EB-2014-0012

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 necessary to accommodate a new interruptible natural gas liquefaction service at its Hagar Liquefied Natural Gas Facility

MOTION RECORD OF INTERNOR/MOVING PARTY, NORTHEAST MIDSTREAM LP

Date: October 15, 2014

GOODMANS LLP
Barristers & Solicitors
Bay Adelaide Centre
333 Bay Street, Suite 3400
Toronto, Canada M5H 2S7

David E. Lederman LSUC#: 44170U

Tel: (416) 979-2211
Fax: (416) 979-1234

Lawyers for the Intervenor/Moving Party,
Northeast Midstream LP

TO: **ONTARIO ENERGY BOARD**

P.O. Box 2319
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4
Attention: Board Secretary

E-mail: boardsec@ontarioenergyboard.ca
Tel: 1.888.632.6273 (Toll free)
Fax: 416.440.7656

INDEX

EB-2014-0012

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 necessary to accommodate a new interruptible natural gas liquefaction service at its Hagar Liquefied Natural Gas Facility

INDEX

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TAB 1

EB-2014-0012

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 necessary to accommodate a new interruptible natural gas liquefaction service at its Hagar Liquefied Natural Gas Facility.

NOTICE OF MOTION

Northeast Midstream LP ("Northeast") will make a motion on a date and time to be fixed by the Ontario Energy Board (the "Board"), at the Board's Chambers at 2300 Yonge Street, Toronto, Ontario.

PROPOSED METHOD OF HEARING: Northeast proposes that the motion be heard orally.

1. THE MOTION IS FOR:

(a) an order pursuant to section 29 of the *Ontario Energy Board Act,* 1998 (the "Act") that the Board refrain from regulating and approving the terms, conditions and rates for the interruptible natural gas liquefaction service requested by Union Gas Limited ("Union");

(b) costs of this motion pursuant to Rule 39.01 of the Board's Rules of Practice and Procedure; and

(c) such further and other orders as the Board may deem just.

2. THE GROUNDS FOR THE MOTION ARE:

(a) Northeast, an Intervenor in the within application, is a limited partnership established on March 22, 2013. Its principal place of business is in Thorold, Ontario.

(b) Northeast was established to construct and operate a natural gas liquefaction plant on its property in Thorold, Ontario, and to produce and market liquefied natural gas ("LNG"). Northeast will market LNG as a transportation fuel and for other purposes.

(c) Northeast has acquired rights to land in Thorold, Ontario, and has secured the requisite municipal and provincial approvals permitting it to build a gas liquefaction plant thereon capable of producing 33,000 GJ of LNG per day, for sale into the competitive market.

(d) The estimated cost of building Northeast's LNG plant is $130,000,000. The expected date to complete the construction is in the fourth quarter of 2016. To date, Northeast has spent significant at-risk funds to advance its project. All of the additional money required to complete the project will come from private investors whose investment will also be fully at risk.

(e) Northeast's presence in Thorold, Ontario confirms that the LNG market as a transportation fuel is competitive.

(f) Union also owns a LNG liquefaction and storage facility in Hagar, Ontario built in 1968. Union has used the Hager facility to liquefy and vapourize LNG and remove it from storage to inject it into Union's distribution system to meet its integrity

requirements. In its material filed in support of its application, Union asserts that the liquefaction and storage capacity at the Hager facility exceeds that which is required for system integrity requirements and thus it seeks to sell excess LNG capacity to wholesalers or customers (ex-franchise) primarily for vehicle transportation fuel. Union has applied to the Board for an order approving a new Rate L1 rate schedule and a cost-based rate to accommodate an interruptible liquefaction service in Hagar, Ontario.

(g) With Northeast's entry into the LNG market in Ontario, there will be an increased number of market participants competing with each other without the benefits of being able to shield themselves from investment risk. The potential entry by Union into the LNG market on a rate regulated basis, where its existing distribution customers take on the investment risk, is incompatible with the development of a competitive market and will not facilitate competition in the market of selling LNG to users.

(h) Union's proposed entry, as set out in its application, falls squarely within the provisions of section 29(1) of the Act. LNG in the transportation market is a product subject to competition sufficient to protect the public interest.

(i) The public interest relevant to assessing whether competition is sufficient is the operation of the competitive market.

(j) Such further and other grounds as counsel may advise and the Board may permit.

3. **THE FOLLOWING DOCUMENTARY EVIDENCE WILL BE USED AT THE HEARING OF THE MOTION:**

(a) all of the evidence previously filed with the Board in connection with Union's Application;

(b) the Affidavit of Joshua Samuel sworn October 15, 2014;

(c) The Affidavit of Steven Gaske sworn October 15, 2014; and

(d) such further and other material as counsel may advise and the Board may permit.

Date: October 15, 2014

GOODMANS LLP
Barristers & Solicitors
Bay Adelaide Centre
333 Bay Street, Suite 3400
Toronto, Canada M5H 2S7

David E. Lederman LSUC#: 44170U

Tel: (416) 979-2211
Fax: (416) 979-1234

Lawyers for the Intervenor/Moving Party,
Northeast Midstream LP

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Toronto, ON M4P 1E4
Attention: Board Secretary

E-mail: boardsec@ontarioenergyboard.ca
Tel: 1.888.632.6273 (Toll free)
Fax: 416.440.7656

TAB 2

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 necessary to accommodate a new interruptible natural gas liquefaction service at its Hagar Liquefied Natural Gas Facility.

AFFIDAVIT OF JOSHUA SAMUEL
(Sworn October 15, 2014)

I, Joshua Samuel, of the City of Toronto, in the Province of Ontario, **MAKE OATH AND SAY:**

1. I am the President and Chief Executive Officer of Northeast Midstream Corporation, the general partner of Northeast Midstream LP ("Northeast").

2. Northeast was established pursuant to the *Limited Partnership Act* of Ontario on March 22, 2013. Since that time, Northeast has vigorously pursued its entry into the market for liquefied natural gas ("LNG") in Ontario.

3. Northeast has acquired rights to land in Thorold, Ontario and has been successful in the protracted and onerous process of securing the necessary municipal and provincial approvals which permit it to build its LNG liquefaction plant. Attached hereto as Exhibit "A" is the site plan for Northeast's LNG liquefaction plant along with the site plan agreement with the City of Thorold. Attached hereto as Exhibit "B" is the Environmental Compliance Approval for Northeast's LNG liquefaction plant received from the Province of Ontario.

4. Northeast's plant, which is scheduled for completion in the fourth quarter of 2016, will cost approximately $130 million and will produce 33,000 GJ of LNG per day. It is anticipated that, subject to maintenance shut-downs, the plant will operate 24 hours a day, 365 days a year.

5. Northeast recognises the evolving nature of the market for LNG, both as a

transportation fuel and for other purposes. Northeast therefore anticipates several competitive entrants into these markets. More entrants will lead to a more vibrant and widespread market for LNG.

6. There is great and continuing interest in the development of LNG as a transportation fuel specifically. Attached hereto as Exhibit "C" is a program for the Natural Gas Vehicles Canada Conference to be held in Toronto, October 20-22, 2014.

7. There has also been coverage recently of LNG in the press that highlights the challenges for end users. The issues faced by early entrants into the LNG market in Canada are multidimensional and typical of problems faced by early entrants in any industry. By way of example, attached hereto as Exhibit "D" is an article dated April 9, 2014 and titled *Insight – Ride to lower costs of LNG – run trucks rockier than expected,* published on Reuters.com. Moreover, there is no clear suggestion to support that the regulation of LNG production in Ontario is desired by or will benefit the transportation industry.

8. Northeast initiated its business as one which would be fully competitive in a competitive market. It did not anticipate that it would face competition from a capital cost protected utility, such as Union Gas Limited ("Union"). Attached hereto as Exhibit "E" is Union's anticipated geographic market titled – *Union Gas Non-Binding Call* along with a document prepared by Union titled *Cold Weather and Growth,* which I understand was presented by Union at the meeting in Calgary in March 2, 2014.

9. Northeast is concerned that, if Union is permitted entry into LNG market under a regulated rate regime whereby Union's distribution customers bear the risk of the proposed capital investment, it would provide an unfair competitive advantage to Union and the result would be a negative effect on the robust development of a fully competitive LNG market.

10. I make this affidavit in support of Northeast's motion made pursuant to section 29(1) of the *Ontario Energy Board Act* and for no other purpose.

SWORN before me at the City of Toronto,
on October 15, 2014.

A Commissioner for taking affidavits
Name:

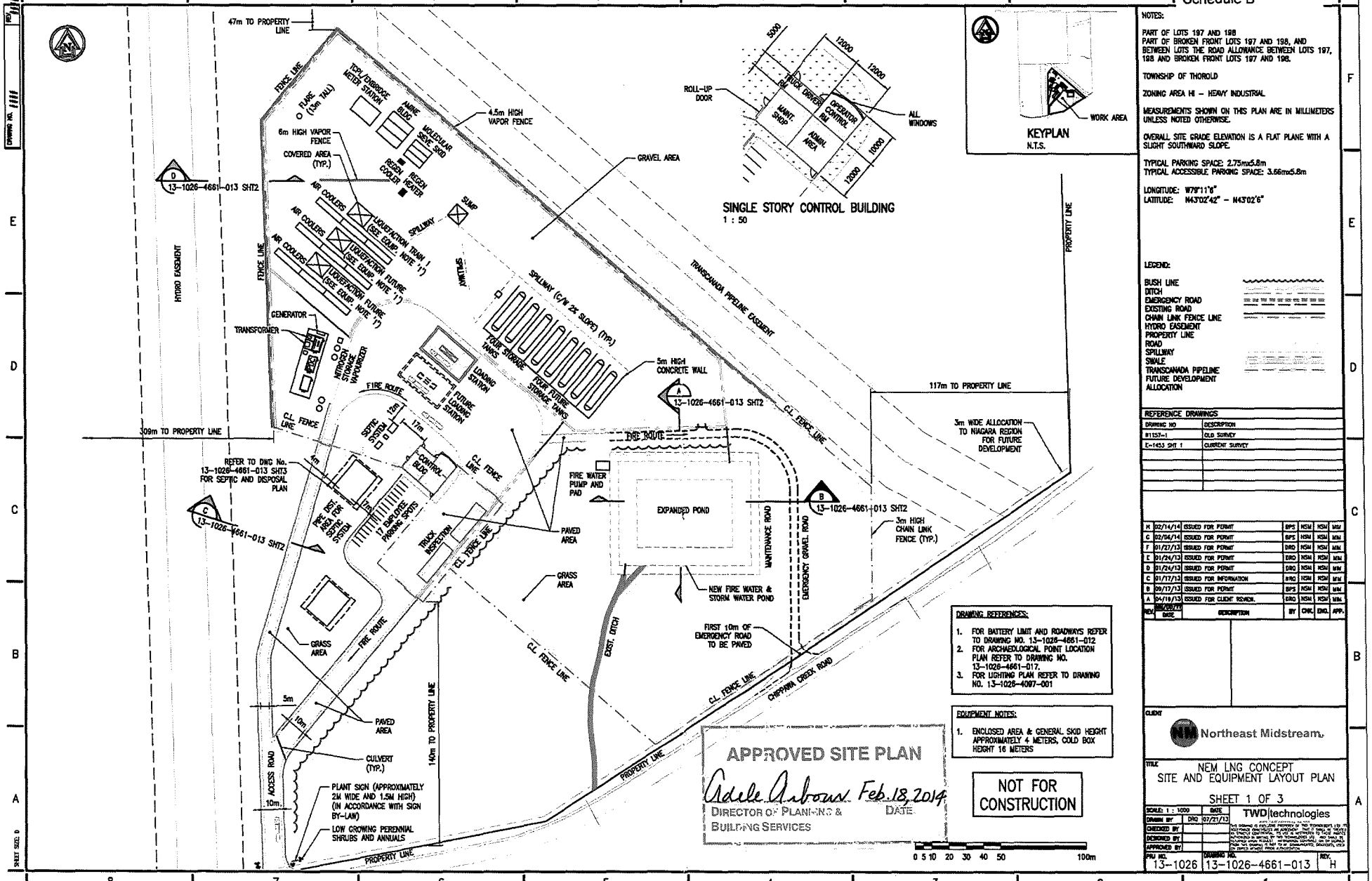
Joshua Samuel

6379066

This is Exhibit "A" referred to
in the Affidavit of Joshua Samuel
sworn this 15th day of October 2014

A Commissioner, etc.

Schedule B



SINGLE STORY CONTROL BUILDING
1 : 50

KEYPLAN
N.T.S.

NOTES:

PART OF LOTS 197 AND 198
PART OF BROKEN FRONT LOTS 197 AND 198, AND BETWEEN LOTS THE ROAD ALLOWANCE BETWEEN LOTS 197, 198 AND BROKEN FRONT LOTS 197 AND 198.

TOWNSHIP OF THOROLD

ZONING AREA HI – HEAVY INDUSTRIAL

MEASUREMENTS SHOWN ON THIS PLAN ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

OVERALL SITE GRADE ELEVATION IS A FLAT PLANE WITH A SLIGHT SOUTHWARD SLOPE.

TYPICAL PARKING SPACE: 2.75mx5.8m
TYPICAL ACCESSIBLE PARKING SPACE: 3.66mx5.8m

LONGITUDE: W79°11'6"
LATITUDE: N43°02'42" – N43°02'6"

LEGEND:

BUSH LINE
DITCH
EMERGENCY ROAD
EXISTING ROAD
CHAIN LINK FENCE LINE
HYDRO EASEMENT
PROPERTY LINE
ROAD
SPILLWAY
SWALE
TRANSCANADA PIPELINE
FUTURE DEVELOPMENT ALLOCATION

REFERENCE DRAWINGS	
DRAWING NO	DESCRIPTION
81157-1	OLD SURVEY
E-1453 SHT 1	CURRENT SURVEY

REV	DATE	DESCRIPTION	BY	CHK.	ENG.	APP.
H	02/14/14	ISSUED FOR PERMIT	BPS	MSM	MSM	MM
G	02/06/14	ISSUED FOR PERMIT	BPS	MSM	MSM	MM
F	01/27/13	ISSUED FOR PERMIT	DRD	MSM	MSM	MM
E	01/24/13	ISSUED FOR PERMIT	DRD	MSM	MSM	MM
D	01/24/13	ISSUED FOR PERMIT	DRD	MSM	MSM	MM
C	01/17/13	ISSUED FOR INFORMATION	DRD	MSM	MSM	MM
B	09/17/13	ISSUED FOR PERMIT	BPS	MSM	MSM	MM
A	04/19/13	ISSUED FOR CLIENT REVIEW.	DRD	MSM	MSM	MM

DRAWING REFERENCES:

1. FOR BATTERY LIMIT AND ROADWAYS REFER TO DRAWING NO. 13-1026-4661-012
2. FOR ARCHAEOLOGICAL POINT LOCATION PLAN REFER TO DRAWING NO. 13-1026-4661-017.
3. FOR LIGHTING PLAN REFER TO DRAWING NO. 13-1026-4097-001

EQUIPMENT NOTES:

1. ENCLOSED AREA & GENERAL SKID HEIGHT APPROXIMATELY 4 METERS, COLD BOX HEIGHT 16 METERS

APPROVED SITE PLAN
Adele Arbour Feb.18,2014
DIRECTOR OF PLANNING & BUILDING SERVICES — DATE

NOT FOR CONSTRUCTION

CLIENT: Northeast Midstream

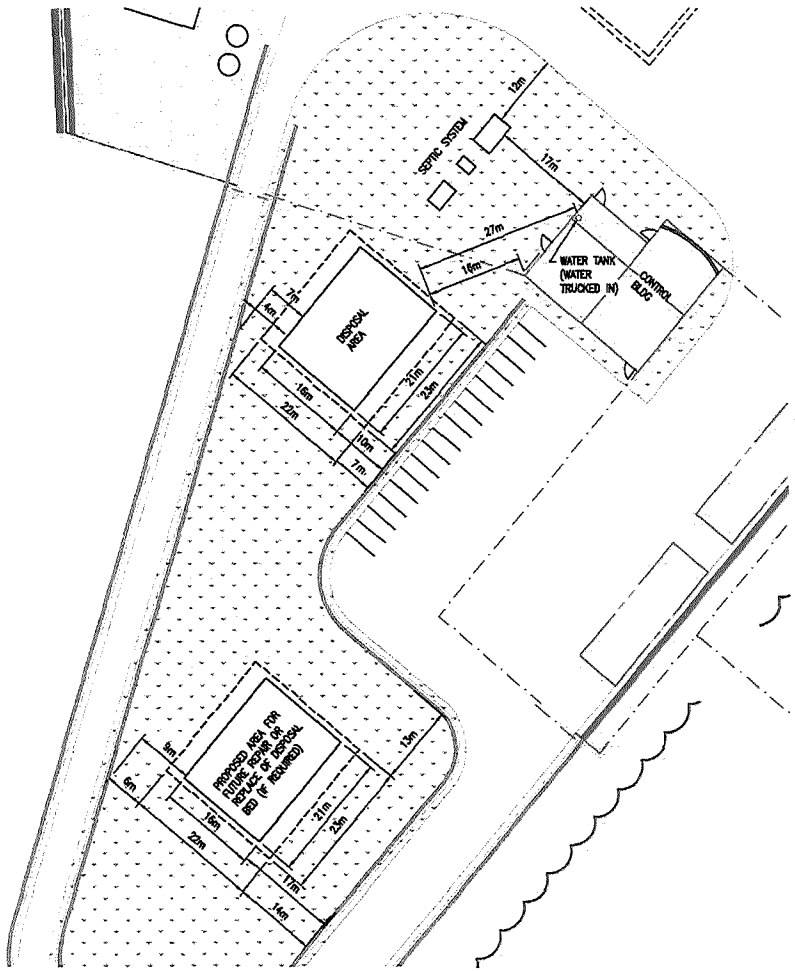
TITLE: NEM LNG CONCEPT
SITE AND EQUIPMENT LAYOUT PLAN
SHEET 1 OF 3

SCALE: 1 : 1000	DATE	TWD technologies
DRAWN BY	DRD 07/27/13	
CHECKED BY		
DESIGNED BY		
APPROVED BY		

PRJ NO. 13-1026 | DRAWING NO. 13-1026-4661-013 | REV. H

SHEET SIZE: D

Schedule B-1



SEPTIC AND DISPOSAL PLAN
N.T.S.

NOTES:

ESTABLISHED ONTARIO BUILDING CODE SETBACKS FOR CLASS 4 TREATMENT UNITES AND DISTRIBUTION PIPES (TABLE 8.2.1.6.A AND 8.2.1.6.B, RESPECTIVELY)

SETBACK DESCRIPTION	DISTANCE (m)
ALL TANKS TO STRUCTURE	1.5
ALL TANKS TO LAKE, POND, SPRING	15
ALL TANKS TO ANY WELL	15
ALL TANKS TO PROPERTY LINE	3
DISTRIBUTION PIPING TO STRUCTURE	5
DISTRIBUTION PIPING TO LAKE, POND, SPRING	15
DISTRIBUTION PIPING TO WELL WITHOUT TIGHT CASING	30
DISTRIBUTION PIPING TO PROPERTY LINE	3

APPROVED SITE PLAN
Adele Arbour Feb.18, 2014
DIRECTOR OF PLANNING & BUILDING SERVICES — DATE

NOT FOR CONSTRUCTION

0 5 10 20 30 40 50

NOTES:

PART OF LOTS 197 AND 198
PART OF BROKEN FRONT LOTS 197 AND 198, AND BETWEEN LOTS THE ROAD ALLOWANCE BETWEEN LOTS 197, 198 AND BROKEN FRONT LOTS 197 AND 198.

TOWNSHIP OF THOROLD

ZONING AREA HI – HEAVY INDUSTRIAL

MEASUREMENTS SHOWN ON THIS PLAN ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

OVERALL SITE GRADE ELEVATION IS A FLAT PLANE WITH A SLIGHT SOUTHWARD SLOPE.

TYPICAL PARKING SPACE: 2.75mx5.8m
TYPICAL ACCESSIBLE PARKING SPACE: 3.66mx5.8m

LONGITUDE: W79°11'6"
LATITUDE: N43°02'42" – N43°02'6"

LEGEND:

BUSH LINE
DITCH
EMERGENCY ROAD
EXISTING ROAD
FENCE LINE
HYDRO EASEMENT
PROPERTY LINE
ROAD
SPILLWAY
SWALE
TRANSCANADA PIPELINE
FUTURE DEVELOPMENT ALLOCATION

REFERENCE DRAWINGS

DRAWING NO	DESCRIPTION
81157-1	OLD SURVEY
E-1453 SHT 1	CURRENT SURVEY

REV.	DATE	DESCRIPTION	BY	CHK.	ENG.	APP.
A	02/12/14	ISSUED FOR PERMIT	BPS	NSM	NSM	NSM

CLIENT: Northeast Midstream

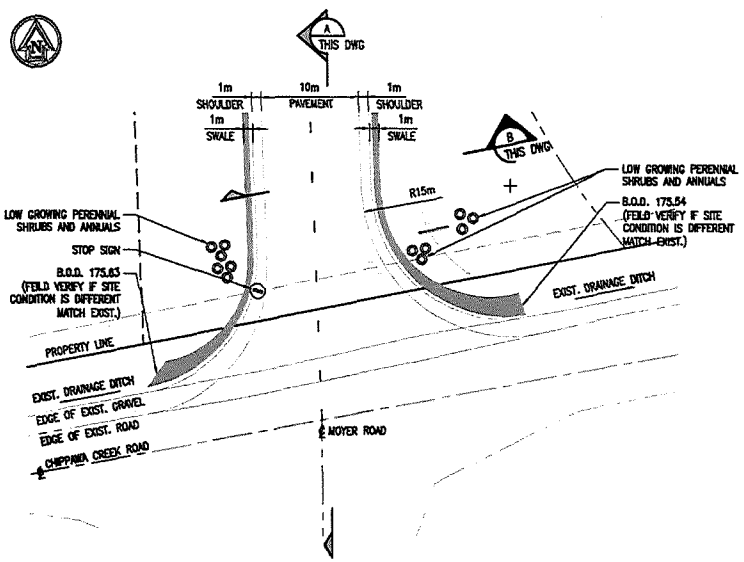
TITLE: NEM LNG CONCEPT SEPTIC PLAN

SHEET 3 OF 3

SCALE: AS NOTED	DATE:	TWDtechnologies
DRAWN BY: DRO	02/21/13	
CHECKED BY:		
DESIGNED BY:		
APPROVED BY:		

PROJ NO.: 13-1026
DRAWING NO.: 13-1026-4661-013
REV.: A

Schedule B-2



PLAN – ROAD INTERSECTION DESIGN
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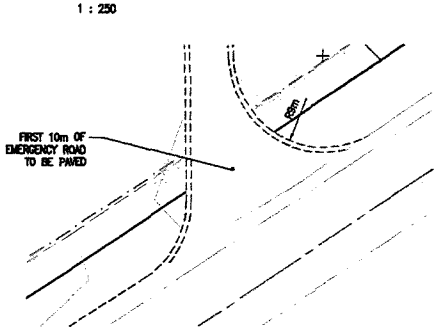
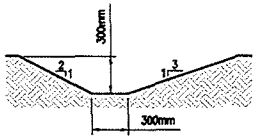
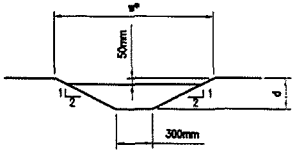


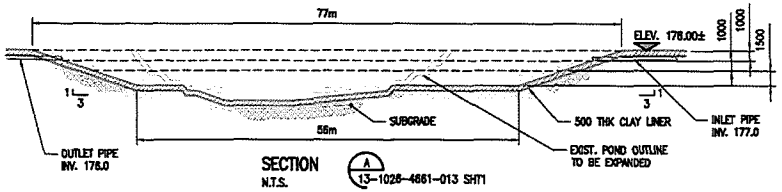
PLAN – EMERGENCY ROAD INTERSECTION DESIGN
1 : 250



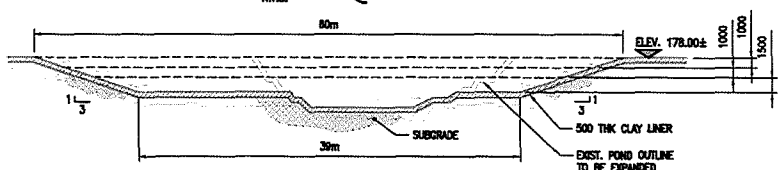
TYP. SWALE SECTION (C) 13-1026-4661-013 SHT1
N.T.S.
(AT DOWNSTREAM DEPTH)



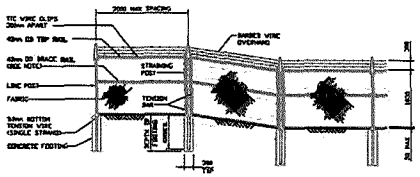
TYP. DITCH SECTION (C) 13-1026-4661-013 SHT1
N.T.S.
* DITCH WIDTH IS BASED ON THE SIDE SLOPE AND DEPTH OF DITCH AT THAT POINT.



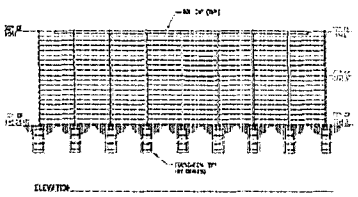
SECTION (A) 13-1026-4661-013 SHT1
N.T.S.



SECTION (B) 13-1026-4661-013 SHT1
N.T.S.



TYPICAL CHAIN LINK FENCE PROFILE
N.T.S.



VAPOUR FENCE PROFILE
N.T.S.

APPROVED SITE PLAN
Adele Arbour Feb. 18, 2014
DIRECTOR OF PLANNING & BUILDING SERVICES DATE

NOTES:

PART OF LOTS 197 AND 198
PART OF BROKEN FRONT LOTS 197 AND 198, AND BETWEEN LOTS THE ROAD ALLOWANCE BETWEEN LOTS 197, 199 AND BROKEN FRONT LOTS 197 AND 198.

TOWNSHIP OF THOROLD

ZONING AREA MI – HEAVY INDUSTRIAL

MEASUREMENTS SHOWN ON THIS PLAN ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

OVERALL SITE GRADE ELEVATION IS A FLAT PLANE WITH A SLIGHT SOUTHWARD SLOPE.

TYPICAL PARKING SPACE: 2.75m±5.8m
TYPICAL ACCESSIBLE PARKING SPACE: 3.66m±5.8m

LONGITUDE: W79°11'8"
LATITUDE: N43°02'42" – N43°02'8"

LEGEND:

BUSH LINE
DITCH
EMERGENCY ROAD
EXISTING ROAD
FENCE LINE
HYDRO EASEMENT
PROPERTY LINE
ROAD
SPILLWAY
SWALE
TRANSCANADA PIPELINE
FUTURE DEVELOPMENT ALLOCATION

REFERENCE DRAWINGS	
DRAWING NO	DESCRIPTION
81157-1	OLD SURVEY
C-1433 SHT 1	CURRENT SURVEY

REV	DATE	DESCRIPTION	BY	CHK'D	ENG'D	APP'D
B	02/12/14	ISSUED FOR PERMIT		BPS	KSM	KSM
A	02/06/14	ISSUED FOR PERMIT		BPS	KSM	KSM

CLIENT
Northeast Midstream

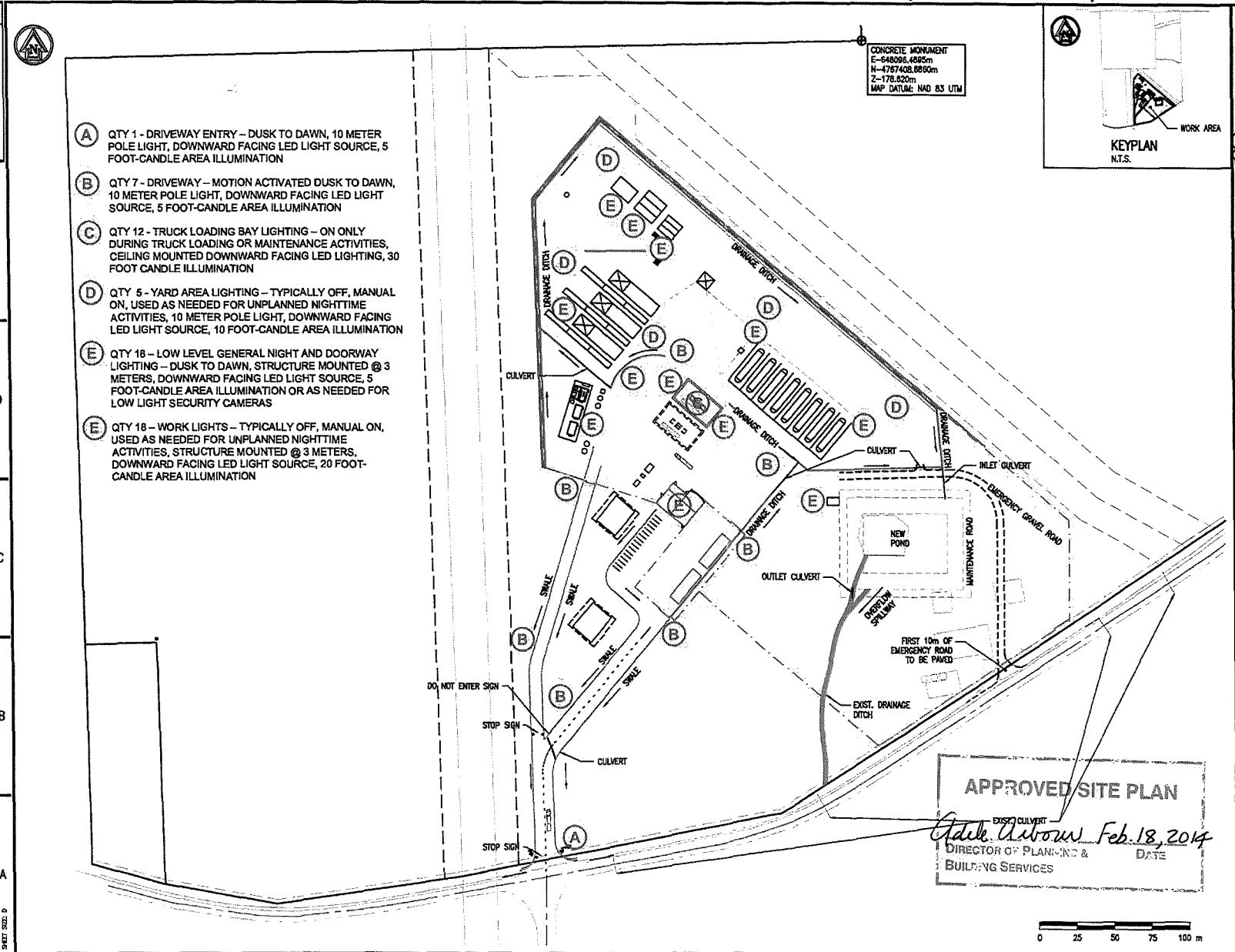
TITLE
NEM LNG CONCEPT
SITE SECTIONS AND DETAILS
SHEET 2 OF 3

SCALE: AS NOTED	DATE	TWD technologies
DRAWN BY	DRG 02/21/13	
CHECKED BY		
DESIGNED BY		
APPROVED BY		

PM NO. 13-1D26
DRAWING NO. 13-1026-4661-013
REV. B

NOT FOR CONSTRUCTION

Schedule C



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TOWNSHIP OF THDROLD

ZONING AREA HI – HEAVY INDUSTRIAL

MEASUREMENTS SHOWN ON THIS PLAN ARE IN MILLIMETERS

ALL LIGHTING INSTALLED WILL BE CUT-OFF LIGHTING AND THERE WILL BE NO LIGHT SPILL OVER ONTO ADJACENT PROPERTIES OR ROADWAYS B

LEGEND:

- EMERGENCY ROAD
- EXISTING ROAD
- DRAINAGE DITCH
- FENCE LINE
- GAS SPILLWAY
- HYDRO EASEMENT
- PROPERTY LINE
- TRANSCANADA PIPELINE
- TRAFFIC LINE
- TRAFFIC DIRECTION

- NEW GRASS AREA
- NEW GRAVEL AREA
- NEW ROAD/PAVED AREA
- NEW DITCH
- NEW SWALE
- UNCHANGED AREA

REFERENCE DRAWINGS

DRAWING NO	DESCRIPTION

REV.	DATE	DESCRIPTION	BY	CHK.	ENG.	APP.
D	02/13/14	RE-ISSUED FOR PERMIT	CCr	TMA	TMA	KPB
C	02/06/14	RE-ISSUED FOR PERMIT	CCr	TMA	TMA	KPB
B	01/24/14	RE-ISSUED FOR PERMIT	CCr	TMA	TMA	KPB
A	01/17/14	ISSUED FOR PERMIT	CCr	TMA	TMA	KPB

CLIENT: Northeast Midstream

TITLE: NEM LNG CONCEPT LIGHTING PLAN

SCALE: 1 : 1250	DATE: 01/17/14
DRAWN BY	
CHECKED BY	
DESIGNED BY	
APPROVED BY	

TWDtechnologies

PRJ NO. 13-1026 | DRAWING NO. 13-1026-4097-001 | REV. D

SHEET SIZE: D

Properties

PIN	64058 - 0142 LT
Description	PT TWP LT 197, THLD, PT 13 59R8603 ; THOROLD
Address	THOROLD
PIN	64058 - 0144 LT
Description	PT TWP LTS 197 & 198, THLD; PT TWP LTS BROKEN FRONT 197 & BROKEN FRONT 198, THLD; PT RDAL BTN TWP LTS 198 & BROKEN FRONT 198, THLD; PT RDAL BTN TWP LTS 197 & BROKEN FRONT 197, THLD, ALL BEING PTS 7-11 & PTS 14-34 59R8603 , EXCEPT PTS 1 & 2 59R9960 ; S/T AA27693, AA88849,RO648012,RO663586,RO669483,RO82212,TH16063, TH21603 THOROLD
Address	THOROLD

Consideration

Consideration $ 2.00

Applicant(s)

The notice is based on or affects a valid and existing estate, right, interest or equity in land

Name	THE CORPORATION OF THE CITY OF THOROLD
Address for Service	3540 Schmon Parkway P.O. Box 1044 Thorold, ON L2V 4A7

This document is not authorized under Power of Attorney by this party.

This document is being authorized by a municipal corporation by A. T. (Ted) Luciani, Mayor and Susan Daniels, City Clerk.

Statements

This notice is pursuant to Section 71 of the Land Titles Act.

This notice is for an indeterminate period

Schedule: See Schedules

Signed By

Diana Maria Bondio	40 Queen St., PO Box 1360 St. Catharines L2R 6Z2	acting for Applicant(s)	Signed	2014 02 21

Tel 905-688-6655

Fax 905-688-5814

I have the authority to sign and register the document on behalf of the Applicant(s).

Submitted By

SULLIVAN MAHONEY LLP	40 Queen St., PO Box 1360 St. Catharines L2R 6Z2	2014 02 26

Tel 905-688-6655

Fax 905-688-5814

Fees/Taxes/Payment

Statutory Registration Fee	$60.00
Total Paid	$60.00

File Number

Applicant Client File Number : 93987

THE CORPORATION OF THE CITY OF THOROLD

BY-LAW NO. 22-2014

BEING A BY-LAW TO AUTHORIZE THE EXECUTION
OF A SITE PLAN AGREEMENT WITH
DRIFTWAY FARMS LTD AND NORTHEAST MIDSTREAM LP
CHIPPAWA CREEK ROAD, THOROLD

WHEREAS Driftway Farms Ltd and Northeast Midstream LP has requested that the Council of The Corporation of the City of Thorold enter into a Site Plan Agreement;

AND WHEREAS the Council of the City of Thorold approved the recommendation of Report PBS2014-14 at the Council meeting held on February 18, 2014 to enter into a Site Plan Agreement with Driftway Farms and Northeast Midstream LP.

NOW THEREFORE THE COUNCIL OF THE CORPORATION OF THE CITY OF THOROLD HEREBY ENACTS AS FOLLOWS:

1. THAT entry into a Site Plan Agreement with Driftway Farms Ltd and Northeast Midstream LP, in the form attached hereto, is hereby approved and authorized.

2. THAT the Mayor and the Clerk are hereby authorized to execute the said Agreement and the Clerk shall affix the corporate seal thereto.

3. THAT the City Solicitor shall not proceed to register the said Agreement until such time as all prior encumbrances of the lands within the terms of the Site Plan Agreement have postponed in favour of the Site Plan Agreement.

READ A FIRST, SECOND AND THIRD TIME AND FINALLY PASSED BY COUNCIL THIS 18th DAY OF FEBRUARY, 2014.

A.T. (Ted) Luciani, Mayor

Susan Daniels, City Clerk

SITE PLAN AGREEMENT

THIS AGREEMENT, made in triplicate, this 18th day of February, 2014 authorized by By-law 22-2014 of The Corporation of the City of Thorold.

BETWEEN:

THE CORPORATION OF THE CITY OF THOROLD
(hereinafter called the "City")

OF THE FIRST PART

- and -

DRIFTWAY FARMS LTD
(hereinafter called the "Owner")

OF THE SECOND PART

-and-

NORTHEAST MIDSTREAM LP
(hereinafter called the "Developer")

OF THE THIRD PART

WHEREAS the Owner has requested that Council of The Corporation of the City of Thorold enter into a Site Plan Agreement with Driftway Farms Ltd;

AND WHEREAS the City has enacted Site Plan Control Policy by By-law No. 1130(88) pursuant to the provisions of Section 41 of the Planning Act, R.S.O. 1990, c.P. 13, as amended;

AND WHEREAS the Owner owns the lands described as Chippawa Creek Road, PT LT 197, 198, Thorold being all of PIN 640580144 and PIN 640580142 (LT) in the City of Thorold, Regional Municipality of Niagara;

AND WHEREAS the Owner has applied to the City for approval of a Site Plan annexed to and made part of this Agreement as Schedule B, Schedule B1, Schedule B2 and Schedule C which Site Plan has been received by the Site Plan Committee of the City of Thorold and that Committee has approved of the said Site Plan subject to the Owner entering into this Site Plan Agreement with the City and subject to the Owner completing all matters contemplated by this Agreement to the satisfaction of the City.

NOW THEREFORE IN CONSIDERATION OF THE MUTUAL COVENANTS CONTAINED HEREIN, THE PARTIES COVENANT AND AGREE AS FOLLOWS:

Conditions for Site Plan Agreement

1. This Agreement shall apply to the Owner's land, which is described above and to the development or redevelopment of the said lands.

2. The Owner covenants and agrees that no development or redevelopment will proceed on the said lands except in accordance with the Plan approved by the

City pursuant to Section 41 of the Planning Act and more particularly identified in Schedule B attached hereto.

3. The Owner further agrees that the proposed buildings, structures and other works shown on the Plan which is identified as Schedule B shall be completed in conformity with the said Plan and shall do all acts to provide for the maintenance and use of the requirements set out in this Agreement.

4. The Owner further covenants and agrees, in addition to Sections 2 and 3 above and without limiting the generality of Sections 2 and 3 or any other Sections of this Agreement and at its own costs:

   (a) To complete the installation of all site services, works and facilities as shown on Schedule B within the time specified in Section 5.

   (b) To provide and maintain at all times such parking and loading facilities convenient to users and ensuring orderly and safe vehicular and pedestrian movements as shown on Schedule B and further agrees that the said areas shall be surfaced in accordance with the approved plans. Surface parking areas and access driveways shall be in accordance to the locations shown on the approved plans and to specifications and a design in accordance with the Ontario Building Code.

   (c) All loading areas shall be screened from view and are to be maintained clear of debris.

   (d) To provide to Niagara Region an approximate three (3) metre road widening across the frontage of the subject property in order to achieve 13.1 metres from the centerline of Chippawa Creek Road to accommodate future pavement widening and to provide sufficient boulevard area for utilities, snow storage and tree plantings. The requested widening is to be conveyed free and clear of any mortgages, liens or other encumbrances.

   (e) Prior to any construction within the Regional road allowance, the Owner agrees to obtain a Regional Construction Encroachment and Entrance Permit from the Niagara Region (Transportation Division). The proposed entranceway must align centerline to centerline with Regional Road No. 84 (Moyer Road) with a 7.3 metre throat width and a 12 metre turning radii.

   (f) The Owner agrees to construct the entrances in accordance with the plans approved by the Region.

   (g) All roads, entranceways and the emergency access route must conform to the requirements of the Fire Department and meet Ontario Building Code Standards.

   (h) The Owner shall, at its own expense, erect "No Parking-Fire Route" signs along all fire routes as required.

   (i) The Owner agrees to maintain all access and interior driveways including the emergency access route and access to the fire water pump and pad

year round including snow removal to the satisfaction of the Fire Department.

(j) Prior to the commencement of any construction, to submit a site servicing and lot grading and drainage plan to the satisfaction of the Ministry of the Environment, Niagara Region, Niagara Peninsula Conservation Authority (NPCA), Hydro One and City for review and approval and to construct all infrastructure in accordance with the approved plans.

(k) Prior to the issuance of a building permit, the Owner shall receive approval for the private on-site sanitary sewer disposal and treatment system on the said lands to serve the buildings to be erected thereon and agrees such construction will be in accordance with specifications, plans and permits approved by Niagara Region. The Owner agrees, at its own expense, to construct, undertake, to repair, forever maintain, and, where necessary, replace any private sanitary sewer system located on the lands

(l) The Owner agrees that should alternative technology be planned for sewage disposal, other than a system approved by Niagara Region, the approval may fall under the jurisdiction of the Ministry of Environment and the Owner may be required to submit the proposal to the Ministry of Environment or if generated flows exceed 10,000 l/day a Ministry of Environment approval shall be required.

(m) The Owner agrees to, at its own expense, construct all internal water supply services necessary to serve the development, such construction to be in accordance with specifications and a design approved by the Niagara Region.

(n) Prior to the commencement of any construction, the Owner will verify, to the satisfaction of the Fire Chief and the Chief Building Official, the fire flow requirements for the proposed Facility and have a qualified engineer confirm that the required flows are acceptable.

(o) The Owner shall submit calculations to support the private water service sizes for both daily consumption and fire flow requirements that will be required.

(p) All fire protection (hydrants and fire connections) for the site shall be installed in accordance with the Ontario Building Code.

(q) All fire hydrant protection identified in this agreement shall be commissioned, tested and demonstrated to be in working order, to the satisfaction of the Fire Chief, prior to the introduction of natural gas into the LNG facility and it becoming operational.

(r) The Owner agrees to install a key box at the main and emergency access entrances to the Facility. The key lock box is available from Pinders Lock in St. Catharines and is to be keyed to Thorold Fire Department Specifications. Further boxes may be required at strategic locations as the project transpires.

(s) Prior to the commencement of any construction, to submit a stormwater managment plan to the satisfaction of the Ministry of the Environment (MOE), Niagara Region, Niagara Peninsula Conservation Authority and City for review and approval. The Owner agrees to construct all infrastructure in accordance with the approved plans and to operate in accordance with the Ministry of the Environment "Environmental Compliance Approval" (ECA). The Owner agrees, at its own expense, to undertake, to repair, forever maintain, and, where necessary, replace any private storm water system located on the lands.

(t) The Niagara Peninsula Conservation Authority requires that all stormwater runoff be treated to a Normal standard prior to discharge from the site.

(u) Prior to undertaking any works on-site, the Owner agrees to obtain a Site Services building permit from the City's Building Services Department.

(v) Prior to undertaking any works on-site, the Owner agrees to obtain all proper approvals from the Niagara Peninsula Conservation Authority for the expansion of the existing pond and any other works proposed within the regulated areas.

(w) Prior to undertaking any works on-site, the Owner agrees to install adequate sediment erosion control fencing and to maintain such fencing in good working condition until the completion of the works and the site has been revegetated. The Owner agrees that all disturbed area will be re-vegetated immediately upon completion of construction (before removal of sediment control fencing).

(x) That at no time shall muddy water or materials of any kind be allowed to discharge into the watercourse.

(y) The Owner understands and agrees that all sewer and water materials installed on private properties must be specified and in compliance with current City standards and the Plumbing Code.

(z) To construct and maintain all drainage to the satisfaction of the City.

(aa) The storage, collection and disposal of refuse, garbage and waste in the development shall be so conducted as to create no health hazards, rodent harbourage, insect breeding areas, accident, fire hazards or pollution. This responsibility will rest entirely on the Owner.

(bb) To provide such walls, pathways, benches, common area enhancements, fences, hedges, trees and/or shrubs and to landscape the said lands as shown on Schedule B and further agrees to maintain same to the satisfaction of the City of Thorold.

(cc) Prior to installation of any signage, the Owner agrees to obtain the necessary sign permits from the City and Region where required.

(dd) Lighting of the land and/or of the subject buildings shall be directed in such a way and be of an intensity so as not to interfere with adjacent properties and/or the traveling public. For this purpose, cut-off lighting shall be used for all exterior lighting of the subject property.

(ee) The Owner agrees to implement all noise control measures necessary to ensure that all noise/acoustic levels meet the Ministry of the Environment (MOE) requirements and obtain all necessary approvals from the Ministry. The Owner agrees to operate in accordance the MOE "Environmental Compliance Approval" (ECA) and provide copies of the ECA to the City.

(ff) The Owner agrees to implement all air control measures necessary to ensure that all levels meet the Ministry of the Environment (MOE) requirements and obtain all necessary approvals from the Ministry. The Owner agrees to operate in accordance with the MOE "Environmental Compliance Approval" (ECA) and provide copies of the ECA to the City.

(gg) The Owner agrees to obtain all necessary approvals required by the Technical Standards and Safety Authority (TSSA) with respect to the operation of the facility including transmission, distribution, transportation, storage, dispensing and utilization. The Owner agrees to operate in accordance with TSSA approvals and provide copies of TSSA approvals to the City.

(hh) The Owner agrees to submit a Risk and Safety Management Plan approved by the TSSA and reviewed by the City of Thorold Fire Department.

(ii) The Owner agrees to obtain any other necessary Federal or Provincial approvals that may be necessary for the operation of the facility and to provide the City with copies of such approvals.

(jj) Prior to any soil disturbance or alterations on-site, the Owner agrees to carry out an archaeological assessment of the subject property and mitigate, through preservation or resource removal and documentation, adverse impacts to any significant archaeological resources found. No grading or other soil disturbances shall take place on the subject property prior to the Niagara Region (Development Services) and the Ministry of Tourism, Culture and Sport confirming that all archaeological resource concerns have met licensing and resource conservation requirements.

(kk) Should deeply buried archaeological material be found during construction, the Ontario Ministry of Culture in London (519-675-7742) should be notified immediately. In the event that human remains are encountered during construction, the proponent should immediately contact the Ministry of Culture and the Cemeteries Regulation Unit of the Ontario Ministry of Consumer and Commercial Relations in Toronto (416-326-8392), as well as municipal police and the local coroner.

(ll) The Owner agrees to provide a 20 metre buffer zone and a 50 metre monitoring zone around the sites identified in the report by Archeoworks

Inc. dated September 25, 2013 and supplementary report dated January 16, 2014 to ensure sites are not impacted or disturbed by any proposed construction activities. The Owner agrees that no construction activities shall take place within the 20 metre protective buffer and that any construction activities occurring within the 50 metre monitoring zone must be undertaken under the supervision of a licensed archaeologist. The Owner agrees to erect snow-fencing around the limits of the sites identified in the report by Archeoworks Inc. dated September 25, 2013 and supplementary report dated January 16, 2014including the 20 metre buffer zone.

(mm) The Owner agrees to issue "no-go" instructions to all on-site construction crews, engineers, architects or others involved in the day-to-day decisions during construction and to show the location of areas to be avoided on all contact drawings (including explicit instructions and/or labelling to avoid the areas).

(nn) The Owner agrees to have a Professional Engineer confirm the location of the subject lands with respect to the Allanport Road Municipal Drain Watershed and address future maintenance cost allocations in accordance with the Drainage Act.

(oo) The Owner agrees that any development in conjunction with the proposed site plan must not block vehicular access to any Hydro One facilities located on the right of way. During construction, the Owner agrees that there will be no storage of materials or mounding of earth, snow or other debris on the right of way.

(pp) The Owner agrees that the costs of any relocations or revisions to Hydro One facilities which are necessary to accommodate this site plan would be borne by the Owner.

(qq) The Owner agrees that the easement rights of Hydro One and its legal predecessors are to be protected and maintained at all times.

(rr) The Owner is aware that some noise from the existing Transformer/Distribution Station, which is in close proximity, may interfere with the proposed development/site. Should the Owner do noise tests and should the City or other governing body require any type of noise attenuation infrastructure (ie. berms, sound walls, etc.), the costs involved will be the sole responsibility of the Owner. Hydro One Networks Inc. (HONI) will not be responsible for any costs involved.

(ss) In accordance with Hydro One comments, it should be noted that the transmission lines abutting this development operate at either 500,000, 230,000 or 115,000 volts. Section 188 – Proximity – of the Regulations for Construction Projects in the *Occupational Health and Safety Act* require that no object be brought closer than 6 metres (20 feet) to the energized 500 kV conductor. The distance for a 230 kV conductor is 4.5 metres (15 feet) and for 115 kV conductors it is 3 metres (10 feet). It is the proponent's responsibility to be aware and to make all personnel on-site

aware that all equipment and personnel must come no closer than the distance specified in the *Act*. They should also be aware that the conductors can raise and lower without warning depending on the electrical demand placed on the line.

5. The Owner covenants and agrees that all conditions as set out in Sections 2, 3 and 4, as shown in Schedule B, Schedule B1, Schedule B2 and Schedule C shall be completed within five (5) years from the date this site plan agreement is fully executed.

6. The Owner further covenants and agrees that prior to the issuance of the Site Services building permit, the Owner will deposit with the Planning and Building Services Department the sum of One Hundred and Eighty-Five Thousand and Two Hundred Dollars ($185,200.00) Dollars in Canadian Dollars or a Letter of Credit to ensure fulfilment of all terms and conditions of this Agreement.

   Any Letter of Credit must provide that draws may be made by the City, if necessary, in accordance with the terms and conditions of this Agreement. It must further be in a form satisfactory to the City and be in force until the security deposits have been released in accordance with Section 7.

   Should the Owner default in any of its obligations as contained in this Agreement, or fail to provide or construct any of the works described in this Agreement within the time limit which is provided herein, the City at its option, may enter upon the said lands and complete such obligations or works and charge the total cost thereof to the Owner who shall pay the same to the City forthwith upon demand.

   Should the Owner fail to pay the City forthwith upon demand, the City may apply all or such portion of the deposit as may be required towards the cost.

   Should the cost exceed the amount of the deposit, the Owner agrees that the balance may be added to the Tax Roll and collected in a like manner as property taxes.

   The Letter of Credit must be arranged such that the City may make draws, if necessary, to perform this work or any part of it, or to pay or settle any construction lien claims under Section 17, R.S.O. 1990, Chap C. 30 of the Construction Lien Act.

   It is further agreed by the Owner that the City may also use this deposit for payment into court and/or towards the City's legal costs in any lien action for this work in accordance with the Construction Lien Act, whether such action is framed to include The Corporation of the City of Thorold.

7. The Director of Operations shall upon written application thereof, by the Owner, authorize the release of the deposits identified in Section 6 having regard for the provisions of this agreement and completion of all on site and off site works, subject to the following:

a) Submission of 'as built' drawings accompanied by a letter confirming that the required works and services have been installed and/or constructed in accordance with the approved site plan agreement. The letter shall be prepared by the company responsible for the installation and/or construction of the required works and services.

b) Submission of a letter by the Owner, requesting the return of the securities which identifies that all works and services have been completed in accordance with the Site Plan Agreement and that no Construction Lien Claims have been filed.

c) Submission of a subsequent letter, by the Owner, no earlier than forty-five (45) days from the completion of Section 9 a) and b) above, to certify that no Construction Lien Claims have been filed.

Upon receipt of the above to the satisfaction of the Director of Operations, the City may return to the Owner the amount on hand of the deposits under Sections 7.

8. In the event of failure of the Owner to carry out any of the provisions of this Agreement, then the Municipality, its servants, or agents shall, on fifteen (15) days written notice of its intention to do so and forthwith in cases or emergency, have the right to enter on to the said lands and, at the expense of the Owner, do any work required hereby and further, and the Owner agrees that the Municipality shall have the right to recover the costs thereof by action or as municipal taxes, pursuant to the provisions of the Municipal Act, R.S.O. 2001, as amended.

9. The Owner will indemnify and save harmless the City and each of its officers, servants, and agents from all loss, damage, damages, costs, expenses, claims, demands, actions, suits or other proceedings of every nature and kind (collectively, "Claims") arising from or in consequence of the execution, non-execution or imperfect execution of any of the work hereinbefore mentioned or of the supply or non-supply of material therefor, whether such Claims arise by reason of negligence or without negligence on the part of the Owner or its contractors, officers, servants or agents, or whether such Claims are occasioned to or made or brought against the Owner or its contractors, officers, servants, or agents or the City, its officers, servants, or agents.

10. The Owner understand and agree that he/she shall be responsible for all fees incurred in the registration of this Agreement against the title to the said property, and for all registration fees incurred in the registration of any subsequent amendment or deletion of the Agreement from title and for any approvals or consents required to register the Agreement.

11. The Owner shall arrange for and shall be responsible for all fees incurred in the registration of postponements of all debentures, charges, mortgages, or other similar documents registered prior to the registration of this Agreement.

12. The Owner understands and agrees that any building additions, additional structures and/or new buildings on the said lands shall require an amendment to

this Agreement. Small accessory buildings required to house equipment less than ten (10) square metres in size located within the fenced area of the facility will not require an amendment to the Agreement.

13. The Owner covenants and agrees to pay any arrears of taxes outstanding against the lands, prior to the execution of this Agreement by the City.

14. Prior to the release of any securities, the Owner agrees to pay any arrears of taxes outstanding against the lands.

15. The Owner shall provide City Staff access to and from the property at all times for the purposes of ensuring compliance with this agreement.

16. The Developer herein agrees to develop the property in accordance with the site plan agreement and assumes and will be bound by the site plan agreement as "Owner".

17. The Owner is advised that prior to commencing any work within the site, the owner must confirm that sufficient wire line communication/telecommunication infrastructure is available within the development to provide communication/telecommunication services to the development. In the event that such infrastructure is not available, the Owner may be required to pay for the connection to and/or extension to existing communication/telecommunication infrastructure.

18. In case the Owner wishes not to pay for the connection to and/or extension to an existing communication/telecommunication infrastructure, the Owner shall be required to demonstrate to the municipality that sufficient alternative communication/telecommunication facilities are available within the proposed site to enable, at a minimum, the efficient delivery of communication/telecommunication services for emergency management services (i.e. 911 Emergency service).

19. This agreement shall enure to the benefit of and be binding upon the parties hereto and their heirs, executors, administrators, successors, mortgagees and assigns and all covenants, agreements, conditions and understandings herein contained on the part of the Owner shall run with the lands and it shall enure to the benefit of the lands of the City and it shall be binding upon the Owner and its successors and assigns as Owners or occupiers of the lands from time to time.

THIS AGREEMENT shall be binding upon the parties hereto and their respective successors and assigns.

IN WITNESS WHEREOF the parties hereto have hereunto placed their respective hands and seals to these presents.

SIGNED, SEALED AND DELIVERED)
In the Presence of)

DRIFTWAY FARMS LTD

I, Helmut Rempel, have the authority to bind the Corporation

NORTHEAST MIDSTREAM LP

I, [illegible] have the authority to bind the Corporation

THE CORPORATION OF THE CITY OF THOROLD

A.T. (Ted) Luciani, Mayor

Susan Daniels, City Clerk
I/We have the authority to bind the Corporation

Schedule A

PT Lot 197, 198, Thorold

PIN # 640580144 (LT)

PIN # 640580142 (LT)

Roll Number 2731000029029000000

SCHEDULE E
SECURITY DEPOSITS AND REQUIRED PAYMENTS

Item	Reference	Subject	Est. Cost	L of C	Cash
Prior to Signature					
1.	14.	Tax Arrears @ Feb 18/14			$0.00
Prior to Construction					
2.	6	Securities for Off-Site and On-Site Services – 10% Primary - $220,132.00 100% Secondary - $163,181.00	$185,195.00	$185,200.00	
Total				**$185,200.00**	**$0,000.00**

NOTE:

- Separate Agreement with Hydro and other utilities (i.e. Canada Post) may be required.

SCHEDULE

Schedules B, B-1, B-2 and C of this Site Plan Agreement between The Corporation of the City of Thorold and Driftway Farms Ltd. and Northeast Midstream LP dated February 18, 2014 is available at the premises of the City of Thorold located at 3540 Schmon Parkway, Thorold, during normal business hours.

This is Exhibit "B" referred to
in the Affidavit of Joshua Samuel
sworn this 15th day of October 2014

A Commissioner, etc.

Ontario

Ministry of the Environment
Ministère de l'Environnement

ENVIRONMENTAL COMPLIANCE APPROVAL
NUMBER 3690-9HXR67
Issue Date: May 29, 2014

Northeast Midstream Corporation
42 St. Clair Ave E, No. 200
Toronto, Ontario
M4T 1M9

Site Location: Thorold Natural Gas Plant
Lot Parts of 197/198, Concession 9
Thorold City, Regional Municipality of Niagara
L2V 0S9

You have applied under section 20.2 of Part II.1 of the Environmental Protection Act, R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:

Description Section

A liquified natural gas processing facility, consisting of the following processes and support units:

- three (3) liquefaction trains;

- eight (8) storage tanks;

- flare system;

- storage and loading; and

- emergency generator and diesel engine fire pump;

including the *Equipment* and any other ancillary and support processes and activities, operating at a *Facility Production Limit* of up to **210,000 tonnes of liquified natural gas per year** discharging to the air as described in the *Original ESDM Report.*

For the purpose of this environmental compliance approval, the following definitions apply:

1. "*Acceptable Maximum Ground Level Concentration*" means a concentration accepted by the *Ministry,* as described in the Guide to Applying for Approval (Air & Noise), for a *Compound of Concern* listed in the *Original ESDM Report* that:

(a) has no *Ministry Point of Impingement Limit* and no *Jurisdictional Screening Level,* or

(b) has a concentration at a *Point of Impingement* that exceeds the *Jurisdictional Screening Level.*

2. "*Acoustical Consultant*" means a person currently active in the field of environmental acoustics and noise/vibration control, who is familiar with *Ministry* noise guidelines and procedures and has a combination of formal university education, training and experience necessary to assess noise emissions from a *Facility.*

3. "*Acoustic Assessment Report*" means the report, prepared in accordance with *Publication NPC-233* and Appendix A of the *Basic Comprehensive User Guide,*by HGC Engineering and dated September 24, 2013 submitted in support of the application, that documents all sources of noise emissions and *Noise Control Measures* present at the *Facility* and includes

all up-dated *Acoustic Assessment Reports* as required by the Documentation Requirements conditions of this *Approval* to demonstrate continued compliance with the *Performance Limits* following the implementation of any *Modification.*

4. "*Acoustic Assessment Summary Table*" means a table prepared in accordance with the *Basic Comprehensive User Guide* summarising the results of the *Acoustic Assessment Report,* up-dated as required by the Documentation Requirements conditions of this *Approval.*

5. "*Acoustic Audit*" means an investigative procedure consisting of measurements and/or acoustic modelling of all sources of noise emissions due to the operation of the *Facility*, assessed to determine compliance with the Performance Limits for the *Facility* regarding noise emissions, completed in accordance with the procedures set in *Publication NPC-103* and reported in accordance with *Publication NPC-233.*

6. "*Acoustic Audit Report*" means a report presenting the results of an *Acoustic Audit,* prepared in accordance with *Publication NPC-233.*

7. "*Air Standards Manager*" means the Manager, Human Toxicology and Air Standards Section, Standards Development Branch, or any other person who represents and carries out the duties of the Manager, Human Toxicology and Air Standards Section, Standards Development Branch, as those duties relate to the conditions of this *Approval.*

8. "*Approval*" means this entire Environmental Compliance Approval and any *Schedules* to it.

9. "*Basic Comprehensive User Guide*" means the *Ministry* document titled "Basic Comprehensive Certificates of Approval (Air) User Guide" dated March 2011, as amended.

10. "*Company*" means Northeast Midstream Corporation operating as General Partner of Northeast Midstream LP that is responsible for the construction or operation of the *Facility* and includes any successors and assigns in accordance with section 19 of the *EPA.*

11. "*Compound of Concern*" means a contaminant that, based on generally available information, may be discharged to the air in a quantity from the *Facility* that:

(a) is non-negligible in accordance with section 26(1)4 of *O. Reg. 419/05* in comparison to the relevant *Ministry Point of Impingement Limit;* or

(b) if a *Ministry Point of Impingement Limit* is not available for the compound, may cause an adverse effect at a *Point of Impingement* based on generally available toxicological information.

12. "*Description Section*" means the section on page one of this *Approval* describing the *Company's* operations and the *Equipment* located at the *Facility* and specifying the *Facility Production Limit* for the *Facility.*

13. "*Director*" means a person appointed by the Minister pursuant to section 5 of the *EPA.*

14. "*District Manager*" means the District Manager of the appropriate local district office of the *Ministry,* where the *Facility* is geographically located.

15. "*Emission Summary Table*" means the most updated table contained in the *ESDM Report,* which is prepared in accordance with section 26 of *O. Reg. 419/05* and the *Procedure Document* listing the appropriate *Point of Impingement* concentration for each *Compound of Concern* from the *Facility* and providing comparison to the corresponding *Ministry Point of Impingement Limit* or *Maximum Concentration Level Assessment,* or *Jurisdictional Screening Level.*

16. "*Environmental Assessment Act*" means the Environmental Assessment Act, R.S.O. 1990, c.E.18, as amended.

17. "*EPA*" means the Environmental Protection Act, R.S.O. 1990, c.E.19, as amended.

18. "*Equipment*" means equipment or processes described in the *ESDM Report,* this *Approval* and in the *Schedules* referred to herein and any other equipment or processes.

19. "*Equipment with Specific Operational Limits*" means any *Equipment* related to the thermal oxidation of waste or waste derived fuels, fume incinerators or any other *Equipment* that is specifically referenced in any published *Ministry* document that outlines specific operational guidance that must be considered by the *Director* in issuing an *Approval.*

20. "*ESDM Report*" means the most current Emission Summary and Dispersion Modelling Report that describes the *Facility*. The *ESDM Report* is based on the *Original ESDM Report,* is prepared after the issuance of this *Approval* in accordance with section 26 of *O. Reg. 419/05* and the *Procedure Document* by the *Company* or its consultant.

21. "*Facility*" means the entire operation located on the property where the *Equipment* is located.

22. "*Facility Production Limit*" means the production limit placed by the *Director* on the main product(s) or raw materials used by the *Facility*.

23. "*Independent Acoustical Consultant*" means an *Acoustical Consultant* who is not representing the *Company* and was not involved in preparing the *Acoustic Assessment Report* or the design/implementation of *Noise Control Measures* for the *Facility* and/or *Equipment*. The *Independent Acoustical Consultant* shall not be retained by the *Acoustical Consultant* involved in the noise impact assessment or the design/implementation of *Noise Control Measures* for the *Facility* and/or *Equipment*.

24. "*Jurisdictional Screening Level*" means a screening level for a *Compound of Concern* that is listed in the *Ministry* publication titled "Jurisdictional Screening Level (JSL) List, A Screening Tool for Ontario Regulation 419: Air Pollution - Local Air Quality", dated February 2008, as amended.

25. "*Log*" means the up-to-date log that is used to track all *Modifications* to the *Facility* since the date of this *Approval* as required by the Documentation Requirements conditions of this *Approval*.

26. "*Maximum Concentration Level Assessment*" means the Maximum Concentration Level Assessment for the purposes of an *Approval,* described in the *Basic Comprehensive User Guide,* prepared by a *Toxicologist* using currently available toxicological information, that demonstrates that the concentration at any *Point of Impingement* for a *Compound of Concern* that does not have a *Ministry Point of Impingement Limit* is not likely to cause an adverse effect as defined by the *EPA*.

27. "*Ministry*" means the ministry of the government of Ontario responsible for the *EPA* and its regulations and includes all officials, employees or other persons acting on its behalf.

28. "*Ministry Point of Impingement Limit*" means the applicable Standard set out in Schedule 2 or 3 of *O.Reg. 419/05* or a limit set out in the *Ministry* publication titled "Summary of Standards and Guidelines to support Ontario Regulation 419: Air Pollution - Local Air Quality (including Schedule 6 of O. Reg. 419 on Upper Risk Thresholds)", dated April 2012, as amended.

29. "*Modification*" means any construction, alteration, extension or replacement of any plant, structure, equipment, apparatus, mechanism or thing, or alteration of a process or rate of production at the *Facility* that may discharge or alter the rate or manner of discharge of a *Compound of Concern* to the air or discharge or alter noise or vibration emissions from the *Facility*.

30. "*Noise Control Measures*" means measures to reduce the noise emissions from the *Facility* and/or *Equipment* including, but not limited to, silencers, acoustic louvres, enclosures, absorptive treatment, plenums and barriers.

31. "*O. Reg. 419/05*" means the Ontario Regulation 419/05, Air Pollution – Local Air Quality, as amended.

32. "*Original ESDM Report*" means the Emission Summary and Dispersion Modelling Report which was prepared in accordance with section 26 of *O. Reg. 419/05* and the *Procedure Document* by Corporate EMC Limited dated December, 2013 submitted in support of the application, and includes any changes to the report made up to the date of issuance of this *Approval*.

33. "*Performance Limits*" means the performance limits specified in Condition 3.2 of this *Approval* titled Performance Limits.

34. "*Point of Impingement*" has the same meaning as in section 2 of *O. Reg. 419/05*.

35. "*Point of Reception*" means Point of Reception as defined by *Publication NPC-205* and/or *Publication NPC-232,* as applicable.

36. "*Procedure Document*" means *Ministry* guidance document titled "Procedure for Preparing an Emission Summary and Dispersion Modelling Report" dated March 2009, as amended.

37. "*Processes with Significant Environmental Aspects*" means the *Equipment* which, during regular operation, would discharge a contaminant or contaminants into the air at an amount which is not considered as negligible in accordance with section 26(1)4 of *O. Reg. 419/05* and the *Procedure Document.*

38. "*Publication NPC-103*" means the *Ministry* Publication NPC-103 of the Model Municipal Noise Control By-Law, Final Report, August 1978, published by the *Ministry* as amended.

39. "*Publication NPC-205*" means the *Ministry* Publication NPC-205, "Sound Level Limits for Stationary Sources in Class 1 & 2 Areas (Urban)", October, 1995, as amended.

40. "*Publication NPC-207*" means the *Ministry* draft technical publication "Impulse Vibration in Residential Buildings", November 1983, supplementing the Model Municipal Noise Control By-Law, Final Report, published by the *Ministry,* August 1978, as amended.

41. "*Publication NPC-232*" means the *Ministry* Publication NPC-232, "Sound Level Limits for Stationary Sources in Class 3 Areas (Rural)", October, 1995, as amended.

42. "*Publication NPC-233*" means the *Ministry* Publication NPC-233, "Information to be Submitted for Approval of Stationary Sources of Sound", October, 1995, as amended.

43. "*Schedules*" means the following schedules attached to this *Approval* and forming part of this *Approval* namely:

Schedule A - Supporting Documentation

44. "*Toxicologist*" means a qualified professional currently active in the field of risk assessment and toxicology that has a combination of formal university education, training and experience necessary to assess contaminants.

45. "*Written Summary Form*" means the electronic questionnaire form, available on the *Ministry* website, and supporting documentation, that documents the activities undertaken at the *Facility* in the previous calendar year that must be submitted annually to the *Ministry* as required by the section of this *Approval* titled Reporting Requirements.

You are hereby notified that this environmental compliance approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. GENERAL

1.1 Except as otherwise provided by this *Approval,* the *Facility* shall be designed, developed, built, operated and maintained in accordance with the terms and conditions of this *Approval* and in accordance with the following *Schedules* attached hereto:

Schedule A - Supporting Documentation

2. LIMITED OPERATIONAL FLEXIBILITY

2.1 Pursuant to section 20.6(1) of the *EPA* and subject to Conditions 2.2 and 2.3 of this *Approval,* future construction, alterations, extensions or replacements are approved in this *Approval* if the future construction, alterations, extensions or replacements are *Modifications* to the *Facility* that:

(a) are within the scope of the operations of the *Facility* as described in the *Description Section* of this *Approval;*

(b) do not result in an increase of the *Facility Production Limit* above the level specified in the *Description Section* of this *Approval;* and

(c) result in compliance with the *Performance Limits.*

2.2 Condition 2.1 does not apply to:

(a) the addition of any new *Equipment with Specific Operational Limits* or to the *Modification* of any existing *Equipment with Specific Operational Limits* at the *Facility;* or

(b) *Modifications* to the *Facility* that would be subject to the *Environmental Assessment Act.*

2.3 Condition 2.1 of this *Approval* shall expire ten (10) years from the date of this *Approval,* unless this *Approval* is revoked prior to the expiry date. The *Company* may apply for renewal of Condition 2.1 of this *Approval* by including an *ESDM Report* and an *Acoustic Assessment Report* that describes the *Facility* as of the date of the renewal application.

3. REQUEST FOR *MAXIMUM CONCENTRATION LEVEL ASSESSMENT* AND *PERFORMANCE LIMITS*

3.1 **REQUEST FOR *MAXIMUM CONCENTRATION LEVEL ASSESSMENT***

3.1.1 If the *Company* proposes to make a *Modification* to the *Facility,* the *Company* shall determine if the proposed *Modification* will result in:

(a) a discharge of a *Compound of Concern* that was not previously discharged; or

(b) an increase in the concentration at a *Point of Impingement* of a *Compound of Concern.*

3.1.2 If a proposed *Modification* mentioned in Condition 3.1.1 will result in the discharge of a *Compound of Concern* that was not previously discharged, the *Company* shall submit a *Maximum Concentration Level Assessment* to the *Director* for review by the *Air Standards Manager* in the following circumstances:

(a) The *Compound of Concern* does not have a *Ministry Point of Impingement Limit* or a *Jurisdictional Screening Level.*

(b) The *Compound of Concern* does not have a *Ministry Point of Impingement Limit* and the concentration at a *Point of Impingement* will exceed the *Jurisdictional Screening Level.*

(c) Prior to the proposed *Modification,* a contaminant was discharged in a negligible amount and the proposed *Modification* will result in the discharge of the contaminant being considered a *Compound of Concern* and the *Compound of Concern* does not have a *Ministry Point of Impingement Limit* or a *Jurisdictional Screening Level.*

(d) Prior to the proposed *Modification,* a contaminant was discharged in a negligible amount and the proposed *Modification* will result in the discharge of the contaminant being considered a *Compound of Concern.* Additionally, the *Compound of Concern* does not have a *Ministry Point of Impingement Limit* and the concentration at a *Point of Impingement* will exceed the *Jurisdictional Screening Level.*

3.1.3 If a proposed *Modification* mentioned in Condition 3.1.1 will result in an increase in the concentration at a *Point of Impingement* of a *Compound of Concern,* the *Company* shall submit a *Maximum Concentration Level Assessment* to the *Director* for review by the *Air Standards Manager* in the following circumstances:

(a) The *Compound of Concern* does not have a *Ministry Point of Impingement Limit* or a *Jurisdictional Screening Level* and the concentration at a *Point of Impingement* will exceed the *Acceptable Maximum Ground Level Concentration.*

(b) The *Compound of Concern* does not have a *Ministry Point of Impingement Limit* or a *Jurisdictional Screening Level* and the concentration at a *Point of Impingement* will exceed the most recently accepted *Maximum Concentration Level Assessment* submitted under Condition 3.1.2 or this Condition.

(c) The *Compound of Concern* does not have a *Ministry Point of Impingement Limit* and the concentration at a *Point of Impingement* will exceed the *Jurisdictional Screening Level* and the *Acceptable Maximum Ground Level Concentration.*

(d) The *Compound of Concern* does not have a *Ministry Point of Impingement Limit* and the concentration at a *Point of Impingement* will exceed the *Jurisdictional Screening Level* and the most recently accepted *Maximum Concentration Level Assessment* submitted under Condition 3.1.2 or this Condition.

(e) The *Compound of Concern* does not have a *Ministry Point of Impingement Limit, Acceptable Maximum Ground Level Concentration* or a *Maximum Concentration Level Assessment* and the concentration at a *Point of Impingement* will exceed the *Jurisdictional Screening Level.*

3.1.4 Subject to the Operational Flexibility set out in Condition 2 of this *Approval,* the *Company* may make the *Modification* if the submission of a *Maximum Concentration Level Assessment* under Condition 3.1.2 or 3.1.3 is not required.

3.1.5 A *Company* that is required to submit an assessment under Condition 3.1.2 or 3.1.3 shall submit the assessment at least thirty (30) days before the proposed *Modification* occurs.

3.1.6 The *Ministry* shall provide to the *Company* written confirmation of the receipt of the assessment under Condition 3.1.2 or 3.1.3.

3.1.7 If an assessment is submitted under Condition 3.1.2 or 3.1.3, the *Company* shall not modify the *Facility* unless the *Ministry* accepts the assessment.

3.1.8 If the *Ministry* notifies the *Company* that it does not accept the assessment submitted under Condition 3.1.2 or 3.1.3, the *Company* shall:

(a) revise and resubmit the assessment; or

(b) notify the *Ministry* that the *Company* will not be modifying the *Facility.*

3.1.9 The re-submission under Condition 3.1.8 (a) is considered by the *Ministry* as a new submission.

3.2. ***PERFORMANCE LIMITS***

3.2.1 Subject to Condition 3.2.2, the *Company* shall, at all times, ensure that all *Equipment* that is a source of a *Compound of Concern* is operated to comply with the following *Performance Limits:*

(a) for a *Compound of Concern* that has a *Ministry Point of Impingement Limit,* the maximum concentration of that *Compound of Concern* at any *Point of Impingement* shall not exceed the corresponding *Ministry Point of Impingement Limit;*

(b) for a *Compound of Concern* that has an *Acceptable Maximum Ground Level Concentration* and no *Maximum Concentration Level Assessment,* the maximum concentration of that *Compound of Concern* at any *Point of Impingement* shall not exceed the corresponding *Acceptable Maximum Ground Level Concentration;* and

(c) for a *Compound of Concern* that has a *Maximum Concentration Level Assessment,* the maximum concentration of that *Compound of Concern* at any *Point of Impingement* shall not exceed the most recently accepted corresponding *Maximum Concentration Level Assessment.*

3.2.2 If the *Company* has modified the *Facility* and was not required to submit a *Maximum Concentration Level Assessment* with respect to a *Compound of Concern* under Condition 3.1.2 or 3.1.3, the *Company* shall, at all times, ensure that all *Equipment* that is a source of the *Compound of Concern* is operated such that the maximum concentration of the *Compound of Concern* shall not exceed the concentration listed for the *Compound of Concern* in the most recent version of the *ESDM Report.*

3.2.3 The *Company* shall, at all times, ensure that the noise emissions from the *Facility* comply with the limits set out in *Ministry Publication NPC-205* or *Publication NPC-232.*

3.2.4 The *Company* shall, at all times, ensure that the vibration emissions from the *Facility* comply with the limits set out in *Ministry Publication NPC-207.*

3.2.5 The *Company* shall, at all times, operate any *Equipment with Specific Operational Limits* approved by this *Approval* in accordance with the *Original ESDM Report* and Conditions in this *Approval.*

4. DOCUMENTATION REQUIREMENTS

4.1 The *Company* shall, at all times, maintain documentation that describes the current operations of the *Facility,* including but not limited to:

(a) an *ESDM Report* that demonstrates compliance with the *Performance Limits* for the *Facility;*

(b) an *Acoustic Assessment Report* that demonstrates compliance with the *Performance Limits* for the *Facility;*

(c) an up-to-date *Log* that describes each *Modification* to the *Facility;* and

(d) a record of the changes to the *ESDM Report* and the *Acoustic Assessment Report* that documents how each *Modification* is in compliance with the *Performance Limits.*

4.2 The *Company* shall, during regular business hours, make the current *Emission Summary Table* and *Acoustic Assessment Summary Table* available for inspection at the *Facility* by any interested member of the public.

4.3 Subject to Condition 4.5, the *Company* shall prepare and complete no later than April 15 of each year documentation that describes the activities undertaken at the *Facility* in the previous calendar year, including but not limited to:

(a) a list of all *Compounds of Concern* for which a *Maximum Concentration Level Assessment* was submitted to the *Director* for review by the *Air Standards Manager* pursuant to Condition 3.1.2 or 3.1.3 of this *Approval;*

(b) if the *Company* has modified the *Facility* and was not required to submit a *Maximum Concentration Level Assessment* with respect to a *Compound of Concern* under Condition 3.1.2 or 3.1.3, a list and concentration level of all such *Compounds of Concern;*

(c) a review of any changes to *Ministry Point of Impingement Limits* that affect any *Compounds of Concern* emitted from the *Facility;* and

(d) a table of the changes in the emission rate of any *Compound of Concern* and the resultant increase or decrease in the *Point of Impingement* concentration reported in the *ESDM Report.*

4.4 Subject to Condition 4.5, the *Company* shall, at all times, maintain the documentation described in Condition 4.3.

4.5 Conditions 4.3 and 4.4 do not apply if Condition 2.1 has expired.

4.6 The *Company* shall, within three (3) months after the expiry of Condition 2.1 of this *Approval,* update the *ESDM Report* and the *Acoustic Assessment Report* such that they describe the *Facility* as it was at the time that Condition 2.1 of this *Approval* expired.

5. REPORTING REQUIREMENTS

5.1 Subject to Condition 5.2, the *Company* shall provide the *Ministry* and the *Director* no later than April 15 of each year, a *Written Summary Form* that shall include the following:

(a) a declaration of whether the *Facility* was in compliance with section 9 of the *EPA, O.Reg. 419/05* and the conditions of this *Approval;*

(b) a summary of each *Modification* that took place in the previous calendar year that resulted in a change in the previously calculated concentration at the *Point of Impingement* for any *Compound of Concern* or resulted in a change in the sound levels reported in the *Acoustic Assessment Summary Table* at any *Point of Reception.*

5.2 Condition 5.1 does not apply if Condition 2.1 has expired.

6. OPERATION AND MAINTENANCE

6.1 The *Company* shall prepare and implement, not later than three (3) months before commencement of operation of the Equipment, operating procedures and maintenance programs for all *Processes with Significant Environmental Aspects,* which shall specify as a minimum:

(a) frequency of inspections and scheduled preventative maintenance;

(b) procedures to prevent upset conditions;

(c) procedures to minimize all fugitive emissions;

(d) procedures to prevent and/or minimize odorous emissions;

(e) procedures to prevent and/or minimize noise emissions; and

(f) procedures for record keeping activities relating to the operation and maintenance programs.

6.2 The *Company* shall ensure that all *Processes with Significant Environmental Aspects* are operated and maintained at all times in accordance with this *Approval,* the operating procedures and maintenance programs.

7. COMPLAINTS RECORDING PROCEDURE

7.1 If at any time, the *Company* receives any environmental complaints from the public regarding the operation of the *Equipment* approved by this *Approval,* the *Company* shall respond to these complaints according to the following procedure:

(a) the *Company* shall record and number each complaint, either electronically or in a log book, and shall include the following information: the time and date of the complaint and incident to which the complaint relates, the nature of the complaint, wind direction at the time and date of the incident to which the complaint relates and, if known, the address of the complainant;

(b) the *Company,* upon notification of a complaint, shall initiate appropriate steps to determine all possible causes of the complaint, and shall proceed to take the necessary actions to appropriately deal with the cause of the subject matter of the complaint; and

(c) the *Company* shall complete and retain on-site a report written within one (1) week of the complaint date, listing the actions taken to appropriately deal with the cause of the subject matter of the complaint and any recommendations for remedial measures, and managerial or operational changes to reasonably avoid the recurrence of similar incidents.

8. RECORD KEEPING REQUIREMENTS

8.1 Any information requested by any employee in or agent of the *Ministry* concerning the *Facility* and its operation under this *Approval,* including, but not limited to, any records required to be kept by this *Approval,* shall be provided to the employee in or agent of the *Ministry,* upon request, in a timely manner.

8.2 The *Company* shall retain, for a minimum of five (5) years from the date of their creation, except as noted below, all reports, records and information described in this *Approval* and shall include but not be limited to:

(a) If the *Company* has updated the *ESDM Report* in order to comply with Condition 4.1(a) of this *Approval,* a copy of each new version of the *ESDM Report;*

(b) If the *Company* has updated the *Acoustic Assessment Report,* in order to comply with Condition 4.1(b) of this *Approval,* a copy of each new version of the *Acoustic Assessment Report;*

(c) supporting information used in the emission rate calculations performed in the *ESDM Reports* and *Acoustic Assessment Reports* to document compliance with the *Performance Limits*(superseded information must be retained for a period of three (3) years after *Modification);*

(d) the *Log* that describes each *Modification* to the *Facility;*

(e) all documentation prepared in accordance with Condition 4.3 of this *Approval;*

(f) copies of any *Written Summary Forms* provided to the *Ministry* under Condition 5.1 of this *Approval;*

(g) the operating procedures and maintenance programs, including records on the maintenance, repair and inspection of the *Equipment* related to all *Processes with Significant Environmental Aspects;* and

(h) the complaints recording procedure, including records related to all environmental complaints made by the public as required by Condition 7.1 of this *Approval.*

9. REVOCATION OF PREVIOUS APPROVALS

9.1 This *Approval* replaces and revokes all Certificates of Approval (Air) issued under section 9 *EPA* and Environmental Compliance Approvals issued under Part II.1 *EPA* to the *Facility* in regards to the activities mentioned in subsection 9(1) of the *EPA* and dated prior to the date of this *Approval.*

10. ACOUSTIC AUDIT

10.1 The *Company* shall carry out *Acoustic Audit* measurements on the actual noise emissions due to the operation of the *Facility*. The *Company*:

(a) shall carry out *Acoustic Audit* measurements in accordance with the procedures in *Publication NPC-103*;

(b) shall submit an *Acoustic Audit Report* on the results of the *Acoustic Audit*, prepared by an *Independent Acoustical Consultant*, in accordance with the requirements of *Publication NPC-233*, to the *District Manager* and the *Director*, not later than three (3) months after the commencement of operation of the *Facility*;

(c) shall submit, along with the *Acoustic Audit Report,* an updated *Acoustic Assessment Report* that uses the noise data obtained from the *Acoustic Audit* measurements and is based on the *Facility* operating with all three (3) proposed lines.

10.2 The *Director*:

(a) may not accept the results of the *Acoustic Audit* if the requirements of *Publication NPC-233* were not followed;

(b) may require the *Company* to repeat the *Acoustic Audit* if the results of the *Acoustic Audit* are found unacceptable to the *Director.*

SCHEDULE A

Supporting Documentation

(a) Application for Approval (Air & Noise), dated September 23, 2013, signed by Joshua Samuel and submitted by the *Company;*

(b) Emission Summary and Dispersion Modelling Report, prepared by Corporate EMC Limited in December, 2013;

(c) Acoustic Assessment Report, prepared by HGC Engineering and dated September 24, 2013; and

(d) All other supporting documentation and correspondences.

The reasons for the imposition of these terms and conditions are as follows:

GENERAL

1. Condition No. 1 is included to require the *Approval* holder to build, operate and maintain the *Facility* in accordance with the Supporting Documentation in Schedule A considered by the *Director* in issuing this *Approval.*

LIMITED OPERATIONAL FLEXIBILITY, REQUEST FOR *MAXIMUM CONCENTRATION LEVEL ASSESSMENT* AND *PERFORMANCE LIMITS*

2. Conditions No. 2 and 3 are included to limit and define the *Modifications* permitted by this *Approval,* and to set out the circumstances in which the *Company* shall submit a *Maximum Concentration Level Assessment* prior to making

Modifications. The holder of the *Approval* is approved for operational flexibility for the *Facility* that is consistent with the description of the operations included with the application up to the *Facility Production Limit.* In return for the operational flexibility, the *Approval* places performance based limits that cannot be exceeded under the terms of this *Approval. Approval* holders will still have to obtain other relevant approvals required to operate the *Facility,* including requirements under other environmental legislation such as the *Environmental Assessment Act.*

DOCUMENTATION REQUIREMENTS

3. Condition No. 4 is included to require the *Company* to maintain ongoing documentation that demonstrates compliance with the *Performance Limits* of this *Approval* and allows the *Ministry* to monitor on-going compliance with these *Performance Limits.* The *Company* is required to have an up to date *ESDM Report* and *Acoustic Assessment Report* that describe the *Facility* at all times and make the *Emission Summary Table* and *Acoustic Assessment Summary Table* from these reports available to the public on an ongoing basis in order to maintain public communication with regard to the emissions from the *Facility.*

REPORTING REQUIREMENTS

4. Condition No. 5 is included to require the *Company* to provide a yearly *Written Summary Form* to the *Ministry,* to assist the *Ministry* with the review of the site's compliance with the *EPA,* the regulations and this *Approval.*

OPERATION AND MAINTENANCE

5. Condition No. 6 is included to require the *Company* to properly operate and maintain the *Processes with Significant Environmental Aspects* to minimize the impact to the environment from these processes.

COMPLAINTS RECORDING PROCEDURE

6. Condition No. 7 is included to require the *Company* to respond to any environmental complaints regarding the operation of the *Equipment,* according to a procedure that includes methods for preventing recurrence of similar incidents and a requirement to prepare and retain a written report.

RECORD KEEPING REQUIREMENTS

7. Condition No. 8 is included to require the *Company* to retain all documentation related to this *Approval* and provide access to employees in or agents of the *Ministry,* upon request, so that the *Ministry* can determine if a more detailed review of compliance with the *Performance Limits* is necessary.

REVOCATION OF PREVIOUS APPROVALS

8. Condition No. 9 is included to identify that this *Approval* replaces all Section 9 Certificate(s) of Approval and Part II.1 Approvals in regards to the activities mentioned in subsection 9(1) of the *EPA* and dated prior to the date of this *Approval.*

ACOUSTIC AUDIT

9. Condition No. 10 is included to require the *Company* to gather accurate information and submit an *Acoustic Audit Report* in accordance with procedures set in the *Ministry*'s noise guidelines, so that the environmental impact and subsequent compliance with this *Approval* can be verified.

In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me, the Environmental Review Tribunal and in accordance with Section 47 of the Environmental Bill of Rights, 1993, S.O. 1993, c. 28 (Environmental Bill of Rights), the Environmental Commissioner, within 15 days after receipt of this Notice, require a hearing by the Tribunal. The Environmental Commissioner will place notice of your appeal on the Environmental Registry. Section 142 of the Environmental Protection Act provides that the Notice requiring the hearing shall state:

1. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;

2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The environmental compliance approval number;
6. The date of the environmental compliance approval;
7. The name of the Director, and;
8. The municipality or municipalities within which the project is to be engaged in.

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5

AND

The Environmental Commissioner
1075 Bay Street, Suite 605
Toronto, Ontario
M5S 2B1

AND

The Director appointed for the purposes of Part II.1 of the Environmental Protection Act
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 314-4506 or www.ert.gov.on.ca**

This instrument is subject to Section 38 of the Environmental Bill of Rights, 1993, that allows residents of Ontario to seek leave to appeal the decision on this instrument. Residents of Ontario may seek leave to appeal within 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry at www.ebr.gov.on.ca, you can determine when the leave to appeal period ends.

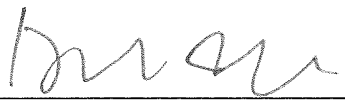
The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.

DATED AT TORONTO this 29th day of May, 2014

Rudolf Wan, P.Eng.
Director
appointed for the purposes of Part II.1 of the
Environmental Protection Act

ML/
c: District Manager, MOE Niagara
Boris Weisman, Corpoate EMC Limited

This is Exhibit "C" referred to
in the Affidavit of Joshua Samuel
sworn this 15th day of October 2014



A Commissioner, etc.

Researched & Organized by FC Gas Intelligence

2nd Annual

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- **BUILDING A ROBUST CASE FOR NGVS:** From regulations, vehicle choice and parts availability to monitoring and inspections, understand how to assess, prepare, implement, operate and maintain a fleet of NGVs
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Researched & Organized by FC Gas Intelligence

The NGV market in Canada is at a tipping point, with a multitude of early adopters enjoying fuel savings, companies such as GE, Shell, Fortis BC and Gaz Metro becoming major players in the space, and fleets and municipalities scrambling to catch up with the early NGV adopters in order to remain competitive.

"With the competition between the different refuse truck companies, they don't really have a choice, because if they want to stay competitive versus the municipalities, they will have to move to natural gas. When we make an offer we can be lower in price because our fuel is much cheaper."
Philippe Kreveld, *Director of Development, Natural Gas Transport,* **EBI**

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Yves Maurais, *Technical Director, Asset Management, Purchasing & Conformity,* **Robert Transport**

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- How to structure successful partnerships and natural gas refuelling business models
- How to help facilitate conversions for fleets to LNG, CNG and dual fuel platforms
- How to select the right technologies and business partners for your NGV project
- How the NGV market in Canada will unfold over the coming years
- How natural gas engine availability now and in the future will drive NGV adoption
- How to position your business to profit as the NGV market in Canada grows

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We are looking forward to seeing you in October

Theo Larn-Jones
Conference Director
T +44 (0) 207 422 4320
E tljones@fc-gi.com

Andrew York
Business Development
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Mike Britt, Director of Maintenance & Engineering International Operations Ground Fleet, **UPS Inc.**


Mauro Fantin, National Transportation Manager, **Labatt Breweries of Canada**


Danny Vettoretti, SC Fleet Manager, PFC - Service & Distribution, **PepsiCo Canada**


Alicia Milner, President, **Canadian Natural Gas Vehicle Alliance**


Alex Lawson, President, **Alex Lawson Associates Inc.**


Timothy M. Egan, President & CEO, **Canadian Gas Association**


Gordon Exel, President, **Cummins Westport Inc.**


Steve Baker, President, **Union Gas**


Doug Sutherland, Vice President, **Sutco Contracting**


Rymal Smith, Partner, **Change Energy**


Steve Carmichael, CEO, **Chelsea CNG**


Bob Taylor, Manager, LNG Business Development, **Shell**


Mark Grossman, New Market Development, **Shell**

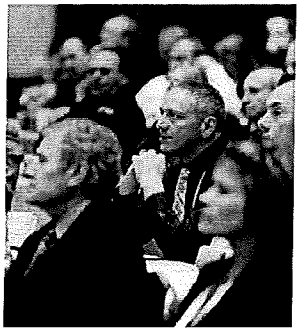
PRE-CONFERENCE // Oct 20, 2014

Researched & Organized by FC Gas Intelligence

SITE VISIT, NGV WORKSHOPS & WELCOME RECEPTION NETWORKING EVENT

Taking place the day before the main conference sessions start, we are hosting an exclusive site visit to a brand new CNG refueling station, NGV workshops and pre-event networking event on the evening of the Oct 20.

This is your opportunity to get up close and hands on with the latest NGV infrastructure technology and equipment. We will also be displaying several NGVs at the conference hotel. This is your chance to go under the bonnet of the latest NGV trucks and automobiles and take part in intimate and in-depth workshops addressing your key challenges.
Please note that the pre-conference day is only available to Gold and Fleet pass holders.



Chelsea CNG Station Site Visit

Delegates will have the opportunity to take a tour of Chelsea CNG's brand new CNG station based nearby to Toronto.

More details coming soon!

NEW for 2014

Food & Beverage Fleet Customer Insight Panel

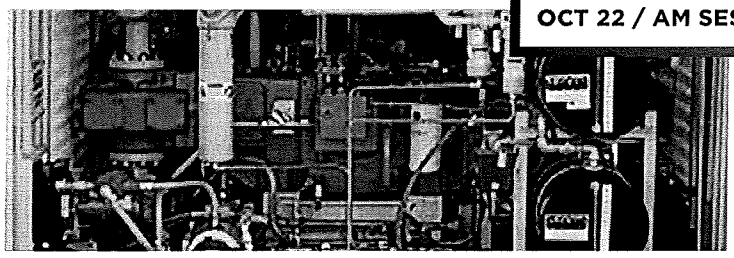
- Understand how a number of large Canadian companies are currently assessing NGVs suitability to integrate into their distribution fleets
- Hear the Fleet Manager's perspective as they go about building a business case for NGVs at some of Canada's largest commercial fleets
- What are the largest F&B fleets really thinking about NGVs? Gain an inside track on issues, challenges, opportunities, timelines, projects and partnerships.

OCT 22 / AM SESSION

NGV Workshops

Pre-Conference NGV 101 Workshops:

- Discover the history behind the NGV market in Canada, where we have come from and the market dynamics that are fuelling market growth
- Understand the difference between CNG & LNG in terms of capital cost and other important metrics (including their suitability for varying applications)
- Learn the basics behind NGV infrastructure technology
- Hear the latest updates on vehicle and engine technology
- Analyse the full industry value chain and discover whose involved and the part they play



Welcome Reception Networking Event

Join us for a glass of wine or a beer while you meet those crucial industry contacts in a relaxed setting on the evening before the conference kicks off
(Evening of Oct 20).

"Well attended by key players in the natural gas market. Excellent balance between government, users and suppliers at the conference and in the presentations"

VOLVO

DAY 1 // Oct 21, 2014

Researched & Organized by FC Gas Intelligence

Keynote Presentations

Enbridge: Making A Firm Commitment To Natural Gas

- Hear how Enbridge are successfully supporting fleets make the transition to NGVs- Understand the strategic position of Canada's largest gas distributor on NGVs

Glenn Beaumont, President, **Enbridge Gas Distribution**

Union Gas - Fueling Ontario's Transportation Market With Natural Gas

- Hear how Union Gas are working strategically to develop the market for natural gas vehicles in Ontario
- Learn from Union Gas' established experience in working with refuse fleets such as Green For Life to successfully implement NGV projects
- Hear exclusive updates on their latest projects and how they see the NGV market growing in Canada over the coming years

Steve Baker, President, **Union Gas**

Natural Gas Engines Powering The Shift To NGVs

- Hear an update on current market penetration and the range of applications Cummins Westport's engines are suited to in Canada
- A high level examination of current LNG and CNG market dynamics, the performance of the 12L Cummins Westport engine in Canada, efforts to improve engine efficiency and more!
- Assess the opportunity to incorporate natural gas engines into your fleet to gain immediate cost and emissions savings

Gordon Exel, President, **Cummins Westport Inc.**

What Can Canada Learn From International NGV Trends

- We explore trends from the U.S. and beyond and how these will in term effect the Canadian NGV market
- Hear about public policy initiatives seeding NGV development across North America- Hear case studies from across the world where infrastructure providers have worked successfully with OEMs to move beyond the 'Chicken & Egg Dilemma'

Alicia Milner, President, **CNGVA**

Getting To ROI: Lessons Learned from Canada's largest LNG Truck Deployment

- Hear how Vedder have paved the way working with partners including FortisBC and Peterbilt Pacific on their hugely successful NGV program
- Understand the ways in which Vedder have optimized their fleet of NGVs to achieve a desirable ROI- Where next for NGVs? And what role will they play in the on-road transportation market in Canada?
- Hear a high level analysis on how the market will play out in the coming year and get ready to profit from the shift towards NGVs

Fred Zweep, President, **The Vedder Transportation Group**

NEW for 2014

More Exclusive NGV Case Studies Than Ever Before!

Speakers from Canada and the USA exclusively lift the lid on their NGV programs giving you first hand insight

Vedder Transportation Group · PEPSICO · Labatt · Sutco "Your Transportation Specialists" · Cold Star Freight Systems Inc. HACCP · UPS

+ many more fleet speakers TBA

Global Efforts To Integrate NGVs at UPS

- Understand why UPS is going all in on natural gas fuels, and hear how its panning out for them on the ground with an exclusive insight into the nuts and bolts of their NGV deployment
- Hear how UPS is increasing the fuel-efficiency of its trucking fleet whilst lowering GHG emissions with a transition to LNG trucks worldwide
- Learn from the largest package delivery company on how they have approached one of the largest NGV deployments in North America

Mike Britt, Director of Maintenance & Engineering International Operations Ground Fleet, **UPS**

Winter Performance of NGVs in Canada

- Can NGVs cope with Canadian operating conditions? Understand the suitability of advanced NGV technologies for use during Canadian winters
- Understand how to prepare a fleet of NGVs for operation in low temperature conditions to make sure you take the steps necessary to ensure minimal downtime
- Learn from a number of case studies including EBI and Emterra on their real world experience running NGVs in cold weather

Alex Lawson, President, **Alex Lawson Associates Inc.** (& Technical Chair at NGV Global & CNGVA)

DAY 2 // Oct 21, 2014

Researched & Organized by FC Gas Intelligence

Track 1: Fleet Operators

Operating NGVs in Canada: Fleet Panel & Audience Q&A

- Hear from a range of fleets operating NGVs in Canada on their forecasted ROI and cost savings on the price of fuel .
- An exclusive look at the inner workings of Canada's leading NGV projects. Come away with practical tips, lessons learned and connections to help get your NGV project off the ground
- An opportunity to ask questions and discuss your NGV challenges with fleets that have experience to share

Moderator: Mark Grossman, New Market Development, **Shell**

Douglas Sutherland, Vice President, **Sutco Contracting**

Kelly Hawes, President, **Cold Star Freight**

More Speakers TBA

NGV Business Case Analysis

- Understand the process and level of technical and strategic analysis required in the feasibility stage to ensure your NGV business plan is rock solid
- Plan for 'people factors' and learn how to mitigate risk from your NGV project
- Ensure the practicality, safety and cost-effectiveness of your compressed gas project

Rymal Smith, Partner, **Change Energy**

Vehicle options for your NGV project

- The latest product lineups will be on display: see how these could fit in your fleet operations today.- Hear case studies on NGV deployments in Canada to access the strengths & weaknesses of your OEM options

Speakers TBA

+ more sessions TBA

Track 2: Industry

Natural Gas Vehicle Canada Market Analysis

- Projections from a range of experts on the rate of NGV demand growth over the next 10 to 15 years from across Canada and from each segment of the market
- Understand how incentive programs will continue to seed the market across the country, and how this momentum will impact your NGV business
- Hear an in-depth review of infrastructure / technology / vehicle developments which might increase the rate of adoption by fleets
- How will developments in the U.S. impact Canada? We take a look at trends and fleet adoption south of the border and access the likely effect this will have on NGV adoption and infrastructure build out.

NEW for 2014

Dedicated Fleet Operator & Industry Tracks

Fleet operator track

- Leading Canadian Fleet Case Studies, Q&A Format
- Dedicated Sessions For Heavy Duty, Medium Duty And Refuse Fleets
- Financing Options & Getting To ROI
- Infrastructure Options & Availability
- Vehicle Options & Availability
- Safety, Reliability, Training & Maintenance

industry track

- Food & Beverage Customer Insight Panel
- How To Drive Fleet Adoption
- Canadian NGV Market Analysis
- Trends, Opportunities And Partnerships
- Technology Updates And Developments
- LNG / CNG Refueling Build Out Strategy

Food & Beverage Fleet Customer Insight Panel

- Understand how a number of large Canadian companies are currently assessing NGVs suitability to integrate into their distribution fleets
- Hear the Fleet Manager's perspective as they go about building a business case for NGVs at some of Canada's largest commercial fleets
- What are the largest F&B fleets really thinking about NGVs? Gain an inside track on issues, challenges, opportunities, timelines, projects and partnerships.

Moderator: Bob Taylor, Manager, LNG Business Development, **Shell**

Mauro Fantin, National Transportation Manager, **Labatt Breweries of Canada**

Danny Vettoretti, SC Fleet Manager, PFC - Service & Distribution, **PepsiCo Canada**

More Speakers TBA

Fleet Outreach & NGV Marketing

- Go With Natural Gas set up the Fleet Information Hubs in Canada, hear which forms of fleet outreach have proved successful and apply these to your own NGV business
- Finding a fit with natural gas: understand which fleet segments are showing the most interest in NGVs, where their challenges are and how your NGV business can address these - Understand your customers and ensure your products and services are optimized for the Canadian market place

Pierre Ducharme, Hub Director, **Go With Natural Gas**

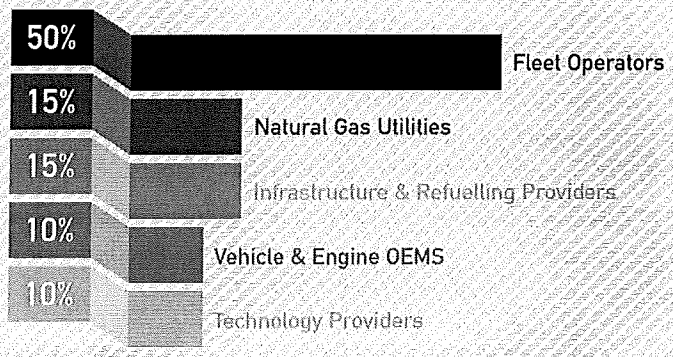
+ more sessions TBA

Unrivalled Networking: Facts and Stats for Natural Gas Vehicles Canada 2014

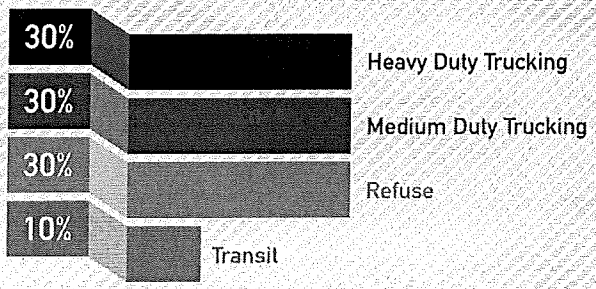
Researched & Organized by FC Gas Intelligence

Who will be there in 2014?

Delegate profile:



Fleet breakdown by segment:



Geographic location:

Agenda At A Glance

Date	Morning	Afternoon	Evening
Oct 20th	Off-Site Tours – Hosted by Chelsea CNG	NGV Workshops	Welcome Reception
Oct 21st	Plenary Sessions	Plenary Sessions	Networking Drinks Reception – Hosted by Embridge
Oct 22nd	Fleet Track Industry Track	Closing Sessions	

Online Networking Centre

Contact those hard-to-reach senior level executives up to 8 weeks pre and post event. No need to sift through the onsite delegate list, hoping to bump into your key future partners as you walk the floor. Book those crucial meetings, filling up your conference diary before you even arrive in Toronto.

Key Stats

- #1 NGV meeting place in Canada
- 175+ fleet representatives
- 30+ hours of structured networking

Industry Buzz Around Natural Gas Vehicles Canada

"The NGV Toronto conference was excellent in all ways. The technical content was informative and interesting, the broad range of attendees allowed for good discussion and networking." **ANGI Energy Systems**

"I have not attended a conference with so many end users present before." **Westport**

"We found the conference exceeded our expectations and are looking forward to next years event. " **Chelsea CNG**

www.ngvevent.com/canada

2nd Annual

Natural Gas Vehicles Canada 2014

CANADA'S LARGEST EVENT DEDICATED TO NGVS

Oct 20-22, 2014 // Westin Prince Hotel, Toronto, ON, Canada

All Passes Include:

- Opening Keynote & Plenary Sessions
- 2 Focused Conference Tracks
- Full Access to Exhibition Floor
- Structured, Topic Specific Networking
- Networking Cocktail Party, Lunches & Coffee Breaks

REGISTER NOW IN 3 EASY STEPS

1. Select Your Registration Package

Pass Features	GOLD	SILVER	FLEET
Access to Pre-Confernece Day on Oct 20: Site Visit, NGV Workshops & Welcome Reception Networking Event	✓		✓
Event summary report with delegate poll results and analysis	✓	✓	
Access to presentation slides post conference (please note, some slides may not be available at the request of the speaker and their company)	✓	✓	
Access to the Online Networking Suite pre and post conference	✓	✓	✓
Full access to conference, workshops & exhibition	✓	✓	✓
Launch Price - Expires June 6th	$1,095 ☐	$995 ☐	$95 ☐
SEB Price - Expires August 1st	$1,395 ☐	$1,295 ☐	$195 ☐
EB Price - Expires August 29th	$1,495 ☐	$1,395 ☐	$295 ☐
LC Price - Expires September 26th	$1,595 ☐	$1,495 ☐	$395 ☐
Full Price	$1,695 ☐	$1,595 ☐	$495 ☐

2. Enter Attendee details

DISCOUNT CODE:
$50
This is your unique discount code, use it online or via this form to get an extra $50 off

Mr/Mrs/Ms/Dr: First name: Last name:

Company: Position/Title:

Telephone: Fax: Email:

Address: Zipcode: Country:

3. Payment Options

☐ I enclose a check/draft for: (Payable to FC Business Intelligence Ltd)

☐ Please invoice my company: Purchase Order Number:

☐ Please charge my credit card: Amex ☐ Visa ☐ Mastercard ☐

Credit card number:

Expiry date: Security number:

Name on card:

Signature:

MORE WAYS TO REGISTER

CALL:	CALL (CANADA Toll Free) 1 800 814 3459 x 7585 or (global) +44 (0) 207 375 7585
FAX:	+44 (0) 207 375 7576
EMAIL:	tljones@fc-gi.com
ONLINE:	www.ngvevent.com/canada/register

TERMS & CONDITIONS Places are transferable without any charge. Cancellations before May 1, 2014 incur an administrative charge of 25%. If you cancel your registration after May 1, 2014 we will be obliged to charge the full fee. Please note – you must notify FC Gas Intelligence in writing of a cancellation, or we will be obliged to charge the full fee. The organizers reserve the right to make changes to the programme without notice. NB: FULL PAYMENT MUST BE RECEIVED BEFORE THE EVENT. Visit www.ngvevent.com/canada for more event information. Design by The Creative Tree: www.TheCreativeTree.com

Researched & Organized by FC Gas Intelligence

2nd Annual

Natural Gas Vehicles Canada 2014

CANADA'S LARGEST EVENT DEDICATED TO NGVS

SAVE $200 *Register before June 6th*

Oct 20-22, 2014 // Westin Prince Hotel, Toronto, ON, Canada

CANADA'S PREMIER NGV MEETING PLACE: WHERE FLEET MANAGERS AND INFRASTRUCTURE DEVELOPERS MEET TO UNLOCK THE POTENTIAL OF NGVS

- **FUELING INFRASTRUCTURE BUILD OUT:** Gain an inside track on where, when and how quickly firms are building out LNG/ CNG re-fuelling in Canada
- **REAL WORLD DATA & CASE STUDIES:** Getting to ROI, critical issues, risk points, lessons learned... Fleets with experience exclusively lift the lid on their NGV projects
- **THE FUTURE OF NATURAL GAS ENGINES:** Understand the power capabilities and robustness of nat gas engines and conversion systems as well as the next gen. technologies in development
- **BUILDING A ROBUST CASE FOR NGVS:** From regulations, vehicle choice and parts availability to monitoring and inspections, understand how to assess, prepare, implement, operate and maintain a fleet of NGVs
- **PARTNERSHIPS & BUSINESS MODELS:** Form strategic partnerships with the leading companies from across the NGV value chain in Canada to secure the finance, purchases and business partners you need to ensure project success

Expert Speakers Include:

apta, GE, Vedder, CGA, Labatt, Shell, Chelsea CNG, CH2NGE, NGV Alliance, Cold Star, UPS, Uniongas, Westport, Hamilton, Sotco, Enbridge, GazMétro, PepsiCo

+ many more to be announced

Site Visit

An entire day pre-conference including a site visit to a CNG re-fueling station hosted by Chelsea CNG, NGV workshops, a welcome reception networking party and an exclusive vehicle demonstration - all taking place Oct 20.

Conference

450+ senior level executives come together for exclusive keynote sessions, 2 focused tracks, and unrivalled networking over 3 days to engage in high level business discussions that will set the pace of the NGV market in Canada!

Exhibition

With 30 NGV exhibitors, you'll get up close and personal with the latest industry products & solutions all under one roof. The largest NGV expo in Canada - this is where deals are done and partnerships are forged.

Platinum Sponsors

Chelsea CNG, Enbridge

Gold Sponsors

GazMétro life in blue, GazMétro Transport Solutions

Silver Sponsors

Shell, GE, Ryder, CH2NGE energy services

Lanyards Sponsor

Uniongas

Co-Sponsors

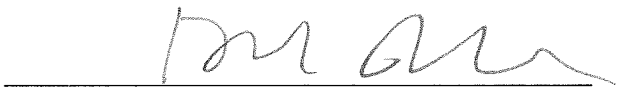
Cryo Star

Supported By

NGV Alliance, CGA, DIC • AIC, SST, Compressed Gas Association, apta, Ontario Trucking Association, Go With Natural Gas

www.ngvevent.com/canada

This is Exhibit "D" referred to
in the Affidavit of Joshua Samuel
sworn this 15th day of October 2014



A Commissioner, etc.

» Print

INSIGHT-Ride to lower costs for LNG-run trucks rockier than expected

Wed, Apr 9 2014

By Julie Gordon

VANCOUVER, April 9 (Reuters) - Just over a year ago, Canadian trucking firm Bison Transport took a bet on a potentially game changing technology, buying 15 big rigs powered by liquefied natural gas.

The privately-held company was attracted by the promise of a cheap and abundant fuel source and lower greenhouse gas emissions. If all went well, it would be the first step toward converting more of its 1,250-strong fleet to a type of fuel that costs about $1.50 less per equivalent gallon than diesel.

After 14 months on the road, though, the Winnipeg-based company has found that the reality - at least initially - is less rosy. The savings on fuel have been offset by other costs that are much higher than expected.

Bison is not alone. There are already signs that broader adoption is falling short of initial expectations, particularly in off-road sectors like locomotives and mining vehicles.

While the lack of fueling infrastructure remains the largest hurdle, other operational teething pains are now tempering some of the growth in LNG use that was expected to further reduce oil demand in North America, as well as carbon emissions, according to interviews with industry experts and officials from five transport companies.

Bison had anticipated that LNG, which generates fewer miles per unit than diesel, to be 10 percent less efficient; instead, the drop was closer to 18 percent. Maintenance costs were about double that of a diesel tractor, more than budgeted.

While Bison is not considering abandoning its investment, it now expects to take at least four years to break-even on the rigs - which cost roughly $75,000 more than standard engines - rather than the two-year pay-off it had hoped for.

"We just wanted to be clear that when you first look at LNG, it can look like there's a potential windfall for carriers, and the reality is not that," said Lionel Johnston, corporate marketing manager with Bison, a top Canadian carrier known for its large, modern trucks that haul two trailers.

The longer pay-off "doesn't mean it's a bad investment, but it was definitely not as good as we were hoping," he said.

To be sure, it takes time for both technicians and drivers to adjust to new equipment, impacting early costs, and technical glitches are not uncommon with new technologies.

Still, Royal Dutch Shell last month surprised the LNG industry when it scrapped a small-scale liquefaction unit it was building at its Jumping Pound complex near Calgary.

"This additional demand has not developed in line with market expectations," said Shell spokeswoman Destin Singleton. The company also paused work on two other plants, in Ontario and in Louisiana, but Singleton said those projects may resume due to better opportunities for LNG-powered marine vessels.

A BRIDGE TO RENEWABLE

Operators of commercial trucking fleets have been eyeing natural gas as a potential fuel since the shale boom sent prices plunging. Gas burns cleaner than diesel and is produced domestically, thus insulating supplies from global political events that can drive up petroleum prices.

Thus far it's been compressed natural gas (CNG), rather than its frozen cousin, LNG, that has captured more of the market.

With cheaper fuel and a more established infrastructure, CNG vehicles now make up a large portion of smaller truck fleets for companies like garbage collector Waste Management and United Parcel Service's (UPS) local delivery. They are ideal in urban or short-haul operations.

North America's CNG infrastructure is also more developed, with 681 public stations across the United States, according to the U.S. Department of Energy. By comparison, there are 52 public LNG stations, with another 37 planned, the data shows.

And CNG is cheaper than LNG at about $2 less per equivalent gallon than diesel, providing hefty savings in vehicles that use 40,000 gallons of fuel or more each year.

But LNG is ideal for large highway tractors that haul heavy loads. Its energy density is greater than CNG, which means its fuel tank

is smaller and lighter, leaving more room for cargo.

Support is still building despite some setbacks. For example, UPS has started deploying its new fleet of 1,100 heavy-haul LNG trucks, which have a 600 mile range.

However long-haul applications raise other problems, say industry insiders. Drivers can only be on the road for so many hours, and the trucks are restricted to routes where there are existing fueling stations.

Heavy-duty fleet operators are "recognizing it's not going to be a universal fit and in some cases there might be parts of the operation where natural gas just isn't going to work," said Erik Neandross, chief executive of Gladstein, Neandross & Associates, a clean transportation consulting firm.

Indeed, the viability of natural gas as a diesel alternative depends on many factors, in particular whether a fleet burns enough fuel to justify the additional cost of buying LNG rigs.

LEARNING CURVE

Bison's rough first year experience was familiar to other early adopters in the trucking sector, they said. Early costs are often higher-than-expected, as truck service and maintenance shops need to be retrofitted for the natural gas technology and technicians need time to get comfortable with the new equipment.

In Bison's case it did not convert its shop for the trial, so maintenance was done externally, leading to higher labor charges. Many of the trucks also had fickle fuel sensors, gauges and software, which had to be addressed by suppliers.

Other companies Reuters spoke with also ran into technical issues. One, Quebec-based Robert Transport, was forced to install solar panels on truck roofs to power energy-intensive methane detectors. Raven Transport, a beverage hauler based in Florida, said its first rigs stalled on the road and had to be towed after the LNG tanks were filled at the wrong pressure.

Westport Innovations, a leading natural gas engine designer behind many models now on the road, says that it can take time to work out the bugs for first-generation technology.

"There have been challenges with reliability or just with performance not as expected," said Karen Hamberg, vice president of strategy at Westport. "So those things are being addressed and as we see new products being launched, there will be higher levels of reliability with those new products."

The Vancouver-based company is working on its second-generation heavy-haul offering, the HPDI 2.0, which it says will deliver breakthrough performance and fuel economy, making it competitive with current high performance diesel-fueled engines.

Back on the road, industry experts say once equipment and use practices are modified, maintenance costs should be close to in-line with diesel, no more than 1 to 2 cents more per mile - or up to $2,000 for a 100,000-mile per year vehicle.

"When you're saving in the order of magnitude of $25,000 on fuel and paying $1,500 more in maintenance, that's obviously a fair trade off," said Neandross.

UPS was the only company that Reuters spoke with that said its LNG maintenance costs were currently even with diesel, though trucking companies that have made the switch say that as they gain experience, reliability goes up and costs come down.

PREACHING THE GOSPEL

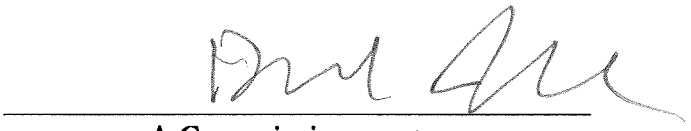
Fueling infrastructure remains a critical issue.

"It's like the chicken and egg, if you don't have fuel stations, then people won't buy trucks, and if people don't buy trucks, then you don't get infrastructure," said Yves Maurais, engineering manager for Robert Transport, which runs its 125 LNG trucks between Quebec City and Windsor, Ontario.

Despite the hurdles, many early-adopters remain strong supporters of natural gas for transport.

"Natural gas is good for the environment, and it's good for this country to reduce its dependence on foreign oil from our enemies," said Phil Crofts, director of marketing for Dillon Transport, an Illinois-based firm with 25 LNG and 150 CNG tractors. "So we are disciples and we are spreading the gospel." (Additional reporting by Edward McAllister in New York; editing by Jonathan Leff and Martin Howell)

This is Exhibit "E" referred to
in the Affidavit of Joshua Samuel
sworn this 15th day of October 2014



A Commissioner, etc.

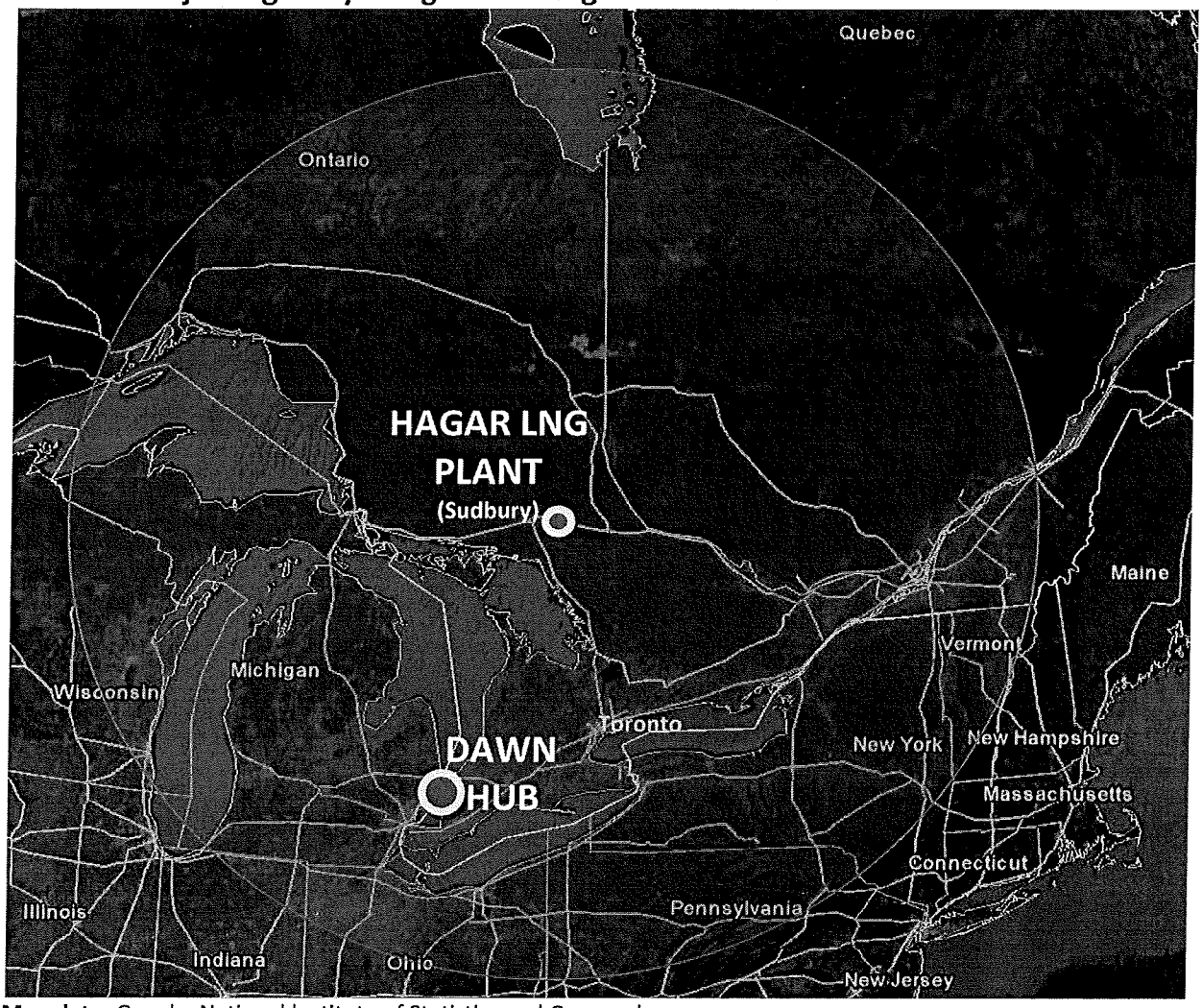
uniongas
A Spectra Energy Company

Non-Binding Call for Expressions of Interest for Liquefied Natural Gas (LNG) Services

February 18th, 2014

Union Gas Limited ("**Union Gas**") is conducting this non-binding call for expressions of interest in support of a proposal to offer liquefaction (LNG) services at the Hagar LNG Plant located near Sudbury, Ontario. Interested parties are asked to express interest in this liquefaction service dispensed by Union Gas FOB at the Hagar LNG Plant.

700 MK Major Highway Range from Hagar LNG Plant:



Map data: Google, National Institute of Statistics and Geography

Terms of Service:

- Services beginning as early as Q3 2015 to accommodate a variety of consumption patterns
- An initial contract term of up to 10 years
- Minimum annual commitment required
- Customers are expected to adhere to provincial & federal standards in effect, tankers used must be in good condition and drivers must be qualified
- For the purposes of billing, the LNG is considered to be sold, delivered and billed at the Hagar LNG Plant (FOB) in CAD/GJ

Price of Service:

Liquefaction Service

Liquefaction fee expected to be in the range of $5.54-$6.93 CAD/GJ ($0.20-0.25 CAD/DLE) subject to Ontario Energy Board approval*

+

Natural Gas Commodity

Delivered to the Hagar LNG Plant/TransCanada's Union Northern Delivery Area

- The 1 year average same day price of natural gas commodity in Ontario at the Dawn Hub as of February 10, 2014 was $4.58 CAD/GJ ($0.17 DLE)
- Transportation fees from the Dawn Hub are currently $0.44 CAD/GJ ($0.016 CAD/DLE)
- Transportation fees are subject to Ontario Energy Board Regulation

NOTE:
** Diesel Litre Equivalent (DLE) to GJ Conversion Factor Used = 27.7 as per **Go For Natural Gas***
http://www.gowithnaturalgas.ca/getting-started/understanding-energy-equivalency/

Additional Information:

Flexible liquefied natural gas services are being offered to customers in order to serve a variety of consumption patterns. In order to assess market interest in the service, Union Gas requests that interested parties provide a maximum daily quantity required as well as annual and monthly consumption estimates where possible.

Customers have the option of either supplying their own natural gas commodity to the Hagar LNG Plant, or of having Union Gas provide natural gas commodity to the Hagar LNG Plant on their behalf. Customers interested in liquefaction service and natural gas commodity supply should stipulate this on their bid form along with any conditions to this effect.

Once expressions of interest have been received Union Gas will determine the feasibility of the service and contact all interested parties directly. If Union Gas determines that sufficient interest has been received Union Gas will proceed with negotiation of contracts with interested parties. In no way does this Call for Expressions of Interest oblige Union Gas to execute any

contract with interested parties. Respondents may, in their expression, indicate any other terms and conditions they wish to add or modify.

Interested parties are asked to complete the attached bid form and return to Union Gas no later than 2 pm on March 7, 2014. Respondents may, in their submission, indicate any other terms and conditions they may wish to add or modify. If you have any questions, please contact either Murray Smith or Steve Kay.

uniongas
A Spectra Energy Company

Expressions of Interest for Liquefied Natural Gas Services:

Please complete, sign and return this Expression of Interest on or before 2:00 p.m. EDT on March 7, 2014, via email or fax to:

ATTN: Murray Smith via **Email:** msmith@uniongas.com **Fax:** (519) 436-4645

Dear Murray:

In response to the letter from Union Gas regarding Expressions of Interest, dated February 18, 2014,

(Please enter your company name here)_____ ("Customer")

Customer requests the opportunity to express interest in interruptible LNG services at the Hagar LNG Plant, as outlined below.

Start Date mm/dd/yyyy		**Term** Up to 10 Years	
Maximum Daily Quantity(GJ or DLE*)		**Minimum Annual Commitment**	
Monthly Consumption Estimates			
Commodity Preference Interest in sourcing from Union Gas?		**Commodity Delivery Point Preference** Dawn vs. Union NDA	
Conditions Of Interest Expressed *Attach additional conditions to your submission as required*			

**If using DLE, Union Gas will convert to GJ of natural gas using 27.7 conversion factor*

It is understood that Union Gas will review interest and acknowledge all requests received by 2:00 pm EDT on March 12, 2014.

Yours truly,

_____ **Name** (printed)

_____ **Phone**

_____ **Signature**

_____ **Fax**

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Background

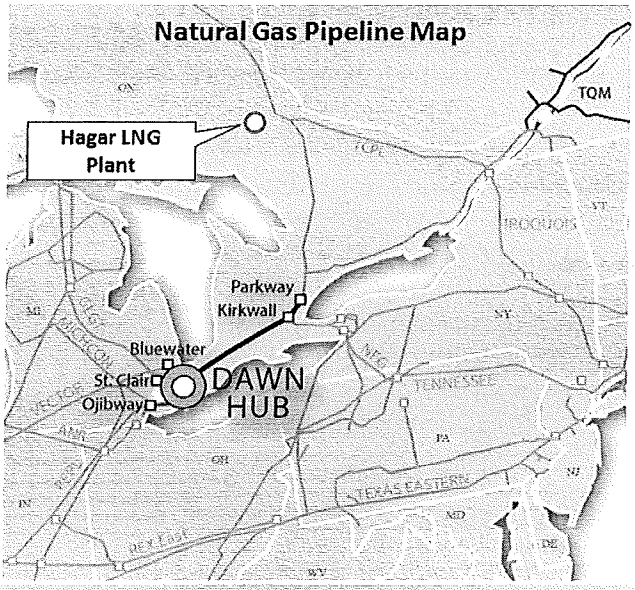
About Union Gas:

Union Gas Limited is a major Canadian natural gas storage, transmission and distribution company based in Ontario with 100 years of experience and service to customers. The distribution business serves about 1.4 million residential, commercial and industrial customers in more than 400 communities across northern, southwestern and eastern Ontario. Union Gas, named one of Canada's Top 100 Employers for 2014, is a Spectra Energy (NYSE: SE) company with assets of $5.8 billion and approximately 2,200 employees. For more information, visit uniongas.com.

The Dawn Hub

Where supply meets demand

- The largest integrated natural gas storage facility in Canada
- The 3rd most physically traded gas market hub in North America
- Connected to all major North American natural gas supply basins
- Supply reliability and price transparency
- Union Gas alone brings 135 PJ/year of gas onto the system



Dawn, one of the most liquid hubs in North America, has the capacity to export more than 6 PJ/d to eastern markets

(this equates to roughly 5% of peak N.A. demand and over 50% of average daily Canadian demand)

What is LNG:

- LNG is natural gas that is cooled to -162°C.
- LNG is up to 1/600th the volume of natural gas, making it easy to store and safe to transport.
- LNG is clear, colourless, non-toxic and non-corrosive. In its liquid state, LNG is non-flammable.
- Depending on its end use, LNG can be converted back to a gas state.
- LNG's high storage density makes it a viable alternative to diesel fuel for heavy duty transport, marine, mining and rail applications.

Cost Advantage:

When compared to alternative fuels like diesel and gasoline, LNG use can lower energy costs by 30-40 percent. As a result of abundant natural gas supply in North America, the price of natural gas is expected to remain low and stable over the long term relative to historic levels.

Environmental Advantages:

Union Gas is committed to minimizing the effects of our operating facilities on the environment. Any environmental impacts of new construction or ongoing operations will be taken seriously and protective measures will be developed to avoid or minimize effects. LNG can also help address environmental concerns like climate change and smog, offering green house gas emissions reductions of up to 28%.

LNG Safety:

Our highest priority is the safe operations of our facilities for the public and our workers.

The Hagar LNG Plant is designed to meet stringent safety codes and requirements of the Canadian Standards Association and the Technical Standards and Safety Authority. The facility is manned 24/7 and has multiple safeguard measures in place, including the ability to shut down the system at anytime.

Customers will be responsible for the transportation of the LNG from the Hagar LNG Plant to market.

Who Will Benefit:

Local Communities

- Experienced contractors will use local resources to construct the facilities, and where possible, will procure material from the local community.
- Local communities also benefit from taxes that Union Gas pays to the municipality annually for its existing Hagar LNG Plant.

Ontario

- Liquefied natural gas will play a key role in meeting Ontario's future transportation fuel needs and in helping the province meet greenhouse gas emissions targets.
- The benefits of LNG have prompted plans to build refueling stations in the United States and Canada along main trucking corridors. The Hagar Project will help support such initiatives.
- The Union Gas Hagar facility is currently the only existing Ontario based LNG plant and it presents an opportunity to offer a service without the need to construct a new facility.
- The use of LNG is limited to transportation fuels.

uniongas

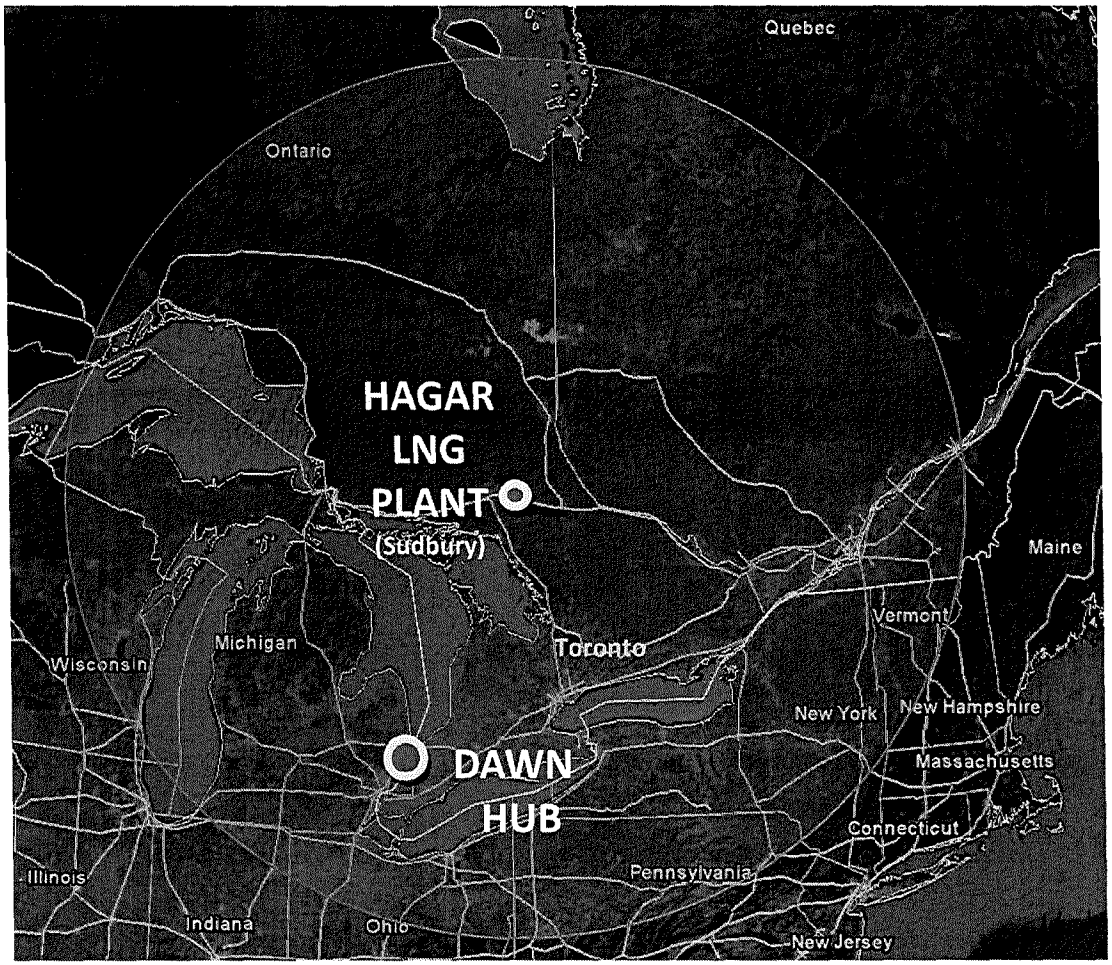
A Spectra Energy Company

Cold Weather & Growth

Calgary Customer Meeting

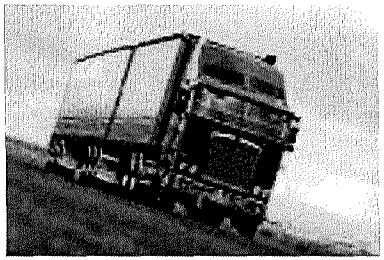
March 3, 2014

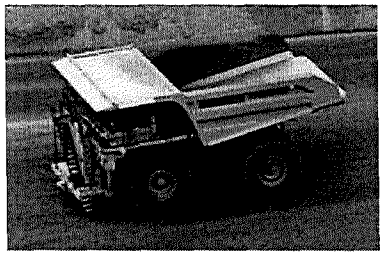
Hagar LNG Open Season

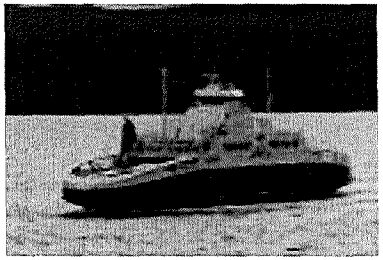


- Flexible LNG liquefaction services
- Natural gas can be provided by customer or Union Gas
- Promotes and facilitates the widespread usage of clean, affordable LNG in Ontario
- Non-binding Expression of Interest closes March 07

Potential LNG Ontario Markets







- Transportation Fuels – MDV & HDV consumed 117 PJ annually
  - Long haul and Return to Base Fleets
  - LNG & CNG
- Mining Applications – 5.3 PJ Demand
  - Mine shaft heating
  - Power generation 5 – 25 MW per site
  - Ore trucks each equal to 90 long haul trucks
- Fleet of 33 ferries – 1.7 PJ Demand
  - Driven by new emission regulations
- CN & CP locomotives - + 18 PJ diesel
  - Trials underway at CN and BNSF

Incipient LNG Ontario market

TAB 3

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 necessary to accommodate a new interruptible natural gas liquefaction service at its Hagar Liquefied Natural Gas Facility.

AFFIDAVIT OF J. STEPHEN GASKE ON BEHALF OF NORTHEAST MIDSTREAM LP (Sworn October 15, 2014)

I, Stephen Gaske, in the City of Washington, in the District of Columbia, in the United States of America, **MAKE OATH AND SAY**:

1. I am a Senior Vice President of Concentric Energy Advisors, Inc. ("Concentric"), an energy consulting firm. I am an economic consultant with more than thirty years of experience specializing in public utility economics, finance, and regulation. I hold a B.A. degree from the University of Virginia and an M.B.A. degree with a major in finance and investments from George Washington University. I also earned a Ph.D. degree from Indiana University where my major field of study was public utilities and my supporting fields were in finance and economics.

2. I have filed expert testimony or testified in more than 90 regulatory proceedings throughout North America. This includes testimony before the National Energy Board of Canada ("NEB"), the U.S. Federal Energy Regulatory Commission ("FERC"), the Comisión Reguladora de Energia de México ("CRE"), and 18 different state and provincial regulatory bodies, including the Ontario Energy Board. A copy of my résumé is attached hereto as Attachment "A".

Summary of Affidavit

3. I have been asked to evaluate the economic and market characteristics of the distribution and sale of liquefied natural gas ("LNG") as a transportation fuel in order to determine whether this is the type of uncompetitive, natural monopoly activity that requires active regulation by the Ontario Energy Board ("OEB" or "the Board"). This question arises in the context of a proposal by Union Gas Ltd. to provide LNG transportation fuel as part of its regulated monopoly gas distribution pipeline services and to roll the costs of its LNG transportation fuel services in with the costs of its regulated services. As I will discuss hereafter, the provision of LNG transportation fuel is a competitive activity that is fundamentally different from the franchised monopoly delivery of natural gas through distribution mains. As a result, the OEB should exercise forbearance by declining to actively regulate LNG transportation fuel and should not allow Union Gas to rely on captive regulated distribution customers to underwrite its entry into a competitive market. By blurring the lines between franchised monopoly activities and competitive activities, the Union Gas proposal would undermine competition and inhibit the efficient development of the nascent market for LNG transportation fuel.

Union Proposal

4. Union Gas is proposing to add facilities to its LNG facility in Hagar, Ontario that would allow it to dispense LNG to LNG wholesalers or customers primarily for vehicle transportation fuel. The Hagar liquefaction facility is currently being used as part of Union's regulated gas distribution operations to provide system integrity; and its latest proposal would use portions of the Hagar capacity to provide LNG vehicle fuel in the competitive market beginning September 1, 2015. In addition, Union proposes to invest approximately $9.9 million in new facilities, primarily for LNG fuel dispensing, and to incur additional O&M costs to operate and maintain its new LNG fuel

business. As part of its application, Union is proposing to set a new tariff rate L1 for its LNG vehicle fuel transportation service and to allocate certain distribution system and liquefaction facility costs to the service.

5. The essence of the Union Gas proposal is to have the facilities used to provide its proposed services approved as utility assets that will be rolled in with its regulated gas distribution assets, with the result that the risks of Union Gas's entry into this nascent competitive market will be underwritten by customers of Union Gas's natural monopoly gas distribution business.

OEB Policy and Precedents for Forbearance

6. In the past the board has established precedents for exercising regulatory forbearance. For example, in its NGEIR Decision the Board stated:

> The issue in this hearing was whether the Board should refrain from regulating the prices charged for storage services. Section 29 (1) of the Ontario Energy Board Act, 1998 states:
>
> > On an application or in a proceeding, **the Board shall make a determination to refrain, in whole or in part, from exercising any power or duty under this Act if** it finds as a question of fact that a licensee, person, product, class of products, service or class of services is, or will be, **subject to competition sufficient to protect the public interest.**[1]

The Board decided to forbear from regulating competitive storage services with the following observation:

> The Board concludes that the public interest is best met by refraining from regulating these services. **This will stimulate the development of these services, by utilities and other providers.**[2]

[1] OEB, Decisions with Reasons, EB-2005-0551, November 7, 2006, p. 3, emphasis added.
[2] Id., p. 2, emphasis added.

7. The NEB also has recognized the importance of allowing competitive markets to work For example, in OH-1-2009, the NEB stated:

> In general, the public interest is served by allowing competitive forces to work, except where there are costs that outweigh the benefits.[3]

Determination of Relevant Product and Geographic Market

8. In assessing whether a market is workably competitive it is first necessary to determine the relevant product and geographic markets. The ability of competitors to provide good substitutes for the company's products in a timely manner is the standard that is typically used in market-power determinations. The Competition Bureau of Canada ("Bureau") specifies the following standard for defining the relevant market:

> "Conceptually, a relevant market is defined as the smallest group of products, including at least one product of the merging parties, and the smallest geographic area, in which a sole profit-maximizing seller (a "hypothetical monopolist") would impose and sustain a small but significant and non-transitory increase in price ("SSNIP") above levels that would likely exist in the absence of the merger. In most cases, the Bureau considers a five percent price increase to be significant and a one-year period to be non-transitory. Market characteristics may support using a different price increase or time period."[4]

In other words, the Competition Bureau considers a market to be workably competitive if no company can raise prices more than five percent above a competitive market level for a period of a year or more.

9. Once the relevant product and geographic markets are determined it is then necessary to determine whether a company is able to exercise market power. A common approach to this analysis is to calculate the relative market shares of the competitors who are already selling the product in the relevant market. If there are numerous competitors in the relevant market and no

[3] NEB, Reasons for Decision, OH-1-2009, p. 32.

[4] *Merger Enforcement Guidelines*, Competition Bureau Canada, Revised October 6, 2011, para. 4.3, footnote omitted.

competitor has an unduly large market share, the market is unconcentrated and it is presumed that the market is workably competitive.

10. Even where the market is concentrated, the market is deemed to be workably competitive if barriers to entry are low such that new competitors can quickly enter or exit the market if prices rise above a competitive market level. As noted by the Competition Bureau:

> "A key component of the Bureau's analysis of competitive effects is whether timely entry by potential competitors would likely occur on a sufficient scale and with sufficient scope to constrain a material price increase in the relevant market. In the absence of impediments to entry, a merged firm's attempt to exercise market power, either unilaterally or through coordinated behaviour with its rivals, is likely to be thwarted by entry of firms that
>
> • are already in the relevant market and can profitably expand production or sales;
>
> • are not in the relevant market but operate in other product or geographic markets and can profitably switch production or sales into the relevant market; or
>
> • can profitably begin production or sales into the relevant market de novo."[5]

11. When considering the likelihood that potential new competitors could enter the market the Merger Enforcement Guidelines indicate that:

> The Bureau seeks to determine the extent that entry is likely, given the commitments that potential entrants must make, the time required to become effective competitors, the risks involved and the likely rewards. The Bureau considers any delay or loss that potential entrants expect to encounter before becoming effective competitors, and the resulting **sunk costs and risk associated with such entry** that reduce the likelihood that entry will occur or be successful. **The Bureau also considers the expectations that potential entrants may have of incumbent responses to entry**, as well as the likelihood that customers will support an entrant's investments or guarantee it a considers needed volume of sales. When assessing the likelihood of entry, the Bureau evaluates profitability at post-entry prices ..."[6]

Thus, barriers to entry hinge in part on the amount of "sunk costs and risk associated with such entry", as well as "the expectations that potential entrants may have of incumbent responses to

[5] *Id.* at para. 7.1, footnote omitted.
[6] *Id.* at para. 7.6.

entry." As I will discuss later, risks and expectations of incumbent responses to entry are key considerations to my recommendation in this proceeding.

LNG Transportation Fuel Market Characteristics

12. Demand for LNG transportation fuel is a relatively new phenomenon associated with the increasing supplies of natural gas and the price advantage that natural gas currently has over diesel fuel. Because LNG can evaporate as it warms, it has a short shelf life compared with gasoline, diesel or compressed natural gas. Consequently, LNG fuel has its most useful applications in transportation that largely consists of continuous use of equipment shortly after the fueling occurs.

13. One of the best uses of LNG transportation fuel appears to be as an alternative to diesel fuel in the trucking industry.[7] In response to this opportunity, in the past few years heavy duty truck manufacturers such as Freightliner, Volvo, Peterbilt, Kenworth and Mack all have begun producing trucks that utilize the Cummins-Westport LNG/CNG engines.

14. The infrastructure to support LNG-fueled vehicles primarily consists of LNG liquefaction plants and dispensing facilities, and may include separate fueling stations as well as special tanker trucks for distributing the product. The liquefaction plants contain refrigeration systems that liquefy the natural gas by cooling it to -160 degrees Celsius. The LNG is then stored in special cryogenic tanks to keep it in a liquid state. Liquefaction plant capacity generally can range in size from 50,000 to 1 million litres per day, which is the energy equivalent of approximately 32,000 to 640,000 litres of diesel fuel per day. LNG-fueled vehicles may re-fuel on the liquefaction plant site, or the product can be distributed by tanker truck to LNG fueling stations in the same manner that gasoline or diesel fuel are distributed to service stations. As seen on Exhibit 1 attached hereto, Union's Call for

[7] Union Gas Application, EB-2014-0012, Exh. A, Tab 1, p. 6.

Expressions of Interest in its liquefaction service suggests that it can supply fueling stations located within a range of 700 km from its Hagar plant.

15. Investments in LNG fuel infrastructure are risky endeavors that depend on a highly uncertain market at this time. Exhibit 2 indicates that heavy duty trucks capable of using LNG can cost $50,000, or even $75,000, more than diesel-powered trucks. These trucks can be replaced as often as every four years, but the break-even point for the extra cost of an LNG-fueled truck can be as much as two to four years, depending on the spread between natural gas and diesel prices.[8] As a result, competition between LNG and diesel fuel can be intense and any significant change in the price of LNG relative to diesel fuel could render LNG fuel infrastructure investments uneconomic.

16. In addition, there is the possibility that some LNG fuel providers will adopt business models that ultimately become uncompetitive. As the market develops, there are numerous alternative business models that are being adopted for providing LNG fuel as an alternative to diesel fuel. For example, there are 103 LNG fueling stations operating in the United States, of which 41 are privately run for fleet operators, and 62 are available for the general public.[9] Some fueling stations are supplied by tanker truck deliveries from large liquefaction plants while, as shown in Exhibit 3, other fueling stations are associated with micro-liquefaction plants that do not require transportation by tanker truck.[10] In addition, as shown on Exhibit 4, companies such as Dresser-Rand Industries sell

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[8] J. Gordon, "Ride to lower costs for LNG-run trucks rockier than expected," *Reuters*, April 9. 2014, http://www.reuters.com/assets/print?aid=USL1N0MT10M20140409; B. Tita, "Slow Going for Natural-Gas Powered Trucks," *The Wall Street Journal*, August 25, 2014, http://online.wsj.com/articles/natural-gas-trucks-struggle-to-gain-traction-1408995745; J.B. Hunt Transport Services, Inc. 2013 Annual Report, p. 74; Con-way Inc. 2013 Annual Report, p. 38.

[9] U.S. Department of Energy, Alternative Fuels Data Center (AFDC).

[10] For example, Linde group is proposing to construct a network of micro-plants and fueling stations in eastern Australia to minimize the costs of transporting LNG to fueling stations. The microplants will have a daily capacity of 50 tonnes of LNG, which corresponds to around 70,000 litres of diesel. http://www.the-linde-group.com/en/clean_technology/clean_technology_portfolio/merchant_liquefied_natural_gas_lng/merchant_lng/index.html

modularized, portable natural gas liquefaction plants that can be moved to new locations as the market changes.[11]

17. It is not clear at this time which alternative LNG fuel liquefaction and distribution business model – private fleet liquefaction, large plant liquefaction with delivery by tanker trucks, micro-liquefaction plant, portable liquefaction plant, or some other alternative – will prove to be the best business model for serving the various circumstances of customers as the LNG alternative fuel market develops in the future. An unregulated competitive market will be the best way to sort out which business models best serve the needs of consumers.

Competition in the Fuel Market

18. In assessing Union's proposal to use Hagar to provide transportation fuel, the relevant product is fuel for heavy duty transportation engines (i.e., diesel and LNG), and the actual and potential competitors in this market include refineries that supply diesel fuel, large liquefaction facilities that can provide LNG by tanker truck to fueling stations, and small facilities that provide on-site liquefaction at LNG fueling stations.

19. Based on the 700 km radius shown on the market area map that Union Gas provided as part of its Call for Expressions of Interest for Hagar liquefaction services (Exhibit 1, attached hereto), the relevant geographic market is, at a minimum, Ontario, Quebec, Michigan, Wisconsin, Indiana, Pennsylvania, Ohio, New York, and Vermont. In addition, the fact that LNG fuel providers located in Quebec and Indiana[12] already are serving the Ontario market, as shown on Exhibit 5, indicates that those locations, and other locations that are a similar distance from Ontario, are within the relevant geographic market.

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[11] http://lng.dresser-rand.com/

[12] According to Union Response to Staff.3: "Both will source LNG from the most economical supply available looking at the total delivered cost including the natural gas price, liquefaction charges, and transportation costs."

20. It should be noted that actual or competing fuel providers do not need to be located within the 700 km radius of Union's Hagar facility market to effectively compete in this market. Instead, fuel providers that can economically supply significant areas of Union's proposed market are relevant competitors. For example, a distant refinery that can ship diesel fuel by pipeline, rail or truck into Union's proposed market area would be a participant in the market. Similarly, a liquefaction facility located outside of the Hagar geographic market that is reasonably close to portions of that market could have an effective market reach by tanker truck that overlaps with Hagar's 700 km radius. For example, the highway travel distance from the UGI LNG facility in Temple, Pennsylvania to Kingston, Ontario, is nearly identical to the travel distance from Hagar to Kingston (570 km v. 550 km), even though the UGI LNG liquefaction facility is outside of Hagar's 700 km radius. Similarly, the Citizen's Gas liquefaction facilities in Indianapolis are outside of the 700 km radius, but they also are providing LNG to the Ontario market.

21. The market for fuel for heavy duty transportation vehicles is highly competitive within the geographic market of Union's Hagar liquefaction facility. In order for LNG to increase its share of the transportation fuel market, fleets and other truck operators must be convinced to switch from diesel fuel to LNG. The market for diesel fuel is a well-established competitive market. For example, as shown on Exhibit 6 of this affidavit, Imperial Oil, Shell, Suncor and Ultramar all operate refineries in Ontario and Quebec and there are 25 different companies that operate refineries producing diesel fuel in the U.S. Northeast and Midwest (PAD 1 and 2).

22. Even after a heavy duty truck operator switches from diesel to LNG the LNG proposition must continue to be competitive or the operator will switch back to diesel or switch LNG providers. Given that heavy-duty fleet operators replace their equipment as often as every four years, an uncompetitive LNG fuel provider could lose as much as 25 percent of its market to diesel fuel

within a year. Alternatively, within less than a year an uncompetitive LNG fuel provider could lose even larger portions of its market to (i) other existing LNG fuel providers, (ii) non-stationary liquefaction facilities, and/or (iii) be forced to bid for long-term contracts against developers who could propose to construct new liquefaction facilities in response to uncompetitively high prices. In these circumstances, the market for heavy duty transportation fuel meets the Competition Bureau's standard that a competitor would not be able to profitably sustain a price that is five percent above the competitive market level for a year. In other words, competition in this market is sufficient to promote the public interest.

23. If one were to limit the market power analysis solely to LNG transportation fuel and exclude diesel fuel from the analysis, the conclusion that competition is sufficient to promote the public interest would still apply. Normally, one would look at the relative market shares of competitors and the degree of market concentration. However, the narrowly-defined LNG fuel market is so new that existing market shares of LNG providers are not particularly relevant. Moreover, this proceeding involves a proposal for Union to enter a new market for which it does not already have market share. Consequently, I believe the focus of the LNG fuel competition analysis should be on the extent to which there are barriers to competitive entry as this market develops, and whether Union's proposal will encourage or inhibit competition in the developing market.

24. The LNG transportation fuel market has characteristics that are conducive to a competitive market because the provision of LNG transportation fuel is an activity for which there are no unusually high barriers to competitive entry. Liquefaction facilities are not overly difficult to construct and both large and small liquefaction facilities used for various purposes already exist throughout North America. Moreover, the liquefaction facilities required to provide this service can

be sited at numerous locations and, unlike gas distribution systems, do not require any particular right of way or disturbance of city streets.

25. A competitive market for LNG fuel already exists in Ontario. For example, Union Gas noted that:

> d) There are two other "stations" in Ontario. One each in Cornwall and Woodstock. These have been set up using non-stationary, refueling units until such time as the market demand will support a permanent facility.[13]

The existence of non-stationary LNG liquefaction facilities within Ontario indicates that it can be very easy both to enter, and to exit, the market for this service. Ease of entry and exit is a good indicator of a potentially competitive market with low barriers to entry. If a company were to attempt to exercise market power by raising prices above a competitive market level, other potential competitors could readily move non-stationary liquefaction and refueling units into the market and undercut the prices of anyone attempting to exercise monopoly power.

26. In addition, according to Union Gas:

> There are currently two LNG wholesalers operating in Ontario, Gaz Metro Transport Solutions (GMTS) and ENN Canada.[14]

And,

> LNG is available for purchase from either Gaz Metro Transport Solutions (in Montreal) or from the Citizen's Gas affiliate in Indianapolis.[15]

If wholesalers with liquefaction facilities located in Montreal and Indianapolis can provide LNG transportation fuel in Ontario, it would seem that there is no reason why anyone within Ontario, or even outside of Ontario, cannot compete in this market.

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[13] Union Gas IR Response to CME.6(d). Attached as Exhibit 7.
[14] Union Gas IR Response to Staff.3(b). See Exhibit 5.
[15] Union Gas IR Response to BOMA.28. Attached as Exhibit 8.

27. Other companies also are attempting to market LNG transportation fuel and construct large-scale liquefaction facilities within Ontario. A new LNG liquefaction facility is being proposed by Northeast Midstream in Thorold Ontario and, as shown on Exhibit 9, in 2013 Shell announced that it was trying to develop a liquefaction plant in Sarnia, Ontario. Although the Shell project is suspended indefinitely, it could be revived at any time. As the market grows, there undoubtedly will be additional entrants as long as the Board allows the market to develop naturally as a competitive market.

28. Truck fleet owners also have the option to build and own their own liquefaction facilities. For example, as shown on Exhibit 10, Plum Energy specializes in building small-scale liquefaction and dispensing facilities to serve private fleets.[16] Thus, ownership of private liquefaction facilities is another competitive option available to the market.

Union's Representations

29. Union maintains that "(t)he lack of LNG supply in Ontario is currently a barrier to market adoption of LNG as a transportation fuel" and that "(t)he introduction of LNG from Hagar could provide the necessary stimulus to the market to support additional LNG facilities in Ontario."[17] However, these arguments do not support Union's proposal. The issue is not whether Union can use its Hagar facility to compete in the LNG fuel market – the issue is whether the risks of its competitive LNG fuel business should be underwritten by captive customers of its gas distribution business. Presumably Union Gas can use its Hagar facility to enter the competitive market for LNG transportation fuel, regardless of whether it is allowed to shift its investment risk to ratepayers in its regulated gas distribution business. Thus, whatever stimulus Hagar's entry into the market might provide to aid the development of Union's competitors – a dubious argument in itself – the

[16] See http://www.plumenergy.com/ and http://www.gfs-corp.com/news.php/art/19/yr/2014.
[17] See Exhibit 8.

"stimulus" argument is irrelevant to the issue of whether the Board should forbear from regulation in this instance.

30. Union's solicitation of expressions of interest indicates that it is marketing its Hagar capacity for delivery to markets in Quebec, Michigan, Wisconsin, Indiana, Pennsylvania, Ohio, New York and Vermont, as well as Ontario. Consequently, its LNG fuel business is intended to serve an end-use market that extends far beyond the bounds of its regulated gas distribution service territory franchise. Given the large ex-franchise scope of the proposed market there is no need for the Board to protect LNG fuel consumers in these other jurisdictions by exercising traditional utility-type regulation.

31. Indeed, Union's updated evidence indicates that OEB regulation is an impediment to its own competition in the LNG fuel market. According to Union, one reason that it has been unable to attract customers for its project is that the customers will not commit to long-term contracts until they know what rate the Board will set for the service. [18] However, Union's marketing dilemma would not be solved if the Board decides to regulate this activity and sets initial rates because those rates will only apply for two and a half years before the Board sets new rates. Thus, Union's prospective customers would still face future rate uncertainty that would inhibit their ability to commit to long-term contracts required to support Union's proposed investment in new facilities.

32. On the other hand, if the Board were to forbear in regulating this activity Union could immediately provide potential customers with contractually guaranteed rates and proceed to develop the business at its own risk.

[18] Union Gas Limited, Addendum to Prefiled Evidence, p. 4.

33. Union's participation is not necessary to stimulate the LNG transportation fuel industry. As with any new product that requires support services to grow, there is a need for the support services (e.g., liquefaction and fueling facilities) to grow in tandem with the product (e.g., LNG-fueled vehicles). However, there is no reason to presume that the supply of LNG transportation fuel within Ontario currently is out of balance with the demand. Because it is easy to enter the LNG fuel market, supply can readily expand to accommodate growth in demand. This process is likely to be most efficient if the Board does not adopt a policy that favors those competitors who also own regulated gas distribution operations.

34. As noted earlier, there are LNG fuelling stations in Cornwall and Woodstock. In addition, LNG fuel suppliers in Montreal, Indianapolis (and other provinces and states) can supply the Ontario market. And both Union and Northeast Midstream are proposing to enter the market by constructing liquefaction and dispensing facilities. In other words, competition already is providing the necessary stimulus to the market and there is no special need for Union's captive gas distribution ratepayers to underwrite Union's entry into the market.

35. In the NGEIR decision the Board concluded that refraining from regulating competitive services is the best way to stimulate the development of such services by utilities and other providers.[19] That same reasoning applies to the competitive provision of LNG transportation fuel. Thus, any suggestion that regulation of the proposed Hagar LNG fuel operations is necessary to stimulate market development would be the opposite of the Board's reasoning in its NGEIR decision.

36. According to Union, "(t)he volumes available from Hagar will be small relative to the Ontario market" and "... not expected to affect the overall operation of the LNG fuel market in

[19] Id., p. 2.

Ontario."[20] However, this argument that sales from the Hagar facility, underwritten by distribution ratepayers, will not affect the market is inconsistent with Union's other argument that Union's proposal will stimulate the market. At this time Ontario is a very small market for LNG transportation fuel and there is nothing to suggest that Union's Hagar operations will remain small relative to the size of the existing market.

37. Regardless of the size of Union relative to the market at this time, the most important consideration for the Board is how Union's proposal is likely to affect future development of the market. As mentioned earlier, in determining whether a merger is likely to lessen competition, the Competition Bureau considers the expectations that potential entrants may have of incumbent responses to entry. If gas distribution ratepayers are required to underwrite its LNG fuel business, Union will have the unique ability to invest in the LNG fuel market without suffering any risks of losses of its own. In contrast, potential competitors would have risks and a cost of capital that is far higher than Union. This will make it more difficult to attract venture capital for new facilities that would need to compete with Union's ratepayer-underwritten service. Similarly, existing competitors could be disadvantaged and either leave the market or limit future expansions of service. Thus, rather than stimulating development of the market, Union's proposal for regulated entry into the market is likely to inhibit the market.

38. In its response to Board Staff.6 (attached as Exhibit 11) Union suggests that a new stand-alone plant would not be regulated if it is used exclusively to provide transportation fuel. However, there is nothing to prevent Union from expanding the Hagar facility to jointly provide both LNG transportation fuel and distribution system integrity. Moreover, the prospect that Union might decide to build unregulated stand-alone facilities after it is well-established in the market with

[20] See Exhibit 7.

operations underwritten by gas distribution ratepayers does not change the fact that Union's proposal will give it a risk-free "first-mover" advantage that will inhibit investments by other competitors in the nascent market.

39. If the LNG fuel market grows, it is unlikely that Union will remain small. Instead, it can reasonably be anticipated that Union initially will expand its Hagar LNG fuel capacity in an attempt to capture as much market share as possible. In doing so, Union would be likely to move from a small interruptible service to a larger firm service. Thus, if the Board approves regulated treatment in this proceeding, and Union's competitive LNG fuel venture succeeds, Union can be expected to add additional LNG fuel facilities to its regulated gas distribution rate base in the future.

40. A good example of this process is the way in which Union grew its participation in the increasingly competitive natural gas storage market. As the Board noted in its NGEIR decision:

> ... the sheer magnitude of the current surplus makes it unlikely that Union's expansion of its storage facilities in the recent past has been driven primarily, or perhaps even to any significant extent, by the anticipated needs of in-franchise customers. For example, since 1999 Union has added almost 18 Bcf of capacity through greenfield developments and enhancements to existing pools, capacity that was not necessary to cover in-franchise needs. This additional capacity has been directed to, and taken up by, the "ex-franchise" market, not distribution customers of Union.[21]

Thus, although Union describes the LNG fuel facilities and business operations proposed in this application as being small, a Board decision to provide rolled-in regulatory rate treatment in this proceeding would establish a precedent for gas distribution ratepayers to continue underwriting future expansions of Union's Hagar LNG fuel facilities.

[21] Decisions with Reasons, EB-2005-0551, November 7, 2006, p. 80.

Public Interest Benefits of Forbearance

41. There can be significant risks associated with trying to develop new markets. For example, Union gives the example of its unsuccessful attempt to develop a CNG market, but claims that future development of the LNG transportation fuel market will be different.[22] Union may prove to be correct, but expectations for successful development of the LNG transportation fuel market are similar to the expectations for CNG market success that existed in the 1990's.

42. Even when a new market develops successfully, many early entrants may be highly successful but subsequently struggle to maintain market share as a market matures and some competitors provide more innovative or efficient products. There are a number of alternative potential business models for providing LNG transportation fuel. If the fledgling market for LNG transportation fuel is allowed to remain competitive, there is no reason to presume that Union will be the most efficient or innovative competitor. However, if it is allowed to leverage its market power in the franchised gas distribution market to underwrite its risks in the competitive LNG transportation fuel market, Union will have the ability to undercut competitors and a high probability of outlasting its rivals in the LNG fuel market. This ability to leverage its gas distribution market power will discourage new entrants to the LNG fuel market and will inhibit the future development of a competitive, innovative and efficient market.

43. As discussed earlier, the market for heavy duty vehicle fuel is highly competitive. LNG fuel faces strong competition from diesel fuel. In addition, barriers to entry are low in the LNG fuel business and competitors with non-stationary facilities, or supplies in other jurisdictions, could quickly enter the market to take advantage of high prices if Union were to overprice its services. In these circumstances, the potential harm to the market will not necessarily be uncompetitively high

[22] Updated Exh. A, Tab 1, pages 4-6.

prices. Instead, the market is likely to be harmed by discouraging sunk cost investments in competing networks of permanent LNG liquefaction, storage and dispensing facilities within the Hagar market area, including Ontario, and by inhibiting the introduction of competitive innovations and efficiencies in the developing market.

44. As the Board noted in its NGEIR decision to forbear from regulation in the ex-franchise storage market:

> The Board concludes that long-term consumer protection in terms of price, reliability and quality of service is best achieved through thriving competition for the competitive elements of the storage market and effective regulation of the non-competitive elements of the market. **The Board is of the view that refraining from rate regulation and contract approval in the ex-franchise market has the potential to foster more competition in the storage market, to the benefit of all customers**, provided there are clear rules and nondiscriminatory access by all market participants. In a competitive market, customers have choices, resources are distributed efficiently, and there are incentives to innovate and respond to customer needs.[23]

Similarly, long-term consumer and public interest benefits in terms of price, reliability and quality of service will be best achieved in the developing LNG transportation fuel market if the Board refrains from regulation and allows competition to thrive. This can be accomplished best if the Board separates Union's competitive LNG fuel activities from its franchised gas distribution operations.

Need to Separate Utility Operations from Non-Utility Operations

45. Previously the Board has recognized the need to separate competitive operations from regulated operations. In its NGEIR decision, the Board reached the following conclusions:

> In the Board's view, Union's existing storage assets are, in substance, a combination of "utility assets" required to serve Union's in-franchise distribution customers and "non-utility assets" that are not required for regulated utility operations and that are sold in the competitive storage market.

* * * *

[23] Decisions with Reasons, EB-2005-0551, November 7, 2006, p. 48, emphasis added.

> The Board concludes that its determination that the storage market is competitive requires it to clearly delineate the portion of Union's storage business that will be exempt from rate regulation.[24]

After deciding to exercise regulatory forbearance in respect to Union's sales of storage services in competitive markets, the Board also stated:

> The Board finds, however, that Union will not be required to share the profits on long-term storage transactions that use storage space not needed to serve in-franchise needs **because that capacity now constitutes a "non-utility" asset for which the shareholders appropriately bear the risk.**[25]

Opinion and Conclusions

46. My analysis results in the following conclusions:

a) The relevant product is fuel for heavy duty transportation engines (i.e., diesel and LNG).

b) The relevant geographic market is a broad area that includes, at a minimum, Ontario, Quebec, Michigan, Wisconsin, Indiana, Pennsylvania, Ohio, New York, and Vermont.

c) This market is workably competitive. For example, competition from the highly-competitive diesel fuel market, as well as existing and potential competition from alternative LNG fuel suppliers to the relevant geographic market, ensures that Union will be subject to competition sufficient to protect the public interest as long as the risks of its LNG fuel operations are not underwritten by its regulated gas distribution ratepayers. Thus, the circumstances of Union's proposed LNG fuel facilities and services meet the test, and suggest an imperative, for the Board to exercise forbearance in regulating these activities.

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[24] *Id.*, p. 82.
[25] *Id.*, p. 4, emphasis added.

d) Unregulated competition in the nascent market for LNG transportation fuel is the best way to achieve the public benefits of innovative, efficient development of the market; especially in light of the numerous potential alternative business models that might be adopted in a competitive LNG fuel market.

e) The Board should forbear from regulating Union's LNG fuel business and allocate costs to this business so as to ensure that Union's gas distribution ratepayers do not subsidize or bear the risks of Union's entry into the competitive LNG fuel market.

47. I make this affidavit in support of Northeast's motion made pursuant to section 29(1) of the *Ontario Energy Board Act* and for no other purpose.

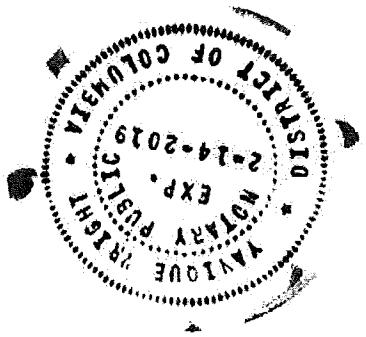
J. Stephen Gaske

SWORN before me at the City of Washington in the District of Columbia, United States, on October 15, 2014.

Notary Public

My Commission Expires:

YANIQUE WRIGHT
NOTARY PUBLIC DISTRICT OF COLUMBIA
My Commission Expires February 14, 2019



J. Stephen Gaske, Ph.D.

Senior Vice President

Steve Gaske has more than 30 years of experience as an economic consultant, researcher, and professor in the fields of public utility economics, finance, and regulation. Dr. Gaske has provided consulting services in more than 300 regulatory, antitrust, tax, and civil proceedings. In addition, he has presented expert testimony in more than 90 state, provincial, and federal regulatory commission hearings in Canada, the U.S. and Mexico.

INDUSTRY EXPERTISE

His work has involved:

- Most of the major natural gas pipelines in North America;
- Many electric utilities;
- Many natural gas distribution companies;
- Several major oil pipelines;
- Railroads;
- Postal Service;
- Telephone and satellite telecommunications companies; and
- Sewer and water companies.

REPRESENTATIVE PROJECT EXPERIENCE

Some of the projects on which Dr. Gaske has worked include:

- Advisor to numerous U.S. and Canadian pipelines on economics, pricing strategies and regulatory matters;
- Development of computerized cost of service models for calculating both traditional and levelized rates for gas and oil pipelines, and rates for electric utilities;
- On behalf of a new, greenfield pipeline designed to carry Canadian gas to U.S. New England markets he served as the rate and financial advisor during the development, permitting and financing stages.
- A variety of White Papers on technical aspects of calculating the allowed rate of return for regulated companies, including white papers submitted in proceedings involving FERC generic rate of return for electric utilities, FERC rate of return for gas and oil pipelines, Canadian rate of return for pipelines and utilities;
- An analysis of the applicability of various finance theories to telephone ratemaking by the U. S. Federal Communications Commission;
- A study of the economic structure, risks and cost of capital of the satellite telecommunications industry;
- Author of several issues of the H. Zinder & Associates Summary of Natural Gas Pipeline Rates;
- Several studies of regional natural gas market competition, market power, pricing and capacity needs;

- An evaluation of Federal Energy Regulatory Commission policies designed to promote liquidity in the natural gas commodity markets;
- Numerous studies of electric rate, regulatory and market issues such as canceled plant treatment, time-differentiated rates, non-utility generation, competitive bidding, and open-access transmission;
- Author of two updates of the Edison Electric Institute Glossary of Electric Utility Terms; and,
- Several reports and projects on incentive regulation and the application of price cap regulation to both electric and natural gas companies.

LITIGATION SUPPORT AND EXPERT TESTIMONY

Dr. Gaske has testified or filed testimony or affidavits in more than 90 regulatory proceedings on the following topics:

Commission	Topic
Alaska Regulatory Commission	Oil Pipeline Rate of Return/Rate Base
Alberta Energy and Utilities Board	Gas Pipeline Cost Allocation/Rate Design
Alberta Utilities Commission	Gas Pipeline Contracts and Market Power; Generic Utility Cost of Capital
Colorado Board of Assessment Appeals	Property Tax Discount Rate
U.S. Economic Regulatory Administration	Gas Distribution Rate Design
U. S. Federal Energy Regulatory Commission	Electric Transmission Rate of Return; Gas Pipeline Cost Allocation and Rate Design; Gas Pipeline Rate of Return and Capital Structure; Competition; Revenue Requirements; Oil Pipeline Rate of Return and Pricing
Indiana Utilities Regulatory Commission	Electric Cost Allocation/Rate Design
Iowa Utilities Board	Electric Avoided Costs/Externalities
Maine Public Utilities Commission	Electric Rate Design/Demand Management
Comision Reguladora de Energia de México	Gas Pipeline Rate of Return
Montana Public Service Commission	Gas Distribution/Electric Rate of Return; Electric Cost Allocation and Rate Design
Minnesota Public Utilities Commission	Gas Distribution Rate of Return

National Energy Board of Canada	Gas Pipeline Cost Allocation and Rate Design; Oil Pipeline Service Structure and Rates
New Mexico Regulatory Commission	Electric Rate of Return
New York Public Service Commission	Gas Pipeline Capital Structure
New Brunswick Energy and Utilities Board	Gas Distribution Ratemaking
North Dakota Public Service Commission	Electric/Gas Distribution Rate of Return; Natural Gas Market Pricing; Electric Cost Allocation and Rate Design
Nova Scotia Utility and Review Board	Bridge Cost Allocation
Ontario Energy Board	Access to and Pricing of Gas Pipeline Expansions; Generic Rate of Return
U.S. Postal Rate Commission	Postal Pricing/Rate Design
Régie de l'énergie du Québec	Regulatory Principles/Rate of Return
South Dakota Public Utilities Commission	Gas Distribution Rate of Return
Texas Public Utilities Commission	Electric Cost Allocation and Rate Design
Texas Railroad Commission	Gas Pipeline Cost Allocation/Rate Design
Wisconsin Public Service Commission	Electric Generation Economics
Wyoming Public Service Commission	Electric/Gas Distribution Rate of Return
Wyoming Board of Equalization	Property Tax Discount Rate

TEACHING/SPEAKING ENGAGEMENTS

Dr. Gaske has spoken on utility finance and economic issues before numerous professional groups. From 1983-1986, he served as Coordinator of the Edison Electric Institute Electric Rate Fundamentals Course. He has lectured on marginal cost estimation for electric utilities at the EEI rate course, and on both low-income rates and natural gas pipeline cost allocation and rate design before the American Gas Association Gas Rate Fundamentals Course. In addition, Dr. Gaske has taught college courses in Public Utility Economics, Transportation, Physical Distribution, Financial Management, Investments, Corporate Finance, and Corporate Financial Theory.

PROFESSIONAL HISTORY

CONSULTING

Concentric Energy Advisors, Inc. (2008 – present)
Senior Vice President

H. Zinder & Associates (1988 – 2008)
President/Senior Vice-President/Consultant

Independent Consulting on Public Utility Issues (1982 - 1988)

Olson & Company, Inc. (1980 – 1981)
Public Utility Consultant

H. Zinder & Associates (1977 – 1980)
Research Assistant and Supervisor of Regulatory Research

ACADEMIC/TEACHING

Trinity University (1986 – 1988)
Assistant Professor of Finance

Indiana University School of Business (1982 - 1986)
Associate Instructor of Public Utilities and Transportation

Northern Virginia Community College (1978)
Lecturer in Accounting

EDUCATION

Ph.D., Indiana University School of Business, 1987
M.B.A., George Washington University, 1977
B.A., University of Virginia, 1975

PROFESSIONAL ASSOCIATIONS

American Economic Association
American Finance Association
American Gas Association Rate Committee (1989-2001)
Energy Bar Association
Financial Management Association

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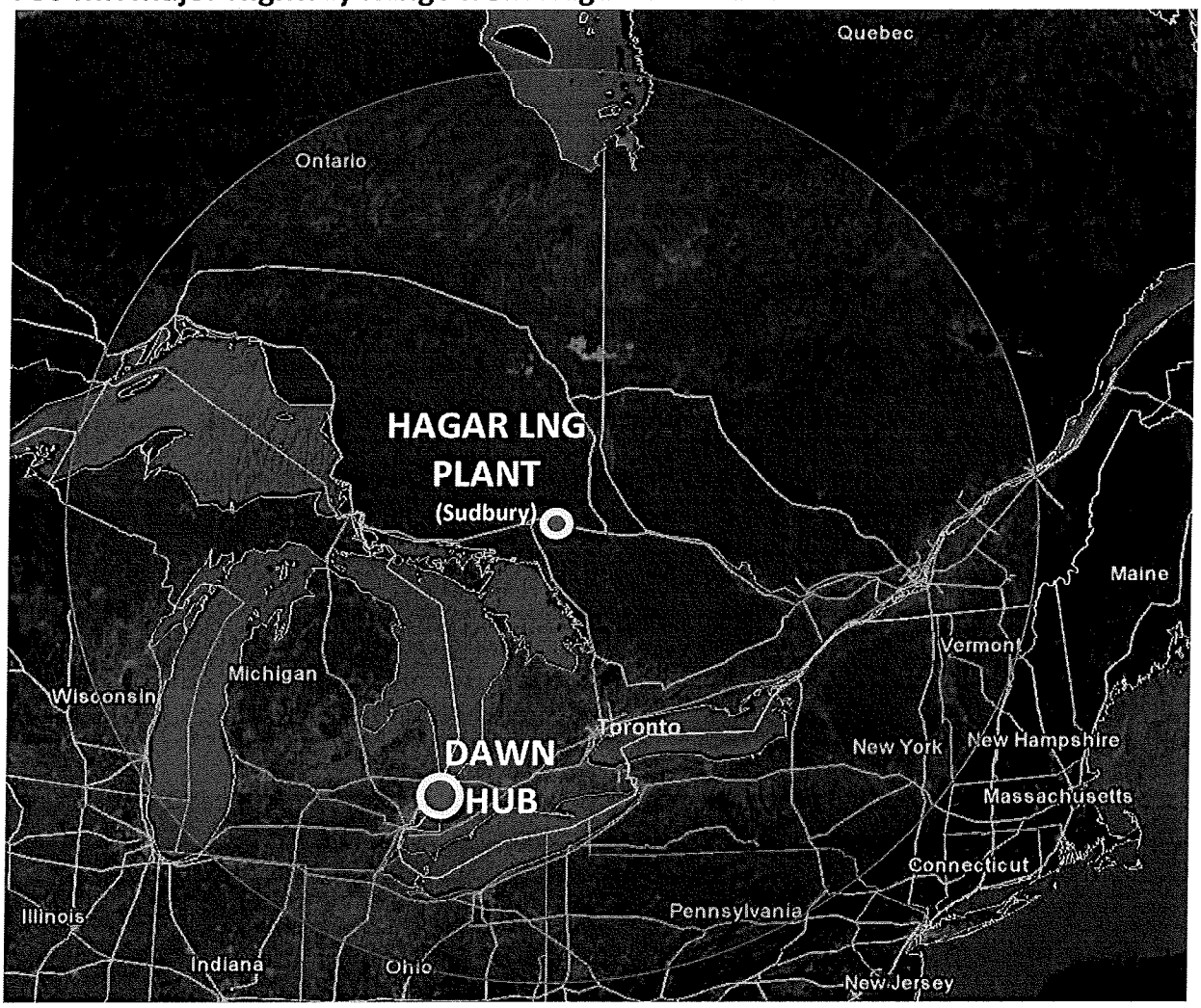
Non-Binding Call for Expressions of Interest for Liquefied Natural Gas (LNG) Services

February 18th, 2014

Union Gas Limited ("**Union Gas**") is conducting this non-binding call for expressions of interest in support of a proposal to offer liquefaction (LNG) services at the Hagar LNG Plant located near Sudbury, Ontario. Interested parties are asked to express interest in this liquefaction service dispensed by Union Gas FOB at the Hagar LNG Plant.

700 MK Major Highway Range from Hagar LNG Plant:



Map data: Google, National Institute of Statistics and Geography

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Terms of Service:

- Services beginning as early as Q3 2015 to accommodate a variety of consumption patterns
- An initial contract term of up to 10 years
- Minimum annual commitment required
- Customers are expected to adhere to provincial & federal standards in effect, tankers used must be in good condition and drivers must be qualified
- For the purposes of billing, the LNG is considered to be sold, delivered and billed at the Hagar LNG Plant (FOB) in CAD/GJ

Price of Service:

Liquefaction Service

Liquefaction fee expected to be in the range of $5.54-$6.93 CAD/GJ ($0.20-0.25 CAD/DLE) subject to Ontario Energy Board approval*

+

Natural Gas Commodity

Delivered to the Hagar LNG Plant/TransCanada's Union Northern Delivery Area

- The 1 year average same day price of natural gas commodity in Ontario at the Dawn Hub as of February 10, 2014 was $4.58 CAD/GJ ($0.17 DLE)
- Transportation fees from the Dawn Hub are currently $0.44 CAD/GJ ($0.016 CAD/DLE)
- Transportation fees are subject to Ontario Energy Board Regulation

NOTE:
** Diesel Litre Equivalent (DLE) to GJ Conversion Factor Used = 27.7 as per **Go For Natural Gas***
http://www.gowithnaturalgas.ca/getting-started/understanding-energy-equivalency/

Additional Information:

Flexible liquefied natural gas services are being offered to customers in order to serve a variety of consumption patterns. In order to assess market interest in the service, Union Gas requests that interested parties provide a maximum daily quantity required as well as annual and monthly consumption estimates where possible.

Customers have the option of either supplying their own natural gas commodity to the Hagar LNG Plant, or of having Union Gas provide natural gas commodity to the Hagar LNG Plant on their behalf. Customers interested in liquefaction service and natural gas commodity supply should stipulate this on their bid form along with any conditions to this effect.

Once expressions of interest have been received Union Gas will determine the feasibility of the service and contact all interested parties directly. If Union Gas determines that sufficient interest has been received Union Gas will proceed with negotiation of contracts with interested parties. In no way does this Call for Expressions of Interest oblige Union Gas to execute any

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contract with interested parties. Respondents may, in their expression, indicate any other terms and conditions they wish to add or modify.

Interested parties are asked to complete the attached bid form and return to Union Gas no later than 2 pm on March 7, 2014. Respondents may, in their submission, indicate any other terms and conditions they may wish to add or modify. If you have any questions, please contact either Murray Smith or Steve Kay.

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Expressions of Interest for Liquefied Natural Gas Services:

Please complete, sign and return this Expression of Interest on or before 2:00 p.m. EDT on March 7, 2014, via email or fax to:

ATTN: Murray Smith via **Email:** msmith@uniongas.com **Fax:** (519) 436-4645

Dear Murray:

In response to the letter from Union Gas regarding Expressions of Interest, dated February 18, 2014,

(Please enter your company name here)_____ ("Customer")

Customer requests the opportunity to express interest in interruptible LNG services at the Hagar LNG Plant, as outlined below.

Start Date mm/dd/yyyy		**Term** Up to 10 Years	
Maximum Daily Quantity(GJ or DLE*)		**Minimum Annual Commitment**	
Monthly Consumption Estimates			
Commodity Preference Interest in sourcing from Union Gas?		**Commodity Delivery Point Preference** Dawn vs. Union NDA	
Conditions Of Interest Expressed *Attach additional conditions to your submission as required*			

**If using DLE, Union Gas will convert to GJ of natural gas using 27.7 conversion factor*

It is understood that Union Gas will review interest and acknowledge all requests received by 2:00 pm EDT on March 12, 2014.

Yours truly,

_____ **Name** (printed)

_____ **Phone**

_____ **Signature**

_____ **Fax**

_____ **Title**

_____ **Date**

_____ **Email**

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Background

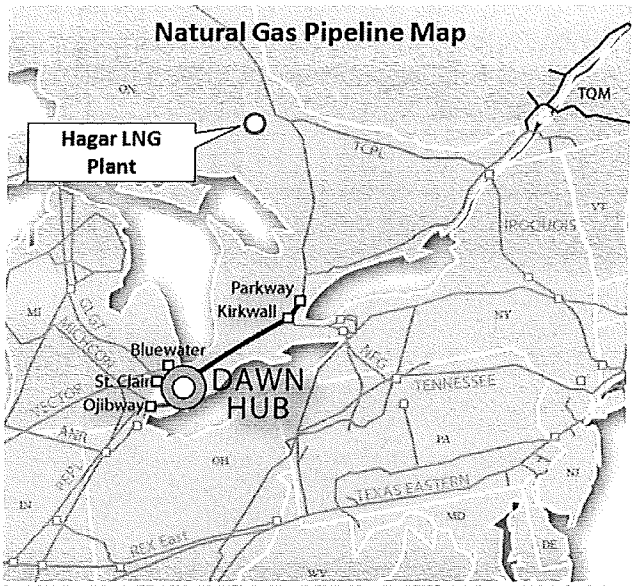
About Union Gas:

Union Gas Limited is a major Canadian natural gas storage, transmission and distribution company based in Ontario with 100 years of experience and service to customers. The distribution business serves about 1.4 million residential, commercial and industrial customers in more than 400 communities across northern, southwestern and eastern Ontario. Union Gas, named one of Canada's Top 100 Employers for 2014, is a Spectra Energy (NYSE: SE) company with assets of $5.8 billion and approximately 2,200 employees. For more information, visit uniongas.com.

The Dawn Hub

Where supply meets demand

- The largest integrated natural gas storage facility in Canada
- The 3rd most physically traded gas market hub in North America
- Connected to all major North American natural gas supply basins
- Supply reliability and price transparency
- Union Gas alone brings 135 PJ/year of gas onto the system



Dawn, one of the most liquid hubs in North America, has the capacity to export more than 6 PJ/d to eastern markets

(this equates to roughly 5% of peak N.A. demand and over 50% of average daily Canadian demand)

What is LNG:

- LNG is natural gas that is cooled to -162°C.
- LNG is up to 1/600th the volume of natural gas, making it easy to store and safe to transport.
- LNG is clear, colourless, non-toxic and non-corrosive. In its liquid state, LNG is non-flammable.
- Depending on its end use, LNG can be converted back to a gas state.
- LNG's high storage density makes it a viable alternative to diesel fuel for heavy duty transport, marine, mining and rail applications.

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Cost Advantage:

When compared to alternative fuels like diesel and gasoline, LNG use can lower energy costs by 30-40 percent. As a result of abundant natural gas supply in North America, the price of natural gas is expected to remain low and stable over the long term relative to historic levels.

Environmental Advantages:

Union Gas is committed to minimizing the effects of our operating facilities on the environment. Any environmental impacts of new construction or ongoing operations will be taken seriously and protective measures will be developed to avoid or minimize effects. LNG can also help address environmental concerns like climate change and smog, offering green house gas emissions reductions of up to 28%.

LNG Safety:

Our highest priority is the safe operations of our facilities for the public and our workers.

The Hagar LNG Plant is designed to meet stringent safety codes and requirements of the Canadian Standards Association and the Technical Standards and Safety Authority. The facility is manned 24/7 and has multiple safeguard measures in place, including the ability to shut down the system at anytime.

Customers will be responsible for the transportation of the LNG from the Hagar LNG Plant to market.

Who Will Benefit:

Local Communities

- Experienced contractors will use local resources to construct the facilities, and where possible, will procure material from the local community.
- Local communities also benefit from taxes that Union Gas pays to the municipality annually for its existing Hagar LNG Plant.

Ontario

- Liquefied natural gas will play a key role in meeting Ontario's future transportation fuel needs and in helping the province meet greenhouse gas emissions targets.
- The benefits of LNG have prompted plans to build refueling stations in the United States and Canada along main trucking corridors. The Hagar Project will help support such initiatives.
- The Union Gas Hagar facility is currently the only existing Ontario based LNG plant and it presents an opportunity to offer a service without the need to construct a new facility.
- The use of LNG is limited to transportation fuels.

» Print

INSIGHT-Ride to lower costs for LNG-run trucks rockier than expected

Wed, Apr 9 2014

By Julie Gordon

VANCOUVER, April 9 (Reuters) - Just over a year ago, Canadian trucking firm Bison Transport took a bet on a potentially game changing technology, buying 15 big rigs powered by liquefied natural gas.

The privately-held company was attracted by the promise of a cheap and abundant fuel source and lower greenhouse gas emissions. If all went well, it would be the first step toward converting more of its 1,250-strong fleet to a type of fuel that costs about $1.50 less per equivalent gallon than diesel.

After 14 months on the road, though, the Winnipeg-based company has found that the reality - at least initially - is less rosy. The savings on fuel have been offset by other costs that are much higher than expected.

Bison is not alone. There are already signs that broader adoption is falling short of initial expectations, particularly in off-road sectors like locomotives and mining vehicles.

While the lack of fueling infrastructure remains the largest hurdle, other operational teething pains are now tempering some of the growth in LNG use that was expected to further reduce oil demand in North America, as well as carbon emissions, according to interviews with industry experts and officials from five transport companies.

Bison had anticipated that LNG, which generates fewer miles per unit than diesel, to be 10 percent less efficient; instead, the drop was closer to 18 percent. Maintenance costs were about double that of a diesel tractor, more than budgeted.

While Bison is not considering abandoning its investment, it now expects to take at least four years to break-even on the rigs - which cost roughly $75,000 more than standard engines - rather than the two-year pay-off it had hoped for.

"We just wanted to be clear that when you first look at LNG, it can look like there's a potential windfall for carriers, and the reality is not that," said Lionel Johnston, corporate marketing manager with Bison, a top Canadian carrier known for its large, modern trucks that haul two trailers.

The longer pay-off "doesn't mean it's a bad investment, but it was definitely not as good as we were hoping," he said.

To be sure, it takes time for both technicians and drivers to adjust to new equipment, impacting early costs, and technical glitches are not uncommon with new technologies.

Still, Royal Dutch Shell last month surprised the LNG industry when it scrapped a small-scale liquefaction unit it was building at its Jumping Pound complex near Calgary.

"This additional demand has not developed in line with market expectations," said Shell spokeswoman Destin Singleton. The company also paused work on two other plants, in Ontario and in Louisiana, but Singleton said those projects may resume due to better opportunities for LNG-powered marine vessels.

A BRIDGE TO RENEWABLE

Operators of commercial trucking fleets have been eyeing natural gas as a potential fuel since the shale boom sent prices plunging. Gas burns cleaner than diesel and is produced domestically, thus insulating supplies from global political events that can drive up petroleum prices.

Thus far it's been compressed natural gas (CNG), rather than its frozen cousin, LNG, that has captured more of the market.

With cheaper fuel and a more established infrastructure, CNG vehicles now make up a large portion of smaller truck fleets for companies like garbage collector Waste Management and United Parcel Service's (UPS) local delivery. They are ideal in urban or short-haul operations.

North America's CNG infrastructure is also more developed, with 681 public stations across the United States, according to the U.S. Department of Energy. By comparison, there are 52 public LNG stations, with another 37 planned, the data shows.

And CNG is cheaper than LNG at about $2 less per equivalent gallon than diesel, providing hefty savings in vehicles that use 40,000 gallons of fuel or more each year.

But LNG is ideal for large highway tractors that haul heavy loads. Its energy density is greater than CNG, which means its fuel tank

is smaller and lighter, leaving more room for cargo.

Support is still building despite some setbacks. For example, UPS has started deploying its new fleet of 1,100 heavy-haul LNG trucks, which have a 600 mile range.

However long-haul applications raise other problems, say industry insiders. Drivers can only be on the road for so many hours, and the trucks are restricted to routes where there are existing fueling stations.

Heavy-duty fleet operators are "recognizing it's not going to be a universal fit and in some cases there might be parts of the operation where natural gas just isn't going to work," said Erik Neandross, chief executive of Gladstein, Neandross & Associates, a clean transportation consulting firm.

Indeed, the viability of natural gas as a diesel alternative depends on many factors, in particular whether a fleet burns enough fuel to justify the additional cost of buying LNG rigs.

LEARNING CURVE

Bison's rough first year experience was familiar to other early adopters in the trucking sector, they said. Early costs are often higher-than-expected, as truck service and maintenance shops need to be retrofitted for the natural gas technology and technicians need time to get comfortable with the new equipment.

In Bison's case it did not convert its shop for the trial, so maintenance was done externally, leading to higher labor charges. Many of the trucks also had fickle fuel sensors, gauges and software, which had to be addressed by suppliers.

Other companies Reuters spoke with also ran into technical issues. One, Quebec-based Robert Transport, was forced to install solar panels on truck roofs to power energy-intensive methane detectors. Raven Transport, a beverage hauler based in Florida, said its first rigs stalled on the road and had to be towed after the LNG tanks were filled at the wrong pressure.

Westport Innovations, a leading natural gas engine designer behind many models now on the road, says that it can take time to work out the bugs for first-generation technology.

"There have been challenges with reliability or just with performance not as expected," said Karen Hamberg, vice president of strategy at Westport. "So those things are being addressed and as we see new products being launched, there will be higher levels of reliability with those new products."

The Vancouver-based company is working on its second-generation heavy-haul offering, the HPDI 2.0, which it says will deliver breakthrough performance and fuel economy, making it competitive with current high performance diesel-fueled engines.

Back on the road, industry experts say once equipment and use practices are modified, maintenance costs should be close to in-line with diesel, no more than 1 to 2 cents more per mile - or up to $2,000 for a 100,000-mile per year vehicle.

"When you're saving in the order of magnitude of $25,000 on fuel and paying $1,500 more in maintenance, that's obviously a fair trade off," said Neandross.

UPS was the only company that Reuters spoke with that said its LNG maintenance costs were currently even with diesel, though trucking companies that have made the switch say that as they gain experience, reliability goes up and costs come down.

PREACHING THE GOSPEL

Fueling infrastructure remains a critical issue.

"It's like the chicken and egg, if you don't have fuel stations, then people won't buy trucks, and if people don't buy trucks, then you don't get infrastructure," said Yves Maurais, engineering manager for Robert Transport, which runs its 125 LNG trucks between Quebec City and Windsor, Ontario.

Despite the hurdles, many early-adopters remain strong supporters of natural gas for transport.

"Natural gas is good for the environment, and it's good for this country to reduce its dependence on foreign oil from our enemies," said Phil Crofts, director of marketing for Dillon Transport, an Illinois-based firm with 25 LNG and 150 CNG tractors. "So we are disciples and we are spreading the gospel." (Additional reporting by Edward McAllister in New York; editing by Jonathan Leff and Martin Howell)

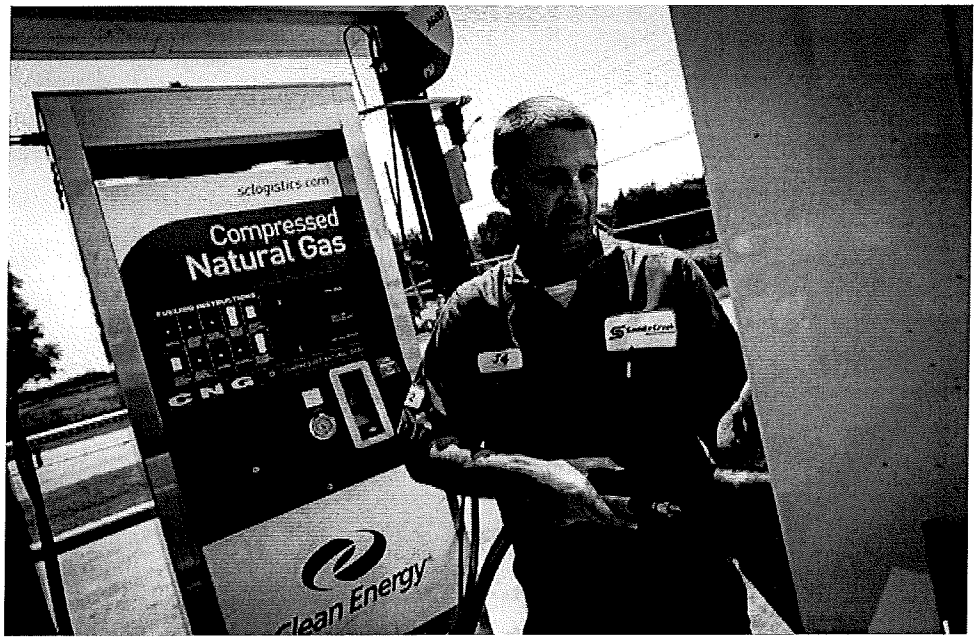
BUSINESS

Slow Going for Natural-Gas Powered Trucks

Premium Prices and More Efficient Diesels Leave Sales in First Gear

By BOB TITA

Aug. 25, 2014 3:42 p.m. ET



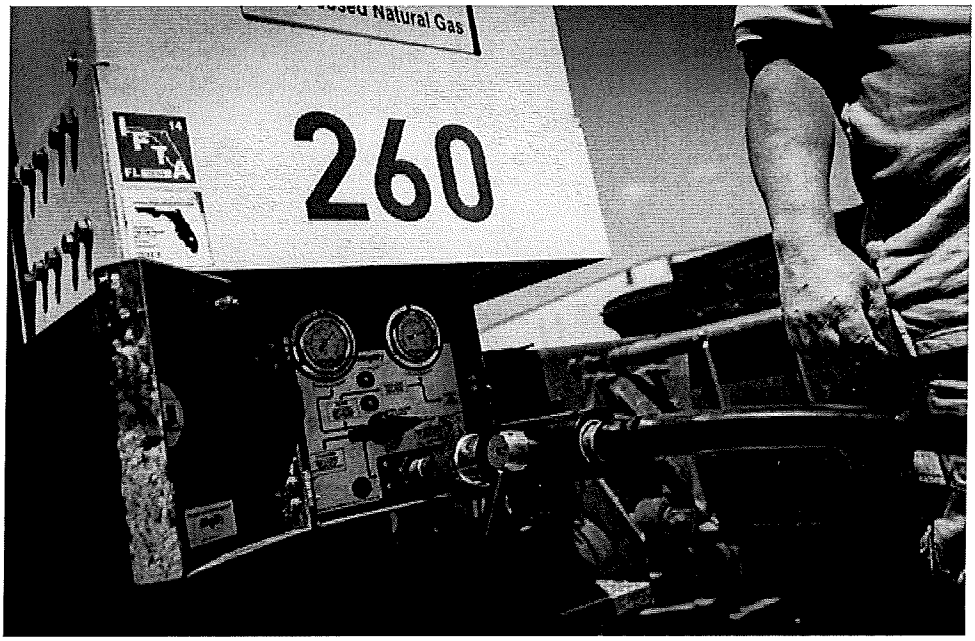
A factor limiting natural-gas-powered sales is the arrival of new, more efficient diesel engines. Pictured, a trucking firm's fuel pump in Florida. *Edward Linsmier for The Wall Street Journal*

In the midst of the strongest market for commercial trucks in eight years, North American sales of natural-gas-powered haulers are just crawling along.

Higher purchase prices compared with diesel trucks, improved diesel fuel economy and continued scarcity of fueling stations are damping natural-gas-powered truck demand. About 10,480 of the heavy-duty trucks are expected to be sold this year, up 20% from the 8,730 sold last year, according to Power Systems Research. However, some forecasters had expected sales to about double to 16,000 vehicles this year amid the trucking industry's enthusiasm for natural gas a year ago.

What happened? A big roadblock remains the premium for a heavy-duty gas truck—$50,000 more than the about $150,000 for a new diesel-powered truck. In theory, the payback for that higher price is recovered from fuel savings of between $1.60 and $1.70 for the gas equivalent of a gallon of diesel. Paybacks can average four years considering the average truck travels 125,000 miles a year.

But truckers say the fuel savings isn't all it seems. Mileage from a natural-gas-powered truck is about 20% less per energy equivalent than a diesel truck, meaning a gas truck consumes the same amount of fuel for 200 miles as a diesel truck uses for 240 miles. Moreover, fuel costs—as well as any natural-gas fuel savings—are typically passed on to a trucking company's customers.



Natural-gas big rigs cost $50,000 more than diesel models. Pictured, refueling a CNG-powered truck Friday. *Edward Linsmier for The Wall Street Journal*

"If you're paying $1 per gallon less for fuel, they'd want that money for themselves, but you need that to pay off the equipment," said Mike Card, president of Combined Transport Inc., which operates a fleet of 500 diesel trucks specializing in hauling heavy or wide cargoes, such as wind energy towers.

At current fuel prices, it takes about four years to recover their investment. "That's tough for a lot of fleets. They want their investment returns a lot faster," said Mike DelBovo, transportation president of Saddle Creek Logistics Services in Lakeland, Fla., which has 175 gas-powered trucks in a fleet of 550.

Large fleet operators typically replace their vehicles every three to four years, leaving little time for them to benefit from the lower fuel costs of natural-gas-powered trucks.

Another factor limiting natural-gas-powered sales is the arrival on the market of new, more efficient diesel engines. The first phase of a federally mandated 6% improvement in fuel economy by 2017 took effect this year, pushing heavy-duty truck mileage closer to 7 miles per gallon from about 6.5 mpg.

WSJ Radio

Bob Tita and WSJ's Hank Weisbecker discuss the slow going for these natural-gas powered trucks

00:00 | 03:29

Indiana-based Cummins Inc. delayed indefinitely a 15-liter natural-gas engine for high horsepower long-distance trucks carrying heavy loads. And a joint venture with Vancouver's Westport Innovations Inc. also ceased production of a 15-liter natural gas engine last fall. That venture still makes smaller-size natural-gas engines used in cement trucks, garbage trucks and delivery vehicles that spend just a day on the road.

All this comes as the market for new commercial trucks is booming.

A stronger economy has pushed up freight volumes, and fleet replacements are expected to push production of heavy-duty trucks in North America this year up 21% from 2013 to 297,400 vehicles, the highest volume since 2006, said Columbus, Ind., market forecaster ACT Research LLC.

For-hire trucking companies such as Con-way Inc. and Schneider National Inc. say they continue to test small numbers of natural-gas trucks. But the limited number of natural-gas refueling stations limits the switch to gas. Just slightly more than half of the 1,500 natural-gas fueling stations in the U.S. are public-access sites, and not all of these can accommodate large trucks.

Kenny Vieth, president and senior analyst for ACT Research, which had forecast as much as a doubling of demand, said a key constraint has been "the need to build out the [gas fueling] infrastructure."

Of course, those trucking companies committed to using alternative fuels or that handle deliveries for customers looking for a greener profile are moving ahead on natural-gas vehicle acquisitions.

"There's not a huge savings today with natural gas," said Jeff Shefchik, president of Paper Transport Inc., 430-truck regional fleet Green Bay, Wis., with about 100 natural-gas trucks. "But we're content to invest in it because it's going to grow over time."

United Parcel Service Inc. this year has ordered about 300 gas-powered heavy-duty trucks and bought 700 gas tractors last year. The trucks operate mostly in corridors in the West and South that have plenty of natural-gas stations, some of which UPS helped to finance. By the end of the year, about 2% of UPS's 100,000 vehicles world-wide will be powered by natural gas.

Meanwhile, Wal-Mart Stores Inc., Office Depot Inc. and Lowe's Cos. and consumer products manufacturer Procter & Gamble Co. are among the companies requesting their trucking suppliers use natural-gas vehicles to comply with corporate policies to reduce carbon dioxide emissions and pollution caused by burning diesel fuel.

Saddle Creek, which offers trucking to those retailers, is racking up 1.5 million miles a month on its 175-vehicle natural-gas fleet and plans to buy 25 additional Freightliner gas trucks by the end of the year.

Still, those purchases are dwarfed by the sheer number of new diesel-powered trucks being sold. North American sales of diesel-powered trucks are forecast to rise 17% to 281,620 this year.

Two years ago, forecasters expected as much as 20% of the heavy-duty trucks sold annually in North America by the end of the decade would be natural-gas powered.

"We're still growing [natural-gas-powered trucks], but all the hype is gone," said Robert Carrick, sales manager for natural gas for Freightliner, a unit of Germany's Daimler AG . "Long-haul, over-the-road trucking is not going to adopt natural gas for a long time."

Write to Bob Tita at robert.tita@wsj.com

THE LINDE GROUP

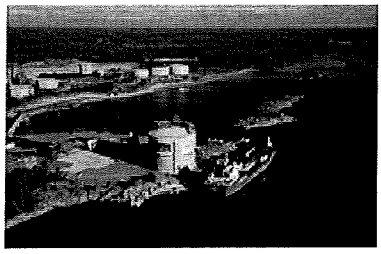
Merchant LNG: Natural gas instead of diesel

In the transport sector, pollutant emissions can be reduced and greenhouse gas emissions saved. Both the global shipping industry as well as heavy-duty truck transportation could become more environmentally friendly.

Today, global mobility is based almost exclusively on crude oil, which is the feedstock for petrol, diesel and kerosene. However, its combustion releases not only the greenhouse gas carbon dioxide (CO_2) as well as other emissions that are sometimes even more harmful to the environment. Compared to these fossil fuels, natural gas emits significantly less pollutants. During combustion, around 90 percent less sulphur oxide and 80 percent less nitrogen oxide develop – and no heavy metals or soot particles!

The environmental guidelines for cars, trucks and aeroplanes are all increasing. Equally, shipping regulations set down by the International Maritime Organization (IMO) are becoming increasingly stringent. Expert opinion pinpoints marine transport as one of the biggest future markets for LNG. Thresholds for sulphur levels in fuel have lately been subject to much stricter legislation, with limits for shipping in the Baltic Sea and parts of the North Sea set to drop from the current 1.5 percent to 0.1 percent by 2015. A further challenge to the shipping industry involves the strict nitrogen oxide (NOx) regulations that must be fulfilled by all new ships. Ships docking in European ports today must already comply with a 0.1 percent limit.

In February 2012, Swedish member of The Linde Group, AGA Gas AB, signed a delivery agreement with Viking Line Abp for liquefied natural gas (LNG). The Finnish company plans to capitalise on the environmental benefits of LNG to power its new cruise ship. Large enough for 2,800 passengers, the ship will ferry between Stockholm,



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Linde Technology – Edition #2.11

P. 52/53: The floating LNG factory

PDF Download

Download

Sweden, and Åbo in southwest Finland, starting in January 2013. Annual fuel requirements are estimated at around 22,500 tonnes of LNG, which corresponds to around 60 tonnes a day. Linde Gas AB will supply the gas from its local LNG terminal in Nynäshamn, near Stockholm.
In addition, Linde agreed with the Hamburg Port Authority (HPA) to drive usage of LNG as an environmentally friendly fuel in the Hamburg port. A joint feasibility study reached positive results, and the first LNG terminal will be constructed in Hamburg by 2015. The newly founded joint venture Bomin Linde LNG GmbH & Co. KG will develop all documents required for authorization.

LNG for trucks

On the streets, too, the benefits of natural gas are becoming increasingly apparent. Natural gas can be stored compressed or as LNG onboard the vehicle. For local distribution trucks, buses and garbage trucks, the storage of compressed gas in cylinders on the vehicles is the best alternative while for the heavy trucks on regional or long-haul operation, the amount of fuel on the vehicles is not enough. In this case LNG can be used instead, allowing for up to three times more fuel compared to a compressed gas storage solution. Swedish manufacturer Volvo Trucks recently started a pilot project with heavy trucks for long-haul operations with LNG stored onboard that run on a mixture of 25 percent diesel and 75 percent LNG.

Other manufacturers like Mercedes and Iveco are also providing an increasing program of vehicles with LNG onboard storage options. In Australia the interest and rationale to use LNG for heavy transport has been growing quickly over the last years. There, most goods are transported across the country by roadtrains – trucks up to 50 metres long that weigh 150 tonnes fully loaded. However, high price and fluctuations of imported diesel is causing an increasing amount of businesses to start converting to the cheaper LNG. Australia is the third-largest producer of LNG in the Asia-Pacific region, exporting half its yield. This abundance of natural gas makes it a cost-effective alternative to crude oil.

Network of micro-LNG plants

Under the lead of Australian Linde Group member BOC, several transport companies have already joined forces to launch an LNG pilot project. Linde has developed an LNG supply and refuelling concept to ensure the necessary infrastructure, with a network of small LNG microplants and refuelling stations along key strategic highways. BOC, now a member of The Linde Group, built Australia's first LNG plant in Dandenong near Melbourne, Victoria, thirty years ago. This is now being modernised and expanded, while a second facility opened in Westbury, Tasmania in mid-January 2011.

Linde has been concentrating on the densely populated south-eastern region of Australia to expand its microplant concept. Over two thirds of Australia's trucks travel the inland and coastal highways between Melbourne, Sydney and Brisbane. This is why a third LNG microplant is now being constructed in Queensland's resource-rich Surat Basin.

Keeping transport costs low

When planning the LNG infrastructure and setting up liquefaction plants, the [redacted]

Download Linde Annual 2011 (PDF 6148 KB)

Press releases

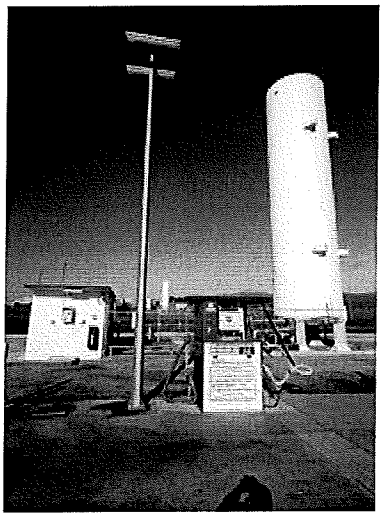
AGA delivers liquefied natural gas to Viking Line's new environmental vessel →

BOC leads way developing Australia's LNG highways →

Marquard & Bahls' subsidiary Bomin and Linde to establish joint venture in liquefied natural gas for the marine market →

challenge was to enable cost-effective, needs-driven production of smaller volumes. Considering the vast distances in Australia, it makes better economic sense to establish multiple smaller facilities close to customers and keep the transport costs low. The microplants have a daily capacity of 50 tonnes of LNG, which corresponds to around 70,000 litres of diesel.

The plan is to build a number of refuelling stations between the LNG microplants in Queensland and Victoria. Depending on driving patterns and mileage, the conversion to LNG can pay for itself in just a few years.



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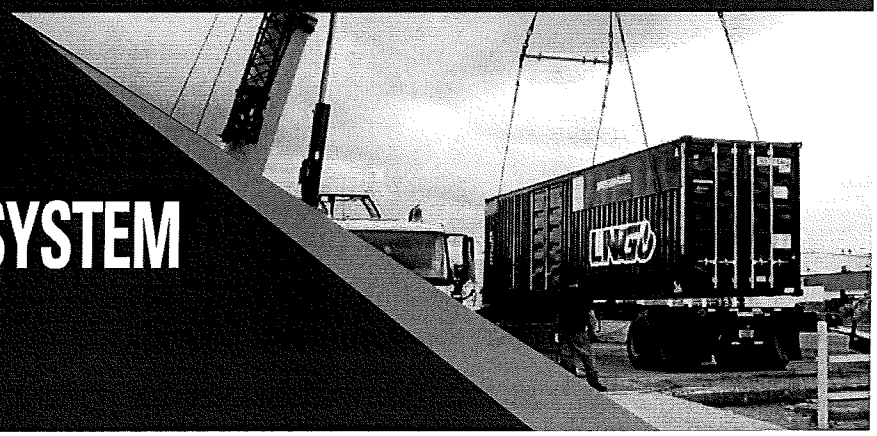
DRESSER-RAND

DISTRIBUTED SMALL-SCALE LNG SYSTEM

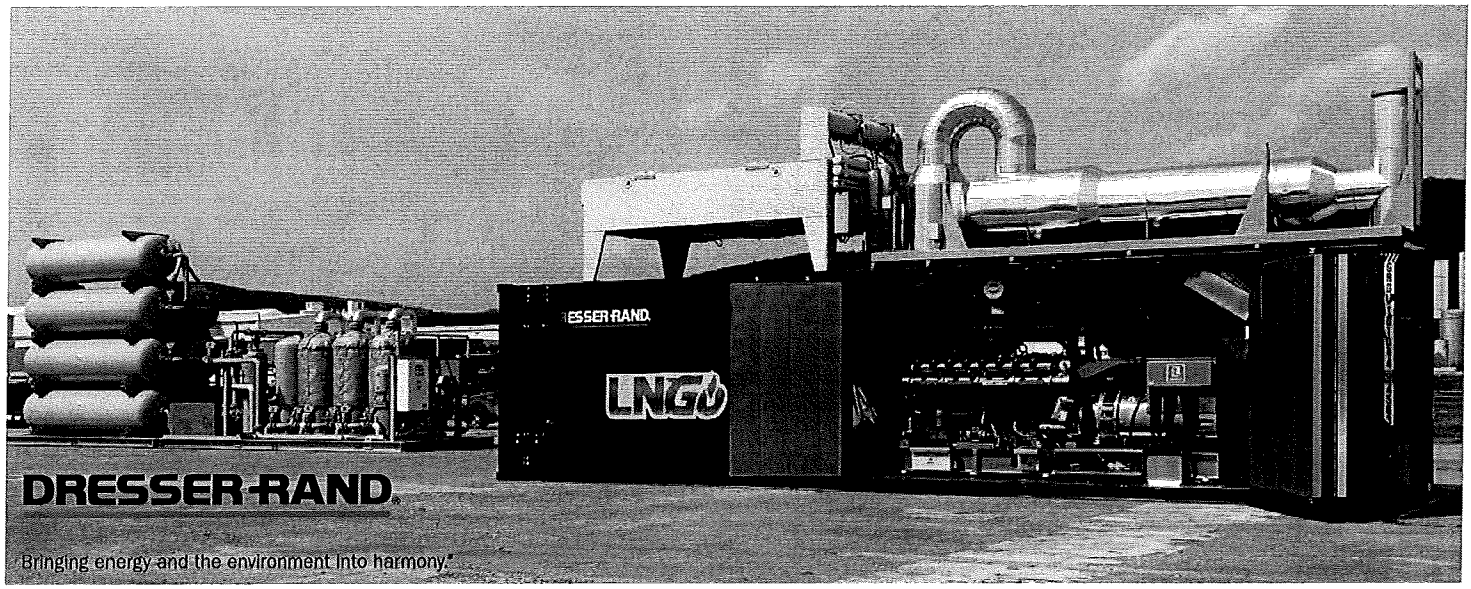


Dresser-Rand is well positioned to help its clients gain a competitive advantage in the distributed LNG market. With its short cycle times, global service presence and leading edge technology, Dresser-Rand combines its MOS™ compressor, Guascor® genset, and Enginuity® controls to offer a new liquefaction process. Meeting the rising demand for energy has never been this sustainable. Introducing the LN*Go* system.

THE LN*Go*™ SYSTEM

Dresser-Rand's LN*Go*™ system is a modularized, re-deployable natural gas liquefaction plant capable of producing 6,000 gallons of LNG per day. This point-of-use production plant is a standardized product made up of four packaged skids: a power module, compressor module, process module and a conditioning module.

Inlet natural gas is converted to LNG product and used as a process refrigerant. A small portion of the inlet gas is used to power the plant. With a small footprint, low emissions, skid-mounted portability, and no external power utility requirement, liquefied natural gas is finally within reach with the LN*Go system.*



DRESSER-RAND

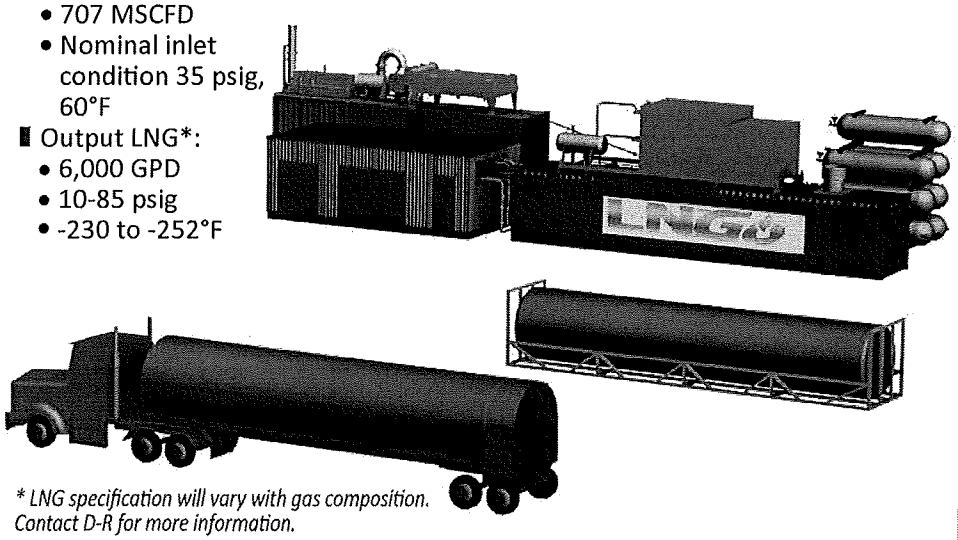
MARKETS

IDEAL FOR FLARE GAS AND STRANDED GAS APPLICATIONS.

- Flares and stranded wells – **Monetize valuable natural gas**
  - Monetize stranded gas – Get gas from stranded wells to markets
  - Eliminate flaring – Capture and monetize wasted flare gas
- LNG fuel source for remote users – **Low cost alternative to diesel/ propane/heating oil**
  - E&P equipment: Drilling/fracturing rigs and generator fueling
  - Mining: Heavy-duty trucks and boiler fueling
  - On-site liquefaction for truck fleets and heavy duty equipment
  - Residential and commercial fuel replacement for propane, heating oil, and diesel
- LNG production in stages – **Incremental supply for underserved and growing markets**
  - Regions with limited or no LNG supply
  - Fuel supply for LNG/LCNG retail/utility dispensers
  - Marine and rail fueling projects
  - Mini peak-shaving / gas storage

SPECIFICATIONS

- Meets NEC Class 1, Division 2, Group D, T2A for certified hazard areas
- Ambient rating: -40°F to 110°F
- Module assembled footprint: 110' x 50' x 14' (h)
- Input natural gas:
  - 707 MSCFD
  - Nominal inlet condition 35 psig, 60°F
- Output LNG*:
  - 6,000 GPD
  - 10-85 psig
  - -230 to -252°F



** LNG specification will vary with gas composition. Contact D-R for more information.*

Is there a firm BUSINESS CASE FOR DRESSER-RAND'S LNGo™ SYSTEM? Yes!

The LNGo system offers a decentralized approach to meeting the growing demand for LNG fueling. LNGo enables the build out of a flexible LNG infrastructure by offering re-deployable, phased expansions of LNG supply in 6,000 GPD intervals. The self-sustaining, pre-packaged LNGo system can be easily applied at or near the point of fuel use with no power interconnects, minimal site requirements and a streamlined installation process. Acquiring mobile LNG production will also enable re-deployment of these fueling hubs to meet future market demands.

SERVICE & SUPPORT PROGRAM

Dresser-Rand provides full turn-key installation and commissioning services as well as routine operations, monitoring, and maintenance contracts to ensure ongoing reliable and available operations.

HOW CAN I FIND OUT MORE?

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- Call 800-372-2608

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Filed: 2014-08-12
EB-2014-0012
Exhibit B.Staff.3
Page 1 of 5

UNION GAS LIMITED

Answer to Interrogatory from
Board Staff

Reference: Exhibit A / Tab 1 / Page 8

On page 8 of its evidence (Exhibit A), Union indicates that the CNG and LNG fuel market is being actively pursued in a number of other regulatory jurisdictions in both the United States and Canada.

a) Please list the jurisdictions in United States and Canada where a regulatory body has determined a rate for a new LNG service through an application or a proceeding.

b) Does Union consider the market for LNG as a competitive market in Ontario? Please substantiate your response.

Response:

a) The research conducted by Union was related to rates for Compressed Natural Gas (CNG) and LNG services.

Regarding Canadian jurisdictions:

- In a decision released November 4, 2010 (D-2010-144), the Régie de l'énergie in Quebec approved a methodology to calculate the cost billed to an affiliate of Gaz Métro for the use of its LNG facility (LSR facility) as part of the activity concerning the sale of LNG.

- In a decision released March 17, 2011 (D-2011-030), the Régie de l'énergie in Quebec determined costs that must be allocated to LNG sales (or to the LNG customer) since these costs will be deducted from the revenue requirement of the regulated sales activity in Québec.

- In its Order No. G-128-11 dated July 19, 2011, the British Columbia Utilities Commission rendered its Decision regarding FortisBC Energy Inc's application for approval of a Service Agreement for Compressed Natural Gas Service and for approval of General Terms and Conditions for Compressed Natural Gas ("CNG") and Liquefied Natural Gas ("LNG") Service.

- On April 2, 2012, Heritage Gas (Nova Scotia) announced that they had reached agreement with Minas Basin Pulp and Power and CKF Inc. of Hantsport to supply trucked CNG to their operations in 2013, pending all necessary approvals.

Regarding US jurisdictions, based on research conducted in 2012, Union gathered the following information:

- In a November 2010 report, the American Gas Association reported that:
  - 17 jurisdictions had a NGV/CNG Rate
  - 10 jurisdictions had Compressor / Filling Facilities included in rate base

  http://www.aga.org/our-issues/RatesRegulatoryIssues/ratesregpolicy/ratedesign/Pages/NaturalGasVehicleCompressedNaturalGasRates(November2010).aspx

- Atlanta Gas Light received approval from the Georgia Public Service Commission in November 2011 for a plan to support the development of a network of privately owned compressed natural gas (CNG) fuelling stations in Georgia and issued a Request for Proposals (RFP) for interested parties to participate.

- Questar Gas, which delivers natural gas in Utah, Wyoming and Idaho, owned and operated 29 public CNG stations with more planned for 2012.

- Citizens Gas received approval from the Indiana Utility Regulatory Commission on June 16, 2010 to establish Gas Rate No. 40 – Liquefied Natural Gas Service to facilitate the sales of LNG as a vehicle fuel to Flatiron Power Systems under a pilot program to end on September 12, 2012.

- Chesapeake Utilities (Delaware) offers a Natural Gas Vehicle Service (Rate NGV) for its New Castle, Kent & Sussex counties.

- Columbia Gas of Pennsylvania offers a NGV Rate where customers may elect Firm Sales Service, Interruptible Sales Service or Distribution Service.

- Integrys Peoples Gas of Illinois provides a compressed natural gas service (Service Classification No.8).

- Laclede Gas of Missouri offers a Vehicular Fuel Rate to customers.

- CenterPoint Energy of Texas offers a Small Commercial Firm Service (SCS-1-I) schedule to any natural gas vehicle fuelling facility, open for use by the general public.

- Connecticut Natural Gas offers a Natural Gas Vehicle Interruptible Rate where the rate is established monthly by the company.

- Consolidated Edison Company of New York offers a Natural Gas Vehicle Service rate (Schedule 14)

- Narrangansett Electric Company d/b/a National Grid (Rhode Island) had a Natural Gas Vehicle Service Rate (Rate 70) which was eliminated as of May 7, 2012.

- Southwest Gas of Arizona offers a Gas Service for Compression on Customer's Premises rate schedule (No. G-55).

- Florida City Gas offers a Natural Gas Vehicle Service.

- In 2013, Intermountain Gas Company (Idaho) received approval from the Idaho Public Utilities Commission to sell excess LNG capacity from its Nampa LNG facility for non-utility use.

- Kansas Gas Service of Kentucky offers a Compressed Natural Gas General Transportation Service.

- National Fuel Gas (New York) offers a Natural Gas Vehicle Rate (Service Classification No. 7) to customers using either company-supplied or customer-supplied filling facilities.

- National Fuel Gas (Pennsylvania) offers a Natural Gas Vehicle Service.

- New Jersey Natural Gas offers a Natural Gas Vehicle Service under Non-firm Gas Services.

- New Mexico Natural Gas offers an Alternative Vehicle Fuel (Rate 39).

- The Northern Indiana Public Service Company (NIPSCO) offers a LNG service rate that was designed primarily to develop a market for use of LNG in its liquefied form as vehicle fuel.

- PECO Energy (Pennsylvania) offers both a Motor Vehicle Firm (Rate MV-F) and Interruptible (MV-I) rate.

- Pacific Gas and Electric offers a Natural Gas Service Core (NGV1) for customers providing fuel on their premises and Non-core service (NGV2).

- Philadelphia Gas Works offers a Liquefied Natural Gas Service Rate (Rate LNG) which is associated with transportation of LNG via truck from PGW's LNG facilities.

- Piedmont Natural Gas (North Carolina) offers a Natural Gas Vehicle Fuel Rate (Schedule 142).

- San Diego Gas and Electric offers natural gas for motor vehicle fuel service (G-NGV) and a natural gas service for home refuelling of motor vehicles (G-NGVR).

- The Southern California Gas Company (SoCalGas) Compression Services Tariff (GO-CMPR) is a non-residential, optional tariff service for customers that allows SoCalGas to plan, design, procure, construct, own, operate, and maintain compression equipment on customer premises to meet pressure requirements as requested by the customer and agreed to by SoCalGas.

- South Jersey Gas (New Jersey) offers a Natural Gas Vehicle Service to commercial and industrial customers who utilize natural gas for the purpose of providing vehicle fuel at Company-operated fuelling stations or at separately metered customer-operated fuelling stations.

- Peoples Gas (Tampa) offers a Natural Gas Vehicle Service (Rate NGVS) for gas delivered to any Customer through a separate meter for compression and delivery (through the use of equipment furnished by Customer) into motor vehicle fuel tanks or other transportation containers.

- Texas Gas Service Company offers a Compressed Natural Gas Service (Rate Schedule CNG-1) which is available to any customer for usage where customer purchases natural gas which will be compressed and used as a motor fuel.

- Indiana Gas Company's (Vectren North) Natural Gas Vehicle Service (Rate 229) schedule applies to both company-owned and customer-owned NGV facilities.

- Southern Indiana Gas and Electric's (Vectren South) Natural Gas Vehicle Service (Rate 129) applies to the provision of (1) gas sales service to a customer-owned and operated CNG facility for the express purpose of converting such natural gas to CNG to fuel natural gas vehicles, or (2) the sale of CNG to any customer from company-owned and operated CNG facilities to fuel natural gas vehicles.

- Washington Gas Light Company (District of Columbia) offers a Developmental Natural Gas Service rate (Schedule No. 4) where service is available to a limited number of applicants in the District of Columbia service area for the sale of compressed gas and for the sale or delivery of gas to be used as Compressed Natural Gas (CNG) to fuel a vehicle or vehicles, to any customer who shall by contract agree to the terms for service at refuelling facilities operated at either Company or customer locations.

- Wisconsin Gas offers a Natural Gas Vehicle Service Rate (Schedule X-130) for provision of natural gas to customers who have natural gas compression facilities for fuelling natural gas vehicles.

- Yankee Gas (Connecticut) offers an Interruptible Natural Gas Vehicle Service (Rate NGV) to any customer requiring natural gas as a motor fuel for vehicles employed in fleet, car pool, public and private transportation, or other motor vehicle operations.

b) Yes. Union does consider the market for LNG as a transportation fuel competitive. At the same time, the LNG for vehicle transportation market is an emerging market, one that is expected to develop gradually over the next several years. There are currently two LNG wholesalers operating in Ontario, Gaz Metro Transport Solutions (GMTS) and ENN Canada. Both will source LNG from the most economical supply available looking at the total delivered cost including the natural gas price, liquefaction charges, and transportation costs. Union is also aware of two other parties looking at locating LNG refuelling facilities or transportation assets to serve the Ontario market.

2014 Capacity of Low-Sulfur Diesel Refineries in the U.S. Midwest and Northeast

SURVEY	PERIOD	COMPANY_NAME	STATE_NAME	SITE	PADI	QUANTITY	Barrels/day Capacity
820	14	BP PRODUCTS NORTH AMERICA INC	Indiana	WHITING	2	119000	119,000
820	14	BP-HUSKY REFINING LLC	Ohio	TOLEDO	2	21500	21,500
820	14	CALUMET LUBRICANTS CO LP	Wisconsin	SUPERIOR	2	6500	6,500
820	14	COFFEYVILLE RESOURCES RFG & MKTG	Kansas	COFFEYVILLE	2	30000	30,000
820	14	COUNTRYMARK COOPERATIVE INC	Indiana	MOUNT VERNON	2	12000	12,000
820	14	DELAWARE CITY REFINING CO LLC	Delaware	DELAWARE CITY	1	52000	52,000
820	14	ERGON WEST VIRGINIA INC	West Virginia	NEWELL	1	9000	9,000
820	14	EXXONMOBIL REFINING & SUPPLY CO	Illinois	JOLIET	2	85100	85,100
820	14	Flint Hills Resources LP	Minnesota	SAINT PAUL	2	62000	62,000
820	14	FRONTIER EL DORADO REFINING CO	Kansas	EL DORADO	2	54000	54,000
820	14	HOLLY REFINING & MARKETING CO	Oklahoma	TULSA EAST	2	40000	40,000
820	14	LIMA REFINING COMPANY	Ohio	LIMA	2	36000	36,000
820	14	MARATHON PETROLEUM CO LP	Illinois	ROBINSON	2	79000	220,000
820	14	MARATHON PETROLEUM CO LP	Kentucky	CATLETTSBURG	2	77500	
820	14	MARATHON PETROLEUM CO LP	Michigan	DETROIT	2	41500	
820	14	MARATHON PETROLEUM CO LP	Ohio	CANTON	2	22000	
820	14	MONROE ENERGY LLC	Pennsylvania	TRAINER	1	47300	47,300
820	14	NCRA	Kansas	MCPHERSON	2	43200	43,200
820	14	PAULSBORO REFINING CO LLC	New Jersey	PAULSBORO	1	46000	46,000
820	14	PDV Midwest Refining LLC	Illinois	LEMONT	2	90000	90,000
820	14	PHILLIPS 66 COMPANY	New Jersey	LINDEN	1	108000	139,981
820	14	PHILLIPS 66 COMPANY	Oklahoma	PONCA CITY	2	31981	
820	14	PREMCOR REFINING GROUP INC	Tennessee	MEMPHIS	2	38000	38,000
820	14	ST PAUL PARK REFINING CO LLC	Minnesota	SAINT PAUL	2	30000	30,000
820	14	Tesoro West Coast	North Dakota	MANDAN	2	20900	20,900
820	14	UNITED REFINING CO	Pennsylvania	WARREN	1	17000	17,000
820	14	VALERO REFINING CO OKLAHOMA	Oklahoma	ARDMORE	2	32000	32,000
820	14	WRB REFINING LP	Illinois	WOOD RIVER	2	55300	55,300
820	14	WYNNEWOOD REFINING CO	Oklahoma	WYNNEWOOD	2	25600	25,600
						Total	1,332,381

Source: U.S. Dept. of Energy, Energy Information Administration
http://www.eia.gov/petroleum/refinerycapacity/

Refineries in Ontario and Quebec

Owner	Location	Province	BBl/d Capacity
Imperial Oil	Nanticoke	Ontario	112,000
Imperial Oil	Sarnia	Ontario	121,000
Shell Canada	Corunna	Ontario	75,000
Suncor	Monteal	Quebec	140,000
Suncor	Sarnia	Ontario	85,000
Ultramar	Levis	Quebec	265,000
			798,000

Sources:

http://www.imperialoil.ca/Canada-English/operations_refineries_nanticoke.aspx

http://www.imperialoil.ca/Canada-English/operations_refineries_sarnia.aspx

http://www.shell.ca/en/aboutshell/our-business-tpkg/downstream/oil-products/sarnia.html

http://www.suncor.com/en/about/232.aspx

Natural Resources Quebec.

http://www.mern.gouv.qc.ca/energie/statistiques/statistiques-production-petrole.jsp

Filed: 2014-08-12
EB-2014-0012
Exhibit B.CME.6
Page 1 of 3

UNION GAS LIMITED

Answer to Interrogatory from
Canadian Manufacturers and Exporters ("CME")

Reference: Exhibit A, Tab 1, pages 8 to 10

In the evidence, Union refers to FortisBC and Gaz Métro ("GMi") press releases pertaining to their role in LNG development. The press releases indicate that, in the cases of each of these utilities, the LNG development activities are being undertaken by affiliates. The Fortis press release indicates that the LNG dispensing rate has been set at $4.35/GJ and that customers will also pay the natural gas commodity cost per GJ. The GMi press release suggests that GMi sells its LNG output to an affiliate, Gaz Métro Transport Solutions, LP ("GMTS") which operates two LNG fuelling stations in Québec and one in Ontario.

In connection with this evidence, please provide the following:

a) A detailed description of the regulated LNG services Fortis and GMi provide and the rate schedules which their regulators have approved pertaining to the provision of such services;

b) The approximate range of prices at which GMTS sells LNG at its fueling station near Mississauga;

c) Are GMi's sales of LNG from its Mississauga fueling station unregulated?;

d) Are there any other unregulated LNG fueling stations in Ontario and, if so, at what prices is LNG being sold from those fueling stations?

e) How will Union's proposed sale of liquefaction services at its Hagar plant affect the operation of the LNG fuel market in Ontario?

Response:

a) The following is a list of the British Columbia Utilities Commission decisions included in the research Union completed:

Order G-118-11 (July 8, 2011)
http://www.bcuc.com/Documents/Decisions/2011/DOC_28147_G-118-11_FEI_AES%20Offering%20Scoping%20Order.pdf

Order G-128-11 (July 19, 2011)

http://www.bcuc.com/Documents/Decisions/2011/DOC_28195_G-128-11-FEI-CNG-LNG_Reasons.pdf

Order G-165-11A (September 26, 2011)
http://www.bcuc.com/Documents/Decisions/2011/DOC_28770_G-165-11A_FEI-Compression-Rate-for-NGV-Reasons-WEB.pdf

Decision (April 12, 2012)
http://www.bcuc.com/Documents/Decisions/2012/DOC_30356_04-12-2012-FEU-2012-13RR-Decision-WEB.pdf

Order G-156-12 (October 22, 2012)
http://www.bcuc.com/Documents/Decisions/2012/DOC_32176_10-22-2012-G-156-12_FEI-Vedder-Temporary-LNG-Service-WEB.pdf

The current rates for FortisBC can be found at -
http://www.fortisbc.com/NaturalGas/Business/Rates/Pages/default.aspx

The GMi decisions included in the research are:

Decision D-2010-144 (November 4, 2010)
http://www.regie-energie.qc.ca/audiences/decisions/D-2010-144.pdf

Decision D-2011-030 (March 17, 2011)
http://publicsde.regie-energie.qc.ca/projets/15/DocPrj/R-3751-2010-A-0005-DEC-DEC-2011_03_17.PDF

GMi's current rates can be found at - http://www.gazmetro.com/residentiel/raccorder-votre-residence/tarifs.aspx

b) GMTS is a non-regulated affiliate and all sales are to a single party under contract. Pricing is not published.

c) GMi is not selling LNG in Mississauga. The affiliate GMTS is. The refuelling facilities are part of Robert Trucking's Mississauga yard and sales of LNG to Robert are unregulated.

d) There are two other "stations" in Ontario. One each in Cornwall and Woodstock. These have been set up using non-stationary, refuelling units until such time as the market demand will support a permanent facility. LNG is sold under dedicated contracts and pricing is not public.

e) The LNG service from Hagar will provide a local, affordable and reliable source of LNG to the Ontario market. The volumes available from Hagar will be small relative to the Ontario market. Although these volumes are not expected to affect the overall operation of the LNG fuel market in Ontario, the proposed service is expected to help stimulate demand and encourage other participants to enter the Ontario market, from both the supply side and demand side.

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EB-2014-0012
Exhibit B.BOMA.28

UNION GAS LIMITED

Answer to Interrogatory from
Building Owners and Managers Association ("BOMA")

Reference: Cost Allocation and Rate Design

What is Union's understanding of the competition for the service it intends to provide in Ontario:

a) currently;

b) over the next three years.

Response:

a) and b) Currently, there are no LNG plants located in Ontario other than Hagar. LNG is available for purchase from either Gaz Metro Transport Solutions (in Montreal) or from the Citizen's Gas affiliate in Indianapolis. In either case, transportation costs are higher than would be available from the Hagar facility for Ontario based customers. A new LNG facility is being proposed by Northeast Midstream in Thorold Ontario. This facility is still in the planning stages and will not be constructed until 2016 or later. The lack of LNG supply in Ontario is currently a barrier to market adoption of LNG as a transportation fuel. The introduction of LNG from Hagar could provide the necessary stimulus to the market to support additional LNG facilities in Ontario.

News and Media Releases

PAGE TOOLS

Shell to develop two additional natural gas for transport corridors in North America

05 Mar 2013

Through further investments in LNG for Transport, Shell plans to utilize North American natural gas to provide an innovative and cost-effective fuel for its commercial customers.

Shell and its affiliates plan to bring liquefied natural gas (LNG) fuel one step closer for its marine and heavy-duty on-road customers in North America by taking a final investment decision on two small-scale liquefaction units. These two units will form the basis of two new LNG transport corridors in the Great Lakes and Gulf Coast regions. This decision follows an investment decision in 2011 on a similar corridor in Alberta, Canada. Shell is also working to use natural gas as a fuel in its own operations.

"Natural gas is an abundant and cleaner-burning energy source in North America, and Shell is leveraging its LNG expertise and integrated strength to make LNG a viable fuel option for the commercial market," said Marvin Odum, President, Shell Oil Company. "We are investing now in the infrastructure that will allow us to bring this innovative and cost-competitive fuel to our customers."

In the Gulf Coast Corridor, Shell plans to install a small-scale liquefaction unit (0.25 million tons per annum) at its Shell Geismar Chemicals facility in Geismar, Louisiana, in the United States. Once operational, this unit will supply LNG along the Mississippi River, the Intra-Coastal Waterway and to the offshore Gulf of Mexico and the onshore oil and gas exploration areas of Texas and Louisiana. To service oil and gas and other industrial customers in Texas and Louisiana, Shell is expanding its existing relationship with fuels and lubricants re-seller Martin Energy Services, a wholly-owned subsidiary of Martin Resource Management Corporation (MRMC). MRMC and its publicly traded affiliate, Martin Midstream Partners L.P. will provide terminalling, storage, transportation and distribution of LNG.

Shell has a memorandum of understanding with Edison Chouest Offshore companies (ECO) to supply LNG fuel to marine vessels that operate in the Gulf of Mexico and to provide what is anticipated to be the first LNG barging and bunkering operation in North America at Port Fourchon, Louisiana. The LNG transport barges will move the fuel from the Geismar production site to Port Fourchon where it will be bunkered into customer vessels.

In the Great Lakes Corridor, Shell plans to install a small-scale liquefaction unit (0.25 million tons per annum) at its Shell Sarnia Manufacturing Centre in Sarnia, Ontario, Canada. Once operational, this project will supply LNG fuel to all five Great Lakes, their bordering U.S. states and Canadian provinces and the St. Lawrence Seaway. The Interlake Steamship Company is expected to be the first marine customer in this region, as it begins the conversion of its vessels.

Pending final regulatory permitting, these two new liquefaction units are expected to begin operations and production in about three years.

Shell is also working to use LNG as a fuel in its own operations or to support its operations.

- Offshore Support Services: Shell has chartered three dual-fuel offshore support vessels (STX SV310DF) from Harvey Gulf International Marine utilizing Wärtsilä engine and LNG system technology. These vessels will be used to support Shell's operations in the U.S. Gulf of Mexico.
- Onshore Production: Shell has also begun to transition many of its onshore drilling rigs and hydraulic fracturing spreads to LNG. These conversions can reduce fuel costs and local emissions.

Given Shell's leading expertise across the LNG value chain and its competitive position in the commercial fuel market, this extension into the North American market is a good fit for Shell and its customers.

Notes to editors

Natural gas could play an important role in helping to meet the world's rising transport needs. It can be converted into different forms to power ships, trucks, buses and planes.

Liquefied natural gas

Cooling natural gas to around -162°C (-260°F) turns it into a liquid and shrinks its volume for easier shipment and storage. At Shell, we are exploring ways to broaden the use of LNG, from the

traditional power generation sector to fuelling more of the world's growing commercial transport fleets and vessels.

LNG also has the potential to be used in sectors such as rail and mining and we are looking at options to increase its use in our own operations.

LNG in the water

LNG is already being used as a fuel for vessels on inland waterways, such as ferries in Norway, and has the potential to be used more widely: by cruisers, ferries, barges and tug boats.

In Europe and North America new environmental regulations require shipping operators to reduce local emissions. LNG fuel, which is virtually free of sulphur and particulates, will help them meet these requirements.

We bought Gasnor , a leading LNG fuel company in Norway that supplies industrial and marine operators, as we work to deliver LNG to more customers. We also plan to charter the first inland barges to run purely on LNG, which will sail on the Rhine in 2013.

LNG on the road

Often trucks delivering goods across the globe run on diesel. LNG has the potential to offer significant fuel cost savings compared to conventional diesel. It can also reduce greenhouse gas emissions, from production to use, compared to conventional diesel and bio-diesel in new engines. Burning LNG in spark-ignited engines is quieter than burning diesel in combustion engines. LNG-fuelled trucks can operate for longer where noise restrictions apply, for example delivering to supermarkets in residential areas.

Shell has focused its attention to date on the large-truck sector in both Canada and the USA. We are working to supply LNG along a truck route in Alberta , Canada, starting with three sites. We also intend to work with TravelCenters of America to provide LNG for truck fleets at truck stops across the USA.

Additional information on Shell and Natural Gas for Transport and the Gulf Coast and Great Lakes Corridors are available at http://www.shell.com/gasfortransport.html

LNG-powered Offshore Supply Vessels like this one will support Shell's operations in the Gulf of Mexico. Image courtesy of Harvey Gulf International Marine.

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Cautionary note

The companies in which Royal Dutch Shell plc directly and indirectly owns investments are separate entities. In this release "Shell", "Shell group" and "Royal Dutch Shell" are sometimes used for convenience where references are made to Royal Dutch Shell plc and its subsidiaries in general. Likewise, the words "we", "us" and "our" are also used to refer to subsidiaries in general or to those who work for them. These expressions are also used where no useful purpose is served by identifying the particular company or companies. "Subsidiaries", "Shell subsidiaries" and "Shell companies" as used in this release refer to companies in which Royal Dutch Shell either directly or indirectly has control, by having either a majority of the voting rights or the right to exercise a controlling influence. The companies in which Shell has significant influence but not control are referred to as "associated companies" or "associates" and companies in which Shell has joint

PLUM energy

(http://www.plumenergy.com)

SEPTEMBER 19, 2014
MINING (HTTP://WWW.PLUMENERGY.COM/CATEGORY/INDUSTRIES/MINING/), PRESS RELEASE (HTTP://WWW.PLUMENERGY.COM/CATEGORY/PRESS-RELEASE/), PRODUCTION (HTTP://WWW.PLUMENERGY.COM/CATEGORY/PRODUCTION/)

PRESS RELEASE: ALPHA NATURAL RESOURCES SELECTS PLUM ENERGY TO SUPPLY LNG FOR EAGLE BUTTE MINE HAUL TRUCKS

BRISTOL, Va., Sept. 19, 2014 – Alpha Natural Resources, Inc. (NYSE: ANR), announced today that Plum Energy LLC will construct a liquefied natural gas (LNG) plant on property adjacent to Alpha Coal West Inc.'s Eagle Butte Mine, near Gillette, Wyoming. The Plum Energy facility will supply LNG to Alpha Coal West's mine haul vehicles, producing cost efficiencies and fuel savings for its mining operations.

Natural gas becomes LNG when the gas is cooled to more than 260 degrees below zero and the volume becomes 1/600th of the gaseous form, turning the gas into a liquid fuel. LNG is a clean, efficient fuel and is extremely attractive from a price point when compared to the cost of conventional diesel fuel.

Alpha Coal West began testing LNG technologies developed by GFS Corp. in trucks at the Belle Ayr Mine in 2012, beginning a pilot program of the world's first LNG-powered mine haul trucks. After 18 months of daily operation, Alpha Coal West decided to proceed with the conversion to LNG of its 16 Caterpillar 793 haul trucks at the nearby Eagle Butte Mine. Alpha Coal West expects the alterations to the trucks, each of which is capable of hauling 240-tons of coal, or the equivalent of two railroad cars, to be completed by the end of 2014.

Plum Energy's LNG plant at the Eagle Butte Mine, scheduled to come online in March 2015, will be able to produce 28,500 gallons of LNG a day. In addition, Plum Energy has designed an LNG refueling station that will be constructed on-site at Eagle Butte, which will be capable of refueling eight trucks simultaneously.

"We are delighted to assist in bringing cleaner burning, lower cost LNG to Alpha Coal West and to Wyoming," said Kirt Montague, chief executive officer of Plum Energy. "This project not only will reduce fuel costs for Alpha Coal West, but will also help solidify supply lines for other LNG users in the Powder River Basin."

Alpha Natural Resources President Paul Vining says, "The construction of the LNG plant fits with ongoing efforts to control costs. Switching the Alpha Coal West fleet to the combined use of LNG and diesel will also lead to more efficient operation and longer engine life for the trucks."

"We are excited by this development," said Jason Green, President and CTO of GFS Corp. "Alpha Natural Resources continues to demonstrate their vision of a more sustainable and efficient future for mining operations. They have been a terrific partner and we are committed to continuing to provide them with state of the art natural gas + diesel solutions for their fleet."

Alpha Coal West's demand for LNG is expected to be about 6,400 gallons a day to fuel its trucks. As the plant grows, excess product can be sold to other companies in the area as they convert their haul trucks and other equipment to the lower emission and cost-efficient LNG.

About Alpha Natural Resources

Alpha Natural Resources is one of the largest and most regionally diversified coal suppliers in the United States. With affiliate mining operations in Virginia, West Virginia, Kentucky, Pennsylvania and Wyoming, Alpha supplies metallurgical coal to the steel industry and thermal coal to generate power to customers on five continents. Alpha is committed to being a leader in mine safety with its Running Right safety process, and an environmental steward in the communities where its affiliates operate. For more information, visit Alpha's website (www.alphanr.com) or Facebook https://www.facebook.com/AlphaNaturalResources).

About Plum Energy

Plum Energy is focused on the development of small-scale LNG value chains to service the industrial and transportation markets. In addition to developing its own projects, the company provides services to other companies seeking to develop small-scale LNG projects involving

various aspects of the value chain. Plum's key management team has extensive experience with, and deep relationships across, all aspects of the small-scale LNG chain, ranging from the design and operation of small-scale LNG production plants, through the transport and delivery of the product to the onsite storage and regasification for end users' applications.

About GFS Corp

GFS Corp designs, manufactures and sells proprietary solutions that enable high horsepower, heavy duty diesel engines to operate on natural gas. The company's primary focus is providing fully integrated alternative fuel solutions for the mining, construction, stationary power and rail markets.

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- Energy & Mining International: Advertisement (http://www.plumenergy.com/energy-mining-international-advertisement/)
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PRESS RELEASE: ND LNG ANNOUNCEMENT

FOR IMMEDIATE RELEASE

North Dakota LNG, LLC Announces First-to-Market Liquefied Natural Gas Production Facility for the Bakken

- LNG Production to Commence Summer 2014
- Hess Corporation Awarded Gas Supply Contract
- Plum Energy and SST Process Solutions, Inc. Awarded Project Management Contracts
- NDLNG Chief Executive Officer to Speak at Williston Basin Petroleum Conference

Bismarck, North Dakota (May 7, 2014) – North Dakota LNG (http://northdakotalng.com), LLC (NDLNG), the newest member of Prairie Companies (http://www.prariecompanies.com), LLC's, portfolio of oil and gas service businesses, today joined North Dakota Governor Jack Dalrymple and other state officials at an event in the State Capitol Building to announce the arrival of a liquefied natural gas (LNG) production facility. Located in Tioga, North Dakota, the plant will be the first-to-market in the state to produce 10,000 gallons per day (GPD) starting in Summer 2014. A phase two facility is scheduled to be operational in the fourth quarter of 2014

and capable of producing 66,000 GPD. NDLNG targets the drilling, fracking and transportation sectors of the unconventional oil and gas industry and will help meet the need for a cost-effective power source by converting natural gas feedstock into value-added liquid fuels."North Dakota LNG is proud to announce it will be the first LNG liquefaction plant in operation for North Dakota," said Patrick Hughes, Chief Executive Officer, Prairie Companies and North Dakota LNG. "This historic venture will allow NDLNG to quickly provide oil and gas operators in the Bakken and across North Dakota with a cost-effective and reliable source of alternative fuel, thereby reducing operating expenses, while also creating new markets for value-added natural gas fuel produced in the State.""This is an exciting day for North Dakota. NDLNG's state-of-the-art processing facility will play an important role in efforts to convert natural gas feedstock into value-added liquid fuels, foster more cost-effective unconventional shale development operations and support our nation's desire to reduce its dependence on foreign fuel sources," said Jack Dalrymple, Governor of North Dakota. "We appreciate NDLNG's investment in our state's energy industry and support them in their venture to move North Dakota's rich natural gas resources to market".

Growing Demand and Market Opportunity

Currently, operators producing oil and gas from unconventional reservoirs in the Bakken face high fuel costs and environmental scrutiny from their use of diesel-powered equipment and flaring of natural gas generated by their drilling activities. Therefore, significant demand exists for locally produced LNG derived from North Dakota's abundant natural gas reserves that will help operators not only reduce energy costs but also lower carbon emissions.
NDLNG will also offer North Dakota's agricultural industry an alternative fuel choice to propane. Leveraging LNG will garner farmers and ranchers lower operating costs, reduced emissions, and the ability to use a 100 percent locally produced fuel.
"Speaking on behalf of the operator community in North Dakota, this is the type of innovative, entrepreneurial thinking we need to help meet our flaring capture goals in the Bakken... it's a great idea," said Ron Ness, President, North Dakota Petroleum Council.

Turnkey Fuel Solution

NDLNG has positioned itself as the first-in-the-market to provide a quick and cost-effective end-to-end solution to meet the demand for LNG. NDLNG will deliver significant benefits to its customers due to the company's ability to:

- Provide a local alternative fuel source to customers in the Bakken;
- Employ a proven process able to produce a cost-effective and environmentally-friendly LNG fuel product; and
- Leverage its relationship with Prairie Companies' three growth-oriented businesses that support the oil and gas industry, including housing, hauling, and water and fluids

processing, giving NDLNG customers access to a completely integrated logistical system and further reducing transportation costs.

"Slawson Exploration Company supports the development of alternative fuel solutions such as LNG that will provide immediate cost relief for rig operations," said Todd Slawson, President, Slawson Exploration Company, Inc. "We support NDLNG in this vital initiative and look forward to converting our rigs to utilize their LNG product."

Project Management Contracts

Plum Energy, a pioneer and leader in the development of small-scale LNG value chains for industrial and transportation markets, will manage development of the project as well as initial operations of the LNG production facility. SST Process Solutions, led by a highly experienced management team, has been selected as the technology provider for the liquefaction equipment. "We are delighted to assist in bringing cleaner burning, lower cost and locally produced LNG into the North Dakota market," said Kirt Montague, Chief Executive Officer, Plum Energy. "Not only will this project materially reduce fuel costs for operators and other businesses in the State, but it also will meaningfully lower levels of harmful emissions, while providing long-term, wage-scale jobs and employment opportunities in the region."

LNG Supply

NDLNG has entered into a contract with Hess Corporation (NYSE: HES) to receive residue gas as a natural gas feedstock for NDLNG's Tioga LNG liquefaction facility.

Williston Basin Petroleum Conference

NDLNG, its executives and project partners will have an active presence at the 22nd Annual Williston Basin Petroleum Conference taking place May 20-22, 2014 at the Bismarck Civic Center in Bismarck, ND. Hughes is scheduled to speak on the topic of LNG-powered rigs at 1:55 p.m. CT on May 20, 2014 and Prairie Companies and NDLNG will be exhibiting on the show floor in booths 607 and 608.

Please visit northdakotalng.com (http://northdakotalng.com) for more information.

# # #

About North Dakota LNG

Headquartered in Tioga, North Dakota, North Dakota LNG (NDLNG) is a supplier of liquefied natural gas (LNG) targeting the drilling, fracking and transportation sectors of the unconventional oil and gas industry in the Bakken. A true end-to-end offering, NDLNG provides

turn-key alternative fuel solutions for customers at any point in the LNG logistics supply chain, resulting in lower costs and reduced environmental impact. For more information, visit www.northdakotalng.com (http://www.northdakotalng.com).

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- LNG Economics 201: Effects of distance on price (http://www.plumenergy.com/lng-economics-201-effects-distance-price/)

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Exhibit B.Staff.6

UNION GAS LIMITED

Answer to Interrogatory from
Board Staff

Reference: Exhibit A / Tab 1 / Page 15

Union has indicated that it will provide liquefaction service under a new Rate L1 rate schedule. How does Union intend to proceed if it does not received approval from the Board to charge a regulated rate but does receive approval to provide the new service? In other words, Union would be free to charge a market or unregulated rate for the new LNG service.

Response:

The primary purpose of the Hagar facility is for system integrity needed to support regulated operations. There is no change to this purpose or operations as a result of this application. The proposal to provide a small amount of interruptible LNG service is a form of asset optimization which will ultimately benefit ratepayers upon rebasing. During the IRM term, the interruptible service and revenue will contribute to regulated earnings, and may affect earnings sharing. For LNG that is used exclusively as a transportation fuel and is therefore subject to regulatory exemption, a new stand-alone plant investment and related services would not be regulated. This is not the case with the Hagar facility. For LNG that is used for purposes other than transportation (i.e. non-exempt), a new stand-alone plant investment and related services should be subject to competitive market and regulatory forbearance determinations.

TAB 4

FORM A

Proceeding: EB-2014-0012

ACKNOWLEDGMENT OF EXPERT'S DUTY

1. My name is J. Stephen Gaske. I live at Fredericksburg, in the state of Virginia.

2. I have been engaged by or on behalf of Northeast Midstream LP to provide evidence in relation to the above-noted proceeding before the Ontario Energy Board.

3. I acknowledge that it is my duty to provide evidence in relation to this proceeding as follows:
   (a) to provide opinion evidence that is fair, objective and non-partisan;
   (b) to provide opinion evidence that is related only to matters that are within my area of expertise; and
   (c) to provide such additional assistance as the Board may reasonably require, to determine a matter in issue.

4. I acknowledge that the duty referred to above prevails over any obligation which I may owe to any party by whom or on whose behalf I am engaged.

Date: October 4, 2014

J. Stephen Gaske
Signature