

December 5, 2014

EMAIL, RESS & COURIER

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
P.O. Box 2319
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4

Dear Ms Walli:

Re: EB-2014-0012 – Union Gas Limited – Hagar Liquefaction Service Rate

Please find attached the Argument in Chief of Union Gas Limited.

Yours truly,



Charles Keizer

CK/

cc: EB-2014-0012 intervenors
Karen Hockin (Union Gas)
Michael Millar (Legal Counsel, OEB)

ONTARIO ENERGY BOARD

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15, Schedule B;

AND IN THE MATTER OF an Application by Union Gas Limited, pursuant to section 36(1) of the *Ontario Energy Board Act, 1998*, for an order or orders approving rates and other charges for an interruptible natural gas liquefaction service.

ARGUMENT IN CHIEF

OF UNION GAS LIMITED

December 5, 2014

A. Introduction

1. By application dated May 16, 2014 and updated October 9, 2014, Union Gas Limited (“Union”) applied to the Ontario Energy Board (the “Board”) pursuant to section 36(1) of the *Ontario Energy Board Act* (the “Act”) for an order or orders approving rates and other charges for a new interruptible natural gas liquefaction service. The service will be provided at Union’s liquefied natural gas (“LNG”) facility in Hagar, Ontario (the “Hagar facility” or “Hagar”) using liquefaction capacity that is excess to utility requirements.
2. To provide the new interruptible liquefaction service at Hagar, Union has requested a new Rate L1 rate schedule and a cost-based rate to be effective July 1, 2016. Union plans to add new facilities adjacent to Hagar, which will enable it to dispense LNG to LNG wholesalers for use as vehicle transportation fuel or for remote power, marine, mining and/or rail applications. In particular, Union’s application seeks:
 - (a) an order approving the proposed cost allocation methodology used to allocate 2013 Board-approved costs between the liquefaction, storage and vapourization functions that are performed at Hagar;
 - (b) an order approving the proposed cost allocation methodology that allocates 2013 Board-approved Union North distribution costs to the Rate L1 service;

- (c) an order approving a new Rate L1 rate schedule and a cost-based rate to accommodate the interruptible liquefaction service at Hagar;
 - (d) an order approving a maximum interruptible liquefaction rate on short-term (i.e. one year or less) liquefaction service equal to approximately three times the cost based interruptible liquefaction rate;
 - (e) an order approving modifications to the Union North Schedule “A” to accommodate Rate L1 gas supply charges expressed in dollars per gigajoules (\$/GJ); and
 - (f) such interim order or orders approving interim rates or other charges and accounting orders as may from time to time appear appropriate or necessary.
3. Union’s new interruptible liquefaction service takes utilizes excess liquefaction capacity at Hagar and results in better utilization of Hagar for the benefit of rate payers. Based on established and accepted methodology, Union established a cost based rate that recovers all of the incremental costs of providing the service and provides for a reasonable contribution to the recovery of fixed costs associated with the Hagar assets used to provide the service. As such, the proposed Rate L1 is just and reasonable and should be approved by the Board, together with the ancillary relief also sought by Union.
4. During the course of this proceeding Northeast Midstream LP (“Northeast”) brought a motion seeking an order under Section 29 of the Act and requesting that the Board forbear from regulating the provision of LNG. The Board having heard the motion has reserved its decision. An issue in the hearing was recovery by the utility of existing costs in the event the service was provided on a non-utility basis. In addition to the approval of Rate L1, these submissions also consider the non-utility recovery of a contribution to costs through a cross charge, which Union has requested the Board to also approve should it decide to forbear.

B. Regulatory Context

5. The Hagar facility is a regulated asset. Its primary function is to provide for system integrity. Notwithstanding Union’s proposed liquefaction service, Union’s fundamental priority is a consistent and reliable supply to the Northern Delivery Area (“NDA”). System integrity is a firm obligation for Union. To be transparent in the physical and

financial treatment of this important and regulated asset, Union made its application under section 36 of the Act and sought a regulated rate.

6. In responding to Northeast's motion, Union made submissions with respect to the application of Section 36 of the Act and Section 2(2) of the O. Reg 161/99. As indicated in these submissions, subject to a Board decision on forbearance a distributor will not be relieved of the obligation to obtain an order of the Board under Section 36 in respect of motor vehicle fuel gas unless it satisfies each of the three conditions set out in Section 2(2)(a) of the Regulation. It is within a distributor's discretion as to whether or not it will take steps to satisfy the conditions to relieve itself of the obligation to obtain a Section 36 order. For the reasons outlined above, Union has chosen to secure a regulated rate for the liquefactions service.

C. Hagar Operations and Excess Capacity

(i) Current Hagar Operations

7. As explained in the pre-filed evidence at Exhibit A, Tab 1, p. 11, Updated, the Hagar facility has been in operation since 1968 and is interconnected with Union's Sudbury Lateral pipeline system. Hagar serves system integrity requirements in Union North, which benefits the system as a whole and supports the provision of service to all customers served by the system. System integrity space provides reserve capacity and allows for operational balancing to manage all of the services that Union offers, while ensuring the integrity of Union's storage, transmission and distribution systems. System integrity needs can arise from events such as periods of higher than forecasted weather variations, supply shortfalls, unplanned pressure drops or outages.
8. The main components of the Hagar facility are the liquefaction facility, the storage tank and the vapourization facility, as depicted in Exhibit A, Tab 1, Figure 2, p. 17, Updated. Natural gas supplied to Hagar is cooled to -162 degrees Celsius at the liquefaction facility. At this temperature, the gas condenses into a liquid (LNG), which is then pumped into the storage tank. As a liquid, LNG takes up approximately 1/600th the

volume of natural gas in a gaseous state. When needed for system integrity purposes, the LNG is pumped from the storage tank to the vapourization facility where it is heated so as to revert back to its gaseous state, upon which it is injected into the Sudbury Lateral pipeline system.

9. As a system integrity asset, Hagar is operated so as to meet certain targets and parameters, including targeted full nominal capacity of 0.6 PJ in advance of the peak winter season, daily vaporization from the tank that is able to provide up to 90,000 GJ/d of deliverability for injection into the Sudbury Lateral pipeline system, and for LNG balances in the storage tank net of withdrawals to remain available during the winter season (Exhibit A, Tab 1, p. 12, Updated).

(ii) *Excess Liquefaction and Storage Capacity*

10. Underlying the liquefaction rate and the proposed service is the objective of optimizing an asset's use for the benefit of ratepayers.
11. Union has excess liquefaction capability at Hagar because liquefaction is currently needed only to replace LNG volumes that are vapourized for purposes of responding to a system integrity event, or as a result of a regularly occurring boil off. Liquefaction is also unavailable during maintenance periods. As a result, the excess liquefaction capability is only available at Hagar on an interruptible basis throughout the year (Exhibit A, Tab 1, p. 14, Updated).
12. In addition to having excess liquefaction capability at Hagar, as explained at Exhibit A, Tab 1, p. 14, Union plans to increase the working storage space that is available at Hagar. This will be achieved by upgrading the inventory measurement system from the current "tank-o-meter" system to a radar measurement system. The change in measurement system will increase the amount of working storage space that is available at Hagar by an estimated 7,000 GJ.
13. With an interruptible liquefaction service that makes use of excess liquefaction capability and the increased amount of working storage space arising from the replacement of the inventory measurement system, the provision of the new service will not impact the

system integrity space or deliverability available from Hagar to meet Union North system integrity requirements.

D. Proposed Interruptible Liquefaction Service – How it will work

14. Because Hagar is a system integrity asset and has a function separate and apart from the proposed liquefaction service, Union has designed a “just in time” service which (i) does not operationally affect the primary function of Hagar, and (ii) has a storage element of its service that cannot be considered on the same basis as conventional storage.
15. To provide the new natural gas liquefaction service, Union will construct new facilities adjacent to the Hagar facility. These new facilities will include the new radar measurement system on the storage tank, an LNG dispensing facility and weigh scale, as well as associated piping, valves and pump, as shown in Exhibit A, Tab 1, Figure 2, p. 17, Updated. The new facilities will enable Union to dispense LNG to LNG wholesalers that sell LNG for use as vehicle transportation fuel or for remote power, marine and/or rail applications.
16. The proposed new interruptible liquefaction service would include the gas distribution service from Union’s NDA to the Hagar facility, as well as liquefaction of the gas that is delivered, temporary storage of the corresponding LNG and dispensing of the LNG to the customer’s tankers (Exhibit A, Tab 1, p. 18, Updated). As noted above, storage space of 7,000 GJs will be allocated to accommodate the service, which space will become available as a result of the planned replacement of the inventory measurement system for the existing storage tank (Exhibit A, Tab 1, p. 19, Updated).
17. Under the service, customers will have two options for managing their gas supply commodity and upstream transportation arrangements. First, customers could contract with Union for the provision of utility sales service under the proposed L1 Rate Schedule and the Union North Schedule “A”. Under this option, both gas supply and upstream transportation would be provided by Union. Alternatively, customers could contract directly with gas suppliers or marketers for the provision of gas supply commodity and upstream transportation to deliver gas to the NDA (Exhibit A, Tab 1, p. 18, Updated).

18. Customers will be required to commit to a liquefaction forecast prior to each contract year, setting out the dispensing quantities and timing on a monthly basis. The total of the forecast quantity for a customer will be their Minimum Annual Volume. Each month, each customer will be required to deliver to Union's NDA, or arrange for Union to deliver on their behalf to the NDA, an amount of natural gas that is equivalent to the quantity of LNG that will be dispensed to the customer (Exhibit A, Tab 1, p. 19-20, Updated).
19. As a result, there will be a matching of natural gas delivered to be liquefied and the LNG dispersal over the month. With this matching, the service will be "just in time" in nature and will result in minimum use of storage, except to balance over the course of the month deliveries of gas and the dispensing of LNG. In effect, the delivery of the gas and the liquefaction of the gas are a connected continuous process. The LNG effectively moves through the tank and is not stored in the traditional manner where customers compress gas, and inject it in to the ground for the express purpose of using it at a later date to meet their operational or seasonal peaks. From a physical perspective gas is liquefied, it flows into the tank and then dispensed as part of one process. (Transcript Vol. 2, p. 52-55)
20. This approach is captured in the proposed terms and conditions to the Liquefaction and Dispensing Agreement produced in response to interrogatory Northeast. 14. Section 4 of the terms and conditions stated:

"The parties hereto recognize that on any Day, deliveries of gas by Customer to Union at the Receipt Point and deliveries of LNG by Union at the Delivery Point may not always be exactly equal, but each party shall cooperate with the other in order to balance as nearly as possible the quantities transacted on a daily basis. Daily variances between the quantity of gas delivered to the Receipt Point and the corresponding amount of LNG Dispensed at the Delivery Point shall be held in the tank at the Hagar Facility provided that (i) at the end of any Month, such imbalances shall equal zero (0) and (ii) if any imbalance persists for three (3) or more consecutive Business Days, Union may suspend the provision of the Liquefaction Services and receipt of any gas at the Receipt Point, hereunder."

(Exhibit B. Northeast. 4, Attachment 2, p. 7-8)

E. Costs and Cost Allocation

21. The proposed new Rate L1 for interruptible liquefaction service is a cost-based rate. It has been designed to recover (a) the incremental capital costs of providing the service, (b) the incremental O&M expenses resulting from providing the service, (c) the allocated liquefaction and storage costs for the Hagar facility, and (d) the allocated Union North distribution costs for use of the existing system to transport gas from the TCPL interconnect to Hagar. Each is described below.

Incremental Capital Cost

22. As noted, Union will construct new facilities adjacent to the Hagar Facility so as to enable Union to provide the new interruptible natural gas liquefaction service. These new facilities will include the new radar measurement system on the storage tank, an LNG dispensing facility/pumping skid and weigh scales, as well as associated piping and valves. Union will also undertake a one-time upgrade to the municipal road entering the Hagar Facility so as to facilitate access by customer tanker trucks. As shown in Table 3 at Exhibit A, Tab 1, p. 21 Updated, the total estimated capital cost of the project is \$9.9 million. Union will seek to add these incremental capital costs to rate base as part of its next rebasing.
23. With respect to the road upgrades, the cost of the roadway improvement will be capitalized to the dispensing facility asset as a cost required to bring the dispensing facility to a condition necessary for its intended use of filling LNG tanker trucks at the facility per U.S. Generally Accepted Accounting Principles. The roadway improvement is required to facilitate the travel of LNG tankers to and from the facility for the provision of this service. (Transcript, Vol.2, p. 104). The upgrades would not be needed but for the provision of LNG service at Hagar. The roadway itself will not be in rate base. In effect, the payment for the road upgrades are akin to a capital contribution to the benefit of the utility for the purpose of providing a utility service and it is not unusual to capitalize all costs required to bring an asset to its intended use.

Incremental O&M Expenses

24. Providing the new interruptible natural gas liquefaction service will also give rise to incremental O&M expenses. As described at Exhibit A, Tab 1, p. 21, Updated, these expenses will result from increased use of the existing liquefaction equipment at Hagar and the corresponding need for additional operators, increased maintenance costs, additional gas technician and external contractor services, as well as material, electricity and compressor fuel costs. As shown in Table 4 at Exhibit A, Tab 1, p. 22, Updated, total estimated incremental O&M expenses are \$0.986 million per year by 2018. For 2016 it is estimated at \$0.298 million and for 2017 it is estimated at \$0.812 million.

Allocation of Hagar Facility Costs

25. For the purpose of designing the proposed new interruptible liquefaction rate, Union needed to identify the portion of its 2013 Board-approved costs for the Hagar facility that is associated with the liquefaction and storage functions that will be used to support the new service. As explained at Exhibit A, Tab 2, p. 1, Updated, Union retained KPMG to undertake a comprehensive cost allocation analysis of the current approved rate-base related operating and maintenance and compressor fuel costs at Hagar and to recommend a cost allocation methodology. Union has adopted the methodology as recommended by KPMG. The methodology is described in Exhibit A, Tab 2, pp. 3-15, Updated and a copy of KPMG's report is included at Exhibit A, Tab 2, Attachment A.
26. As noted in the KPMG report, similar approaches to functionalization of costs were used in British Columbia and Quebec. Union has confirmed that La Régie de L'Énergie in Quebec accepted Gaz Metro proposed approach to allocating operating costs among liquefaction, storage and vapourization.
27. The starting point for determining the allocated Hagar facility costs is the 2013 Board-approved revenue requirement associated with the Hagar facility, which is approximately \$6.2 million. Excluding compressor fuel costs of \$1.1 million, the current approved revenue requirement for Hagar is approximately \$5.1 million (Exhibit A, Tab 2, Table 1). Having regard to the system integrity function of the facility, the \$5.1 million amount

was allocated to Union North rate classes in proportion to the excess of peak day demand over average day demand and the \$1.1 million amount was allocated to Union North rate classes in proportion to sales service and direct purchase winter volumes (Exhibit A, Tab 2, p. 5, Updated). As such, all of the Board-approved costs associated with Hagar are currently recovered from firm Union North in-franchise customers in delivery rates.

28. As part of KPMG's review, it undertook to functionalize Hagar costs between liquefaction, storage and vapourization. Where costs could not be directly assigned to one of these functions, KPMG allocated those costs in proportion to the functionalization of directly assigned costs. With respect to the allocation of asset values, as explained in Exhibit A, Tab 2 at p. 7, Updated, KPMG was able to directly assign approximately 50% of the Hagar net plant and functionalized the remaining common costs in proportion to the direct assigned assets on the basis of liquefaction (36%), storage (58%) and vapourization (6%).
29. With respect to the allocation of O&M expenses, as explained beginning at p. 11 of Exhibit A, Tab 2, Updated, KPMG determined that, of the total 2013 Board-approved Hagar O&M expenses of \$1.52 million, \$0.057 million are directly attributable to liquefaction for system integrity only and the remaining \$1.463 million supports the overall operations of the Hagar facility. The proposed liquefaction rate does not contribute to recovery of the \$0.057 million in O&M expenses as these costs are incurred for system integrity purposes only. The \$1.463 million has been functionalized in proportion to the functionalized net plant values. Accordingly, \$0.526 million (36%) has been functionalized to liquefaction, \$0.842 million (58%) to storage, and \$0.094 million (6%) to vapourization.
30. With respect to the allocation of indirect costs and taxes associated with the Hagar facility, Union's methodology allocates these to the liquefaction, storage and vapourization functions consistent with the 2013 Board-approved cost allocation methodology. Accordingly, general plant, other working capital, administrative and general expenses are allocated in proportion to O&M and plant, being liquefaction (36%, storage (58%) and vapourization (6%). Income taxes are allocated in proportion to rate

base, being liquefaction (29%), storage (66%) and vapourization (5%). Property taxes are allocated in proportion to gross plant.

31. Overall, as explained in Exhibit A, Tab 2 at pp. 14-15, Updated, \$5.098 million of the total \$6.183 million Hagar revenue requirement was functionalized between liquefaction, storage and vapourization. Of the \$5.098 million, the cost allocation methodology has identified \$1.804 million as relating to liquefaction, \$2.939 million as relating to storage and \$0.355 million as relating to vapourization.
32. The remaining \$1.085 million accounts for the compressor fuel costs associated with the provision of system integrity to Union North. This amount, plus \$0.253 million in costs for gas in storage working capital and \$0.057 million in O&M costs associated with system integrity only, are required solely for system integrity purposes. Union's proposed new liquefaction service rate is not designed to make a contribution to recovery of these amounts, which total \$1.394 million. After this amount is excluded, \$1.747 million (36%) is allocated to liquefaction, \$2.687 million (56%) is allocated to storage and \$0.355 million (8%) is allocated to vapourization (Exhibit A, Tab 2, Schedule 1, line 32).

Allocation of Union North Distribution Costs

33. To determine the proposed new interruptible liquefaction rate, Union also needed to account for the fact that the service will include use of the Union North distribution system to transport gas from the TCPL interconnect to the Hagar facility. As explained beginning at Exhibit A, Tab 2, p. 16, Updated, Union is proposing to use the same cost allocation methodology as was previously approved by the Board in EBRO 484 for the Rate 77 wholesale transportation service. This methodology is also consistent with Union's 2013 Board-approved allocation of Union North distribution costs. Based on this methodology, the Rate L1 service will provide a contribution of \$0.193 million per year towards the recovery of Union North distribution costs (Exhibit A, Tab 2, p. 17, Updated).

F. Rate Design

34. Based on its updated sales forecast and updated costing information, as well as the cost allocation methodologies described above, Union is proposing a new interruptible liquefaction service rate of \$5.073/GJ (Exhibit A, Tab 2, p. 18, Updated). This rate is designed to make a contribution toward recovery of existing Hagar liquefaction and storage costs, Union North distribution costs, as well as to recover the incremental costs associated with providing the new interruptible liquefaction service.
35. Union forecasts an average of approximately 413,000 GJ per year of interruptible liquefaction activity from July 2016 to December 2018 (Exhibit A, Tab 2, p. 19, Updated). The proposed rate of \$5.073/GJ is comprised of (a) functionalized liquefaction costs at Hagar on the assumption that there will be 170 days on average per year of interruptible liquefaction service, (b) incremental capital costs and O&M expenses and compressor fuel needed to provide the interruptible liquefaction service, (c) functionalized storage costs at Hagar adjusted for customer use of storage capacity, which is forecast at up to 7,000 GJ per day or 1.1% of the total Hagar storage capacity, and (d) the annual average allocated distribution cost of using existing Union North distribution assets (See Exhibit A, Tab 2, pp.19-21).
36. Based on its forecast activity of 413,000 GJs per year and the proposed rate of \$5.073/GJ, Union estimates that the interruptible natural gas liquefaction service will generate approximately \$2.1 million per year in utility revenue (Exhibit A, Tab 2, Schedule 6, Lines 17, 19 and 21).
37. Union is also proposing a maximum interruptible liquefaction rate on short-term (i.e. one year or less) interruptible liquefaction service equal to approximately three times the cost-based interruptible liquefaction rate. Union proposes to set this rate at \$15/GJ (Exhibit A, Tab 2, p. 18, Updated).
38. In addition, Union has proposed to modify the Union North Schedule "A" to accommodate Rate L1 minimum and maximum gas supply charges in \$/GJ. This modification will enable Union to invoice the Rate L1 gas supply service in energy,

consistent with the invoicing for the proposed service (Exhibit A, Tab 2, p. 18-19, Updated).

G. Non-Utility Cross Charge

39. Given the Board's decision to reserve its decision on Northeast's forbearance request, parties sought clarification of Union's cost recovery in the event that the liquefaction service was provided as a non-utility service. Union advised the Board that in the event the Board decided to forbear, Union maintains its request for the Board to accept Union's functionalization and allocation of costs for purposes of calculating a utility cross charge to be paid by the non-utility to Union.
40. It is Union's position that the portion of rate design set out in its application that represents the contribution the proposed service is making to the recovery of fixed cost remains valid. (Transcript, Vol. 2, p.115). In particular, this represents the combined amount of lines 5, 15 and 18 of Exhibit A, Tab 2, Schedule 6, Updated (Transcript, Vol, 2, p. 115) or a rate of approximately \$1.59/Gj. The recovery through the cross charge will be treated as revenue to the utility.
41. As shown during the hearing of the motion, the market for LNG has been described as nascent and emerging and a market where customers have to make significant investment decisions before being LNG consumers. The rate charged will be key. Union believes that its rate or cross charge is based on sound cost allocation and rate design principles.
42. Union stated that it requires a minimum commitment level of at least 50% of available capacity in order to proceed with investments for this service. Those parties required to commit are reluctant to make long term commitments without rate certainty. Union believes that a deviation from the cost allocation methodology and resulting charge would change customers' economics and would cause uncertainty for the customer with respect to the feasibility of the service. (Transcript, Vol. 2, p.99)

H. Conclusion

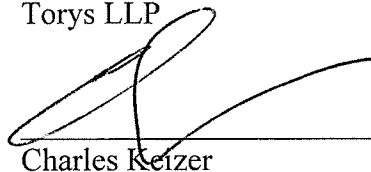
43. Union's proposed new interruptible natural gas liquefaction service will enable Union to make better use of the Hagar facility to the benefit of Union's ratepayers by contributing to regulated earnings subject to sharing. On rebasing, the revenue from this service will form part of Union's regulated revenue for ratemaking.
44. Union's proposed Rate L1 has been designed as a cost-based rate that reflects all incremental costs of the project, as well as all costs associated with use of the existing facilities, allocated using a comprehensive and accepted cost allocation methodology. As such, the proposed new service and the proposed new rate would not adversely impact existing customers or regulated facilities but would instead benefit ratepayers by generating new revenues that would be used to contribute to regulated earnings.
45. For the foregoing reasons, Union respectfully requests that its application, and the requests made therein, be granted.

All of which is respectfully submitted this 5th day of December, 2014.

UNION GAS LIMITED

By its counsel

Torys LLP

A handwritten signature in black ink, appearing to read 'Charles Keizer', is written over a horizontal line.

Charles Keizer