	*	($134.33)
					Subtotal	$850.00
Total Charges This Month						$16,187.57
Harmonized Sales Tax [redacted]						$2,104.38

*** This invoice may reflect Ontario Energy approved rate changes effective July 1, 2019. More information on these changes can be found at "www.uniongas.com/storage-and-transportation/informational-postings/tariffs/archive" ***
*** We have updated our banking information as of June 1, 2019. For more details see https://www.uniongas.com/storage-and-transportation/resources/additional-info/invoice-payment. ***

Previous Amount Payable	Payments Received By Due Date	Late Payment Charge
$17,878.02	$17,878.02	$0.00
Previous Due Date	**Payments Received After Due Date**	**Balance Forward ****
Jul 19, 2019	$0.00	$0.00

Amount Payable by Due Date : ($CAD) **$18,291.95**

Due Date : **August 20, 2019**

 [redacted]

Enbridge Gas Inc.
P.O. Box 2001
50 Keil Drive N.
Chatham, Ontario
N7M 5M1

Invoice Summary: [redacted]

Billing Period	July 2019
Due Date	August 20, 2019
Account #	[redacted]
Currency	$CAD

Invoice Inquiries Please Call: 519-436-5315

[redacted]

Contract #	Contract Name	Service	Total
Current Month Charges			
SA - 26919	M13037POST	M13 Balancing	$4,589.15
	M13037POST	M13 Transportation	$10,748.42
SA - 26918	HUB595POST	HUB Name Change	$850.00
		Harmonized Sales Tax [redacted]	$2,104.38

Total Amount Due : ($CAD) **$18,291.95**

2008

9

Appendix 2E

GPA Statement showing field line customers

ENBRIDGE

[redacted]

Payment Date: September 20th 2019

Vendor #: [redacted]

Month Ended: August 31st 2019

CGPR Dawn Index	$2.509	*per GJ*
Less Bal. & Trans. Chg.	$0.110	*per GJ*
Net Price Paid	$2.399	*per GJ*
Previous Month Price:	$2.527	*per GJ*

Station #	Meter #	Description	Quantity	uom	@ Rate ($)	Payment	HST	Total
[redacted]		Monthly Activity:	5,253.19357	GJs	$2.399 =	$12,602.41	$1,638.31	$14,240.72
		Station Charge:	0	Stn	(90.00) =	0.00	0.00	0.00
		Other Charges:			=	0.00	0.00	0.00
		Monthly Activity:	3,277.67773	GJs	$2.399 =	$7,863.15	$1,022.21	$8,885.36
		Station Charge:	1	Stn	(90.00) =	(90.00)	(11.70)	(101.70)
		Other Charges:			=	0.00	0.00	0.00
		Monthly Activity:	4,499.52742	GJs	$2.399 =	$10,794.37	$1,403.27	$12,197.63
		Station Charge:	1	Stn	(90.00) =	(90.00)	(11.70)	(101.70)
		Other Charges:			=	0.00	0.00	0.00
		Monthly Activity:	356.00657	GJs	$2.399 =	$854.06	$111.03	$965.09
		Station Charge:	1	Stn	(90.00) =	(90.00)	(11.70)	(101.70)
		Other Charges:			=	0.00	0.00	0.00

Field Line:

10^3m^3 x Heat Value = GJ: Heat Value = 39.00

Avoided Cost of Service:	$1.422	per GJ
Balance & Transportation:	$0.110	per GJ
	$1.532	**per GJ**

10^3M^3		Heat Value					Payment	HST	Total
134.69705	x	39.00 =	5,253.1850	GJs @	$1.532 =		$8,047.88	$1,046.22	$9,094.10
							$0.00	$0.00	$0.00
					Fieldline Subtotal:		**$8,047.88**	**$1,046.22**	**$9,094.10**

Monthly Summary:

	Quantity	uom	@ Rate	Payment / Charge	HST	Total
Monthly Activity:	**13,386.4053**	**GJs**	**$2.399 =**	**$32,113.99**	**$4,174.82**	**$36,288.80**
Stations:	**3**	**Stn**	**($90.00) =**	**($270.00)**	**($35.10)**	**($305.10)**
Field Line:			**=**	**8,047.88**	**$1,046.22**	**$9,094.10**
			Total Deposit:	**$39,891.87**	**$5,185.94**	**$45,077.81**

Inquiries can be directed to:

Department:	Finance	Gas Supply
Contact:	Mustapha El-Baba	Karen Vince
Phone:	519-436-4600 x 5002009	519-436-5413 x 5005413
Email:	MElBaba@uniongas.com	KVince@uniongas.com

P.O. Box 2001, 50 Keil Drive North, Chatham, Ontario N7M 5M1
www.uniongas.com

uniongas
A Spectra Energy Company

July 29, 2014

Den-Mar Brines
15124 Longwoods Rd., R.R. #3
Bothwell ON N0P 1C0

Attention: Denis Marcus

This letter is in regards to your request for service for production from a well near the intersection of LaSalle Line and Kimball Road.

The assumed tie-in option is the section of Union Gas' pipeline which runs along LaSalle Road between Indian Road and MacGregor Road. As you know, Union's ability to accept the produced gas is subject to local market demand, which is reduced during the Summer months.

Please see the attached preliminary cost estimate for the station build as requested noting that there are extra costs if construction is within the Winter season.

Here are the next steps:

1. Upon review of the attached estimate, Den-Mar will provide written authorization to proceed with a final meter station design.

2. Once Den-Mar's authorization is received, Union Gas will proceed with the meter station design which will include a site visit to decide on the specific meter site.

3. Once designed, Union Gas will provide another estimated meter station and tie-in cost based on the specific meter site.

4. Den-Mar will provide written authorization to proceed with the project accompanied by a cash deposit (a portion of the meter station cost based on the long lead time items that will need to be ordered) against aid-to-construction for the project. (FYI – the long lead time items usually take 15-20 weeks to be delivered).

5. Once the long lead time items have been received, Den-Mar will be required to pay the remainder of the total estimated cost before construction can begin.

6. Obtaining the meter site and all construction, field lines and other facilities required to deliver pipeline quality gas to the meter site are your responsibility. The supplier is required to pay the entire cost of the meter site, including all tie-ins, fencing and gravel, equipment and installation except for the purchase cost of gas pressure control equipment and gas meters.

I look forward to hearing from you,

Sincerely,

Karen Vince
Senior Buyer, Gas Supply
Union Gas Limited
519-436-5413

DenMar Station Tie-in Estimate (+40%/-20%)

Station Costs		Summer Pricing		Winter Pricing
Materials & Labour	$	88,300.00	$	87,700.00
Fencing	$	8,000.00	$	9,000.00
Painting	$	5,000.00	$	5,000.00
Electrical	$	8,000.00	$	9,000.00
Specialty Items				
Metering and Instrumentation		N/A		N/A
Filter/Separator	$	15,000.00	$	15,000.00
Odourant Tank	$	27,300.00	$	27,300.00
Budget Items				
EVI, Regulators, Reliefs, Cell Modem		N/A		N/A
Total Station Costs	**$**	**125,600.00**	**$**	**153,000.00**
Pipe and Tie-in Costs				
Survey, Materials, Contract Labour	$	2,300.00	$	2,700.00
Total Pipe and Tie-in Costs	**$**	**2,300.00**	**$**	**2,700.00**
Sub Total	**$**	**127,900.00**	**$**	**155,700.00**
15% Contingency	**$**	**19,200.00**	**$**	**23,400.00**
Total	**$**	**147,100.00**	**$**	**179,100.00**
22.5% Overhead	**$**	**26,300.00**	**$**	**31,400.00**
Approximate Total Cost (not including HST)	**$**	**173,400.00**	**$**	**210,500.00**

Assumptions

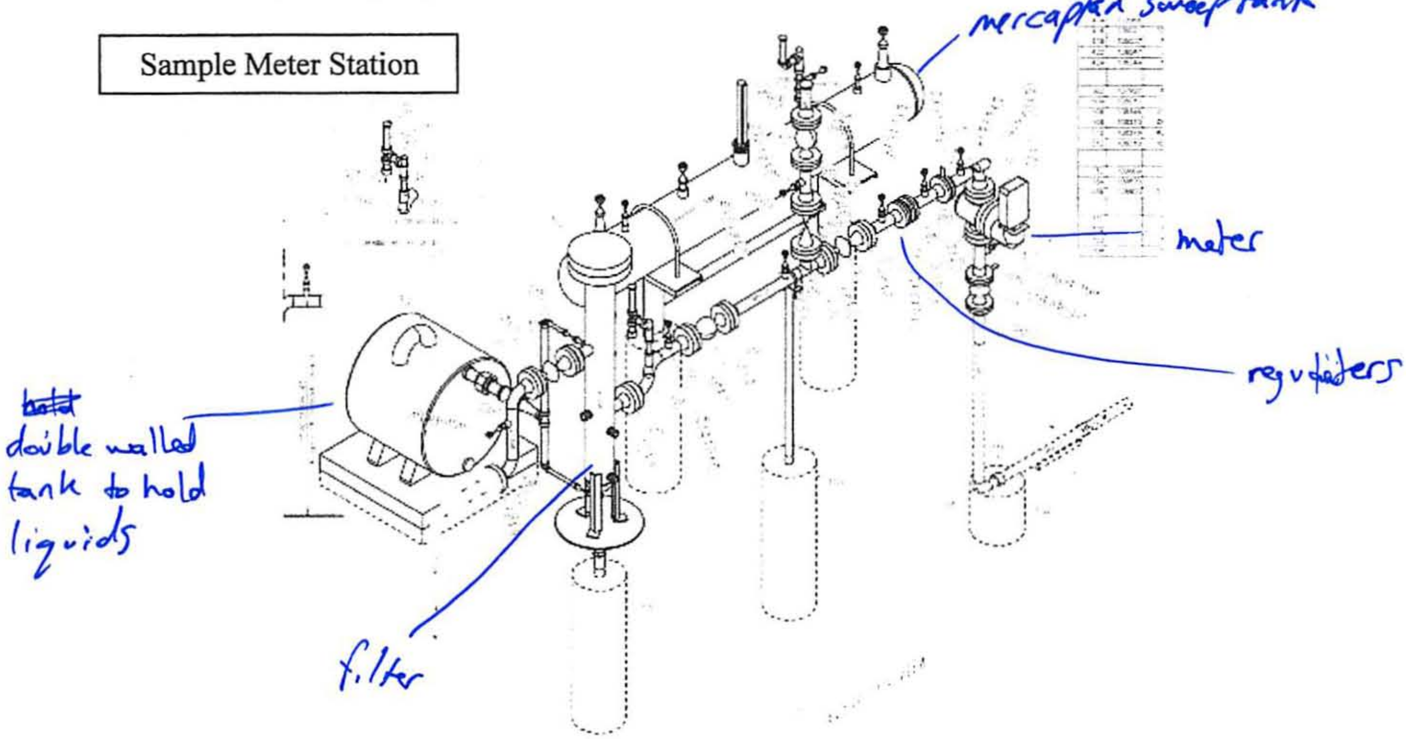
- Inlet Maximum Operating Pressure (MOP)	5930 kPa (860 psig)
- Inlet will however be designed for a MOP	6895 kPa (1000 psig)
- Inlet Minimum	3450 kPa (500 psig)
- Outlet MOP	2900 kPa (420 psig) Kimball NPS 8 line
- Outlet maximum sustainable	TBD, at this point I used 2760 kPa (400
- Flow rate	118 m3/h

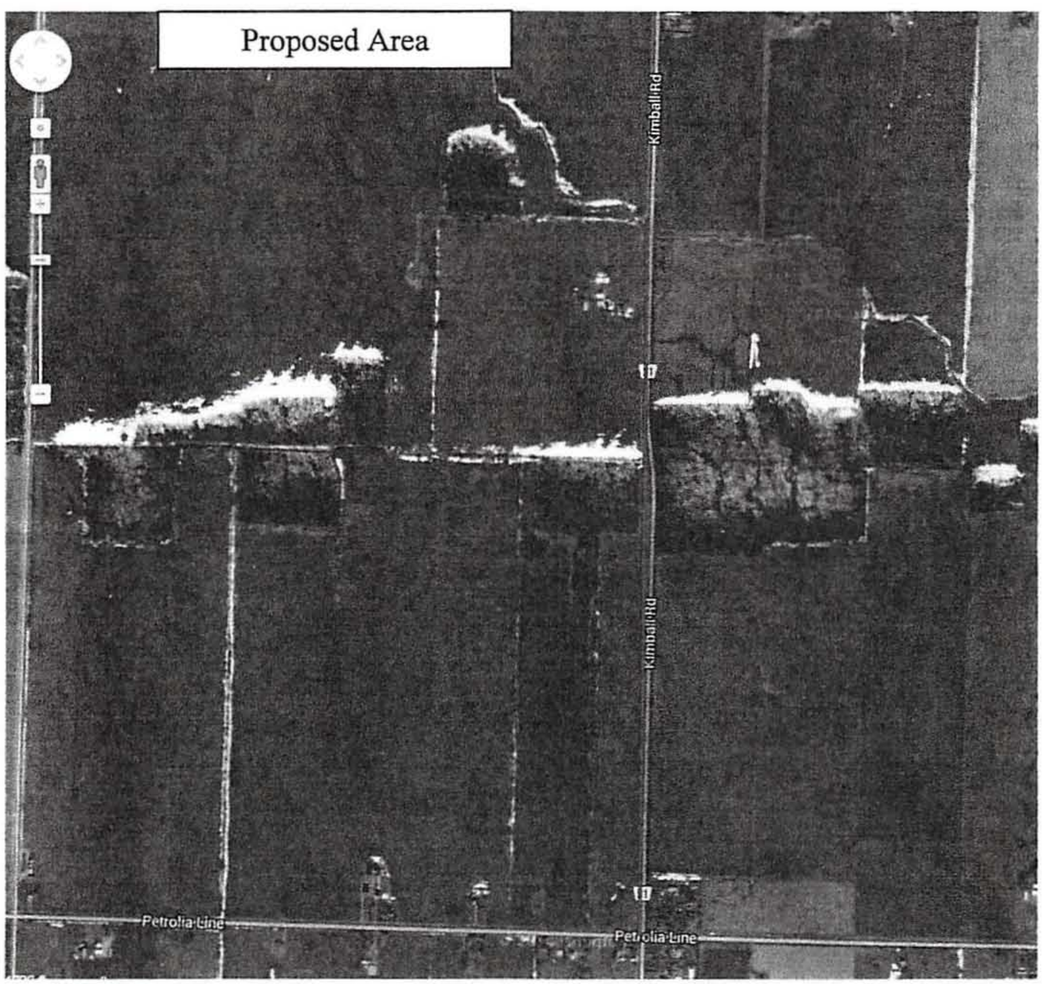
Estimate

- The cost estimate does not include Land purchase. It is assumed that the station would be on the the corner of LaSalle and Tecumseh Roads
- The cost estimate does not include any remediation for land provided if required
- The Filter separator is an estimate based on last meter station built and would need to be sent out for quote to confirm pricing should the producer decide to continue

Note

The Filter and sweep tank will likely be the longest lead time items, with filter/separators typically taking 15 – 20 weeks after placement of order.


Sample Meter Station
mercaptan sweep tank
meter
regulators
~~bolted~~
double walled
tank to hold
liquids
filter


Proposed Area
Kimball Rd
Kimball Rd
Petrolia Line
Petrolia Line

Union Gas Station Cost Comparison Using OPI Member Estimates

Station Costs		**Summer Pricing**		**Winter Pricing**		**OPI Cost Estimates**	**Notes**
Materials						8,009.65	See attached bill of material
Labour						13,630.00	Estimated based on prior experience
Materials and Labour Total		66,300.00		87,700.00		21,639.65	
Fencing		6,000.00		9,000.00		5,000.00	20' x 30' x 6' with barbed wire top and 10' gate plus man gate
Painting		5,000.00		5,000.00		1,500.00	Estimated cost $1500 for paint, materials and labour
Electrical		6,000.00		9,000.00		-	No 120 V electrical required for any equipment Low voltage etc. does not require 120 volts
Specialty Items							
Metering and Instrumentation		N/A		N/A		N/A	
Filter/Separator		15,000.00		15,000.00		15,000.00	A filter separator could be acquired for this cost or less
Odourant Tank		27,300.00		27,300.00		27,300.00	A custom sweep tank or a King 6B could be purchased for less cost
Budget Items							
EVI, Regulators, Reliefs, Cell Modem		N/A		N/A		N/A	
Total Station Costs		125,600.00		153,000.00		84,069.65	
Pipe and Tie-In Costs							
Survey, Materials, Contract Labour		2,300.00		2,700.00		2,700.00	Cost for tie in at main -by EGI.
Total Pipe and Tie-in costs		2,300.00		2,700.00		2,700.00	
Sub Total		127,900.00		155,700.00		86,769.65	
15% Contingency		19,200.00		23,400.00		13,015.45	
Total		147,100.00		179,100.00		99,785.10	
22.5% Overhead	22.50%	26,300.00	22.50%	31,400.00	10%	9,978.51	Overheads are much less for operators
Approximate Total Cost (not including HST)		173,400.00		210,500.00		109,763.61	
Union -Plus 40%		242,760.00		294,700.00		109,763.61	OPI does not consider the +40% and -20% as reasonable
Union -Minus 20%		138,720.00		168,400.00		109,763.61	

Appendix 3B

Bill of Materials
Sales Station

Materials

Quantity	Details	Cost		Total
29	2" raised face weld neck flanges -600#	$ 26.90	each	$780.10
5	2" x 1" threadolets	$ 5.65	each	$ 28.25
1	2" x 1" elbowlet -threaded	$ 23.65	each	$ 23.65
4	2" weld type elbows -sched 80	$ 4.25	each	$ 17.00
21	feet -2" shed 80 pipe plain end	$ 5.65	per foot	$ 118.65
5	2" 1500# ball type flanged valves Balon	$ 355.40	each	$ 1,777.00
4	1" threaded 1500 ball type valves reg port	$ 108.75	each	$ 435.00
4	sono tube -pipe supports 8" x 48"	$ 375.00	per pier	$ 1,500.00
1	double wall tank to hold fluids	$ 1,100.00	litre	$ 1,630.00
1	pad for tank	$ 500.00	each	$ 500.00
misc.	gaskets, bolt up kits etc.	$ 1,200.00		$ 1,200.00
				$ 8,009.65
Welding and Inspection				
29	2" welds $170 per weld			$ 4,930.00
	required Xray			$ 1,500.00
Installation				
120	man hours $60 per man hour			$ 7,200.00
		Total		**$ 13,630.00**

Appendix 3B

Bill of Materials

Sales Station   Source -Wellmaster 2019 09 19

Quantity		
29	2" raised face weld neck flanges -300#	2" x 300#-$18.20 and 2" x 600#-$26.90
5	2" x 1" threadolets	$5.65-2-3 days
1	2" x 1" elbowlet -threaded	$23.65-2-3 days
4	2" weld type elbows -sched 80	$4.25-stock
21	feet -2" shed 80 pipe plain end	$5.65/ft-stock
5	2" 1500# ball type flanged valves	$355.40-Balon -STOCK IN Calgary
4	1" threaded 1500 ball type valves	$108.75 regular port-stock

Appendix 4: 10 YearTotal Ontario Producer Yearly Natural Gas Production

Year	Annual Gas ($10^3 m^3$)	Annual Gas (GJ)
2009	248,544	9,693,215
2010	233,850	9,120,149
2011	224,691	8,762,957
2012	208,296	8,123,556
2013	185,300	7,226,715
2014	161,022	6,279,859
2015	161,184	6,286,181
2016	153,776	5,997,257
2017	144,864	5,649,685
2018	132,186	5,155,254