April 14, 2015

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

Dear Ms. Walli:

RE: EB-2014-0182 – Union Gas Limited – Burlington to Oakville Pipeline Project – Interrogatory Responses

Pursuant to the Motion filed by the Ontario Greenhouse and Vegetable Growers dated April 6, 2015, Union Gas Limited ("Union") has attached a further response to each of Exhibit B.APPrO.2 and Exhibit B.OGVG.4. These responses will be filed in RESS and copies will be sent to the Board.

Union is filing these updated responses without prejudice to the process and timeline provided in the Ontario Energy Board's Procedural Order No.2 (issued April 9, 2015) which allows Union an opportunity to file a written reply April 30, 2015 on the submissions filed specific to the Motion. Union further reserves the right to make submissions in respect of the other interrogatory responses referenced in the Motion as part of its reply submission.

If you have any questions with respect to this submission please contact me at 519-436-5334.

Yours truly,

[original signed by]

Vanessa Innis
Manager, Regulatory Initiatives

cc: Zora Crnojacki, Board staff
Mark Kitchen, Union Gas
Charles Keizer, Torys
All Intervenors (EB-2014-0182)

March 26, 2015

BY COURIER & RESS

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
Suite 2700, 2300 Yonge Street
Toronto, Ontario
M4P 1E4

RE: EB-2014-0182 – Union Gas Limited ("Union") – Burlington Oakville Project Interrogatory Responses

Dear Ms. Walli,

Please find attached Union's responses to the interrogatories received in the above case. These will be filed in RESS and copies will be sent to the Board.

If you have any questions with respect to this submission please contact me at 519-436-5334.

Yours truly,

[original signed by]

Vanessa Innis
Manager, Regulatory Initiatives

Encl.

cc: Zora Crnojacki, Board staff
Mark Kitchen, Union Gas
Charles Keizer, Torys
All Intervenors (EB-2014-0182)

UNION GAS LIMITED

Answer to Interrogatory from
Board Staff

Reference: Exhibit A, Tab 4, pages 8-9

Preamble: TransCanada's settlement agreement proposes to alter the delivery points in the Union Central Delivery Area (CDA). TransCanada will designate its Burlington and Bronte delivery points within a new Domestic Delivery Area called the Union ECDA. Union's Burlington Gate Station and Bronte Gate Station that feed the Burlington Oakville system will be located within the newly created Union ECDA.

Will Union be negatively impacted as a result of TransCanada's proposal to amend the delivery point in the newly created Union ECDA? If yes, please explain how Union will be impacted.

Response:

No. Union will not be negatively impacted by these changes. The changes to the Union CDA were negotiated and agreed to with TransCanada in the Settlement Agreement and facilitate the proposed Burlington Oakville Pipeline Project ("the Project"), reducing operational risks and cost to Union's customers while also allowing for better scheduling on the TransCanada system. The proposed Project provides security of supply and enough capacity to serve the rapidly growing Burlington, Oakville and southern Milton areas over a long period of time. The Project will establish a large diameter, high capacity transmission pipeline from which Union can grow its extensive distribution system.

UNION GAS LIMITED

Answer to Interrogatory from
Board Staff

Reference: Exhibit A, Tab 5, page 1

Assuming that there were no contracting issues between Union and TransCanada, does TransCanada have the required transportation capacity to serve Union's requirements in the Burlington-Oakville area over the next five years?

Response:

Since TransCanada's annual open season held in May 2012, TransCanada has not offered incremental FT short haul transportation to the Union CDA. The only capacity made available with a delivery point of the Union CDA has been long haul transportation from Empress, which is not an economically viable alternative. Union has used third party services (both from TransCanada and the secondary market) to supply the majority of the capacity required. Union has been informed that the secondary market service will not be available post November 1, 2016. For more detail, please see Exhibit A, Tab 5, pgs. 6–8, Exhibit B.APPrO.1 b) and Exhibit B.LPMA.3 a).

UNION GAS LIMITED

Answer to Interrogatory from
Board Staff

Preamble: Union's proposed facilities are subject to economic tests as outlined in the Filing Guidelines on the Economic Tests for Transmission Pipeline Applications, dated February 21, 2013 (Filing Guidelines).

Please provide a summary of three-stage test set out in the Filing Guidelines including a statement of why the project meets the economic feasibility criteria and how each of the three stages tests contribute to overall feasibility of the proposed project.

Response:

Issue #2 of the Board's Final Issues List for the Project (dated March 10, 2015) reads:

> *"Do the proposed facilities meet the Board's economic tests as outlined in the Filing Guidelines on the Economic tests for Transmission Pipeline Applications, dated February 21, 2013, as applicable?"*

The inclusion of the words "*as applicable*" is significant as its Union's position EBO 134 is not applicable in this circumstance. The following excerpt from the EBO 134 Filing Guidelines qualifies its applicability to pipelines that would provide transmission services to move natural gas on behalf of other shippers within Ontario.

> *"These requirements apply to all Ontario Energy Board regulated gas utilities requesting approval to construct new transmission facilities. For the purpose of these Guidelines transmission pipelines are defined as any planned or proposed pipeline project that would provide transportation services* ***to move natural gas on behalf of other shippers within Ontario*** *(emphasis added). Distribution system expansion pipelines that are subject to the filing guidelines set in the EBO 188 would not be subject to the proposed filing requirement." (pg.1)*

The Project will not be used to transport gas for other shippers. In addition, the Board's EBO 134 and EBO 188 criteria are used to evaluate the economics for expansion growth projects. The proposed Project is primarily the replacement of purchased services supplying an existing demand with a pipeline owned by Union. For Union's existing demand there is no incremental revenue from customers, although there are avoided gas transportation costs for sales service customers as described at Exhibit A, Tab 8.

The appropriate economic assessment is to compare the cost of building a pipeline against the avoided cost of purchasing the services (eg. build vs buy analysis).

UNION GAS LIMITED

Answer to Interrogatory from
Board Staff

Reference: Exhibit A, Tab 7

Has Union consulted with TransCanada to explore alternatives that do not involve construction of the proposed facilities? If so, please provide the alternatives considered and the rationale, including supporting analysis, for rejecting those alternatives.

Response:

Please see the response at Exhibit B.Staff.1-2 which addresses TransCanada capacity availability. The Settlement Agreement negotiations included discussions regarding the proposed Project. Please also see the response at Exhibit B.LPMA.3 a). No other alternative was brought forward at that time. However, to explore the economics of alternatives Union assumed that capacity was available based on the Settlement Tolls excluding the abandonment surcharge, as described at Exhibit A, Tab 7.

The abandonment surcharge further increases the cost of the commercial options by approximately $5.5 to $10.5 million (on an NPV basis) with longer paths having a higher abandonment surcharge.

In all cases, building the Project was a more economic option to provide security of supply and enough capacity to meet demand growth than purchasing a service from TransCanada or other third parties, as shown at Exhibit A, Tab 7, Table 7-5.

UNION GAS LIMITED

Answer to Interrogatory from
Board Staff

Reference: Exhibit A, Tab 11, Schedule 2

Preamble: Union's evidence filed with the application indicates that the Summary of Comments from public, agency consultation and the Ontario Pipeline Coordinating Committee review would be filed when received.

a) Please file a complete summary of comments Union has received to date.

b) Please identify any outstanding concerns and issues to date and describe Union's plans to address these concerns and resolve the issues.

Response:

a) and b) Attachment 1 includes all OPCC comments received to date and how Union proposes to address these comments.

OPCC Review Summary

Burlington-Oakville Pipeline Project – Revised Environmental Report

RECORD	STAKEHOLDER	COMMENT SUMMARY	RESPONSE SUMMARY
1	• **Leah Chishimba**, Environmental Planner, Conservation Halton • Email dated December 12, 2014	Identified wetlands in the vicinity south of Burnhamthrope road and north of Dundas Street, and would like to schedule a site visit in early 2015 to become familiar with the site.	Comments noted. No response required.
2	• **Sandy Acchione** • Email dated January 12, 2015	Encouraged Union Gas to stay on the east side of ninth line, north of Burnamthorpe. The east side places the pipeline in a municipal or provincial ROW whereas on the west side the route completely crosses his frontage which will have significant issues for his development.	• Mark Knight, Stantec Consulting Ltd. • Email dated January 16, 2015 Explained that the pipeline is planned to be located within the ultimate road allowance of Ninth Line, and therefore to avoid the need for any permanent easement on Mr. Acchiones property. Should the need arise for a permanent easement, Union Gas understands his desire to have this as narrow as possible and to have no encumbrances on the future use of his property.
3	• **Leah Chishimba**, Environmental Planner, Conservation Halton • Letter dated February 3, 2015	Provided comments on engineering, aquatic ecology, terrestrial ecology, and hydrogeology.	• Mark Knight, Stantec Consulting Ltd. • Letter dated March 18, 2015 Responded to comments regarding engineering (watercourse crossing methods and restoration), aquatic and terrestrial ecology (2015 field studies), and hydrogeology.
4	• **Thomas**	Provided comments	Comments noted. No

	Nightingale, Watercourse Management Coordinator, City of Mississauga • Email dated February 12, 2015	regarding the Mississauga Green System and Parkway Belt West Plan. Requested that drainage features and floodlines not be altered in a way that could negatively impact adjacent properties. Noted that a RSC was filed in 2002 for a property along Ninth Line just south of Burnhamthorpe Road West.	response required.
5	• **Laureen Choi,** Senior Planner, Halton District School Board • Email dated February 18, 2015	Noted that the comments from their June 12, 2014 letter remain the same.	Comments noted. No response required.
6	• **Ron Glenn**, Director of Planning Services and Chief Planning Official, Halton Region • Letter dated February 20, 2015	Provided comments on the preferred route, Revised ER, Regional Infrastructure Requirements/Approvals. Expressed that the Region has no objection to the preferred route.	• Doug Schmidt, Union Gas Limited • Letter dated March 18, 2015 Provided details regarding well monitoring, significant woodlands, restoration and tree replacement, and approvals for road crossings.
7	• **Ray Green**, Chief Administrative Officer (CAO), Town of Oakville • Letter dated February 9, 2015	Expressed support of the route analysis and the conclusions reached in the analysis as set out in the ER for the preferred route.	Comments noted. No response required.
8	• **Thomas Nightingale,** Watercourse Management Coordinator, City of Mississauga • Email dated February 26,	Provided comments from the Community Services Department, Parks & Forestry Division, Park Planning section. Stated that the two ball diamonds located at the Ninth Line Sports Park (city owned lands) will require appropriate measures to ensure that they are	• Doug Schmidt, Union Gas Limited • Email dated February 27, 2015 Commented that once details are confirmed, Union will make contact to discuss any concerns.

	2015	protected and not impacted.	
	• **Leah Chishimba**, Environmental Planner, Conservation Halton • Letter dated March 17, 2015	Provided comments on wetlands, the East Lisgar branch of Sixteen Mile Creek, Eastern Milksnake, Great Blue Heron colony, and Terrestrial Crayfish.	Field programs will be reviewed as required.

From: Leah Chishimba
To: Knight, Mark
Subject: RE: Burlington-Oakville Pipeline Project - Revised Environmental Report
Date: Friday, December 12, 2014 3:33:09 PM

Hi Mark,
Thanks for the heads up. We appreciate the effort put in trying to address CH comments; I will be on the lookout for the letter and CD. We would appreciate 5 hard copies of the report.

I was actually going to get back to you later today with feedback from staff on the last information session notice you sent us. We reviewed the attached plans submitted with the notice and based on our CH ARL mapping, staff have concerns with the location of the revised preliminary route location where it runs parallel to the Hwy 403 within the vicinity south of Burnhamthrope road and north of Dundas Street. Our ARL mapping identifies some wetlands within that location as well as Hydrologic connections and staff have requested that it would be helpful if a site visit to this location could be scheduled in the New Year. However, now that you will be submitting the revised ESR, I will confirm with technical staff if they would prefer we schedule the site visit early next year so that we are familiar with the site and if there any comments arising from the site visit these should be incorporated into the ESR comments. I can confirm that with you next week.
Thanks,
Leah.

From: Knight, Mark [mailto:Mark.Knight@stantec.com]
Sent: December-12-14 10:39 AM
To: Leah Chishimba
Subject: Burlington-Oakville Pipeline Project - Revised Environmental Report

Hi Leah,

A heads up that you will be receiving a letter regarding the revised Environmental Report for the Burlington-Oakville Pipeline Project. The letter will just include 1 CD. How many hard copies can I forward to you?

Also, we have tried our best to answer the comments provided by your staff on the original ER, though I think since that time there has been a lot more interaction between CH/Stantec/Union Gas for Hamilton-Milton, so perhaps a better understanding of the process and your needs on all our parts.

Also, an FYI that we did get some aquatic and terrestrial field surveys completed in 2014 for the north half of the route (the portion that did not change). In January we will be working on writing up the results and providing recommendations for field surveys in 2015. I'll make sure this is provided for your review/comment (along with providing to the municipalities and MNRF).

Regards,

Mark

Mark Knight, MA, MCIP, RPP

Environmental Planner - Assessment, Permitting and Compliance
Stantec
70 Southgate Drive, Suite 1 Guelph ON N1G 4P5
Phone: (519) 836-6966 x218
Cell: (519) 400-9618
Fax: (519) 836-2493
Mark.Knight@stantec.com

Celebrating 60 years of community, creativity, and client relationships.

From:	Iamarino, Mark
To:	Iamarino, Mark
Subject:	FW: Burlington Oakville Pipeline Project
Date:	Monday, January 19, 2015 2:10:30 PM

From: Knight, Mark
Sent: Friday, January 16, 2015 11:13 AM
To: 'SANDY ACCHIONE'
Cc: hrichardshaw@gmail.com; Paul Anderson; 'Zora.Crnojacki@OntarioEnergyBoard.ca'
Subject: RE: Burlington Oakville Pipeline Project

Hi Sandy,

Thank you for your email.

As discussed verbally, Union Gas is undertaking discussions with the Region of Halton regarding the final detailed design placement of the pipeline. The plan is for the pipeline to be located within the ultimate road allowance of Ninth Line, and therefore to avoid the need for any permanent easement on your property. Should the need arise for a permanent easement, we understand your desire to have this as narrow as possible and to have no encumbrances on the future use of your property.

I will make sure you are added to the project contact list, and myself or Union Gas will certainly provide you an update once detailed design is finalized.

Regards,

Mark Knight, MA, MCIP, RPP
Environmental Planner - Assessment, Permitting and Compliance
Stantec
70 Southgate Drive, Suite 1 Guelph ON N1G 4P5
Phone: (519) 836-6966 x218
Cell: (519) 400-9618
Fax: (519) 836-2493
Mark.Knight@stantec.com

From: SANDY ACCHIONE [mailto:sandyacchione@rogers.com]
Sent: Monday, January 12, 2015 8:52 AM
To: Knight, Mark; zara.crnojacki@ontarioenergyboard.ca
Cc: hrichardshaw@gmail.com; Paul Anderson
Subject: Burlington Oakville Pipeline Project

Mark you recently sent a communication to my partner Richard Shaw on behalf of 2122882 Ontario Inc regarding the above project. We own the lands on the north west corner of Ninth line and Burnamthorpe.

Further to my previous communication with Union Gas on two points;
1.The realignment of Burnamthorpe would seem to create an issue for your route
2. Moving the pipe onto the east side of ninth line;

I note the realignment now proposed deals with our first point.

We continue to strongly encourage you to stay on the east side of ninth line as you progress north of Burnamthorpe. The east side puts you in a municipal or provincial ROW whereas on the west side the route completely crosses our frontage which will have significant issues for our development. Given you have an alternative- public ROW we do not understand the need to cross over at the intersection versus further down as you approach the station.

I will not be able to attend the public session but if you can include me in all future communications.

Zara and Mark can you please confirm receipt of this communication. If you would like to discuss this further I can be reached at the number below.

With Best Regards,

Sandy Acchione CPA, CA - MBA
416-804-5958
35 Winterport Court
Richmond Hill ON
L4C 9V6

Conservation Halton

905.336.1158
Fax: 905.336.7014
2596 Britannia Road West
Burlington, Ontario L7P 0G3
conservationhalton.ca

Protecting the Natural Environment from Lake to Escarpment

February 3, 2015

MAIL & EMAIL

Mr. Mark Knight
Environmental Planner
Stantec Consulting Limited
70 Southgate Drive, Suite 1,
Guelph, Ontario N1G 4P5

Dear Mr. Knight:

Re: Burlington-Oakville Pipeline Project-Revised Environmental Report
Conservation Halton File: MPR 632
Union Gas

Conservation Halton staff received the '*Burlington-Oakville Pipeline Project Revised Environmental Report*', dated December 11, 2014, prepared by Stantec Consulting Ltd. Staff have completed review of the document and offer the comments listed below. Please note that the comments below are in relation to the previous comments provided in Conservation Halton's letter of September 3, 2014 and follow the same numbering sequence as outlined in the letter.

Proposal

Staff is of the understanding that Union Gas is proposing to construct a new natural gas pipeline connecting the Dawn-Parkway pipeline transmission system at the Parkway West Compressor station, to the existing Burlington-Oakville distribution system at the Bronte Gate Station. The proposed project includes construction of a 20 inch (508mm) diameter steel pipeline approximately 11.7 kilometers long. Conservation Halton staff reviewed the previous environmental report and provided comments in September, 2014. Staff note that the study area has since been expanded eastwards to assess additional alternative routes and the preferred route has been revised based on the feedback received during the OPCC review.

Comments:

Engineering Comments

1. ***Section. 1.1. Project Description:***

   Staff note that the project description does not indicate installation of two stations (metering and odourization and connection). Please confirm if the project extent has been

changed. Please identify locations of the stations on the plans if required. Staff require that the stations be located outside of the areas regulated under Ontario Regulation 162/06.

2. ***Section 4.2.5 Natural Hazards:***

(Staff note that Sec. 4.2.5 of this revised report are similar to Sec 2.3.2. of the initial report, staff reiterate the comment and provide further recommendations).

This section identifies two hazards i.e. seismic activity and flooding. Natural hazards also include hazards associated with erosion, unstable bedrock and unstable soils. Please note that at minimum erosion hazards should be included in this section and the impact on the erosion hazard must be discussed. The erosion hazard includes valley walls (confined riverine systems) and meander belt (unconfined riverine systems) and must be addressed accordingly.

Staff noted that the alignment of the proposed pipeline is parallel to East Branch Lisgar of Sixteen Mile Creek between Derry Road and Lower Base Line. Such location (parallel to the watercourse) may interfere with the erosion hazard associated with the watercourse. Please note that according to Ontario Regulation 162/06 no new development is permitted within the erosion hazard, therefore, a fluvial geomorphologist should be retained to confirm the meander belt hazard (erosion hazard associated with the watercourse).

- Staff recommend that the applicable hazards be identified and confirmed for each crossing. Further, staff require that applicable hazards be identified for each section of the pipeline that will run within the regulated areas.

- Due to the low risk systems, the minimum acceptable depth of cover between the new pipe and the bottom of the watercourse for the width of the meander belt is 1.5 m. Such depth of installation must be considered and applied at each crossing location.

- Please note that to address the flooding hazard in the long-term perspective, the project at the minimum should indicate that the existing grades will be maintained. It is expected that the entry-exit pits for the trenchless crossings will be located outside of the floodplain hazard, however, no material should be stockpiled in the floodplain during the construction.

3. ***Table 4.1. Watercourses in the Study area***:

It is understood that the intent is to undertake an open cut method for the watercourse crossings. Please note that according to Sec. 3.51 (g) of our Policy Document, "the construction of pipe or service pipelines must maintain the pre-development configuration of the floodplain and valley walls and minimize the disturbance to existing vegetation. Directional drilling or boring should be utilized for all permanent flowing streams". Please note however that after reviewing the revised preferred route and assessing the watercourses subject to future crossings, staff would be in a position to

support the proposed method (open cut) for the proposed crossings once the depth of installation is confirmed (refer to comment under Sec. 4.2.5). Please note that a permit under Ontario Regulation 162/06 will be required for each crossing of the watercourses regulated by Conservation Halton pursuant to Ontario Regulation 162/06.

4. ***Section 4.3.3. Conservation Areas:***
Please note that a permit to access lands owned by Conservation Halton will be required. Please contact Niall Lobley at 905 336 1158 ext. 2256 or nlobley@hrca.on.ca to obtain the requirements for a land access permit.

General comment.

- Please also confirm the access along the proposed route. Please confirm if any temporary crossings will be required.

5. ***Section 4.1.1 Construction:***

a. Staff recommend that the trench dimensions (i.e. minimum and maximum depth and width) be identified and discussed in the report. Such information will help with quantification of the generated material, and will be useful in Soil Management Plan preparation.

b. Staff recommend that the "Management of Excess Soil – A Guide for Best Management Practices" Guideline, prepared by MOE dated January 2014 be used in preparation of the Soil Management Plan for the project. Please refer to a link below:
http://www.ontario.ca/environment-and-energy/management-excess-soil-guide-best-management-practices

c. Staff request additional details on the hydrostatic test, details on the source of water and discharge procedure should be identified. Please note that depending on the location of the discharge, a permit under Ontario Regulation 162/06 may be required.

d. Staff recommend that emphasis should be placed on the aspect of removal of sediment and erosion control measures prior to closure of the project.

6. ***Section 4.2.2. Physiography, Topography & Surficial Geology:***
Staff reiterates our previous comment.

7. Please refer to comment # 2.

8. Staff reiterate the previous comment and please also refer to comment # 28 and #30.

9. ***Figure 1- Appendix G: Mitigation Photomosaic Burlington Oakville Pipeline:***
Staff note that an existing wetland located at the connection to the future Parkway West Compressor station is not indicated on Figure 1.

10. General:

Please confirm the access along the proposed route and please confirm if any temporary crossings will be required.

Aquatic Ecology Comments

11. Table 2.2: Watercourses in the Study Area:

Please note that up-to-date thermal regime data exists for the many watercourses in the study area within Conservation Halton's jurisdiction. Please ensure that the thermal regime data quoted in this table is up to date. The sampling location for the thermal regime in Joshua's Creek is near the mouth of Lake Ontario and is not applicable given the proposed location for the pipeline installation. The deployment of a temperature data logger would need to be undertaken to determine the thermal regime of Joshua's creek within the study area.

12. Section 2.4.3 Aquatic Species at Risk:

It is anticipated that permits under the Provincial Endangered Species Act will be required for some of the crossings of Sixteen Mile Creek that contain Silver Shiner. Please contact MNR as soon as possible to obtain and fill out an information gathering form. The crossings of these watercourses may also require approval from the Department of Fisheries and Oceans under the Federal Species at Risk Act (SARA). Staff suggest that the proponent contact Dave Balint at the Canada Centre for Inland Waters in Burlington for any requirements necessary under this legislation.

13. Section 5.3.1 Fish and Aquatic Habitat:

a) Potential Effects:

The following temporary and long term impacts to aquatic habitats and communities need to be added to the report.

During Construction:

1. This section needs to include potential effects from dewatering for hydrostatic testing and dewatering necessary due to the presence of the pipeline trench.
2. Please confirm that no machinery will be crossing any of the watercourses as part of the pipeline installation process.
3. Please include distances away from the banks of the creeks where pipeline installation pits will be located.
4. Please provide a commitment that pipelines will only be installed by trenchless methods under all watercourses within the Conservation Halton jurisdiction.

Long Term and/or Permanent Effects on Aquatic Habitat and Aquatic Biota:

1. Permanent loss of shrub and tree vegetation within the riparian zones and floodplains associated with all watercourses in the pipeline study area. These areas need to be quantified and described in the report.
2. There is also the potential for future day-lighting of the natural gas pipeline as a result of scour of the bed and/or banks of the creeks the pipeline will be installed underneath. If day-lighting occurs, hardening of the bed and banks of the creek will likely be necessary and is a permanent negative effect on aquatic habitat.

3. The possibility of future spills and leaks as the pipeline ages or if it becomes damaged due to future work on or adjacent to the pipe.
4. There could be future limitations on the types of road crossings of the creek associated with the pipeline (e.g. need to cross the creek with closed bottom culverts only) to protect the existing pipeline infrastructure. This is a negative impact on the watercourse and needs to be factored into the environmental assessment.

b) Mitigation and Protective Measures:
Please provide mitigation measures to address all impacts during construction and over the long term on aquatic habitat and aquatic life mentioned above.

14. Section 4.2.6 Groundwater:

Potential Effects - Hydrostatic Testing and Trench Dewatering:
Preference is that municipal water be used to complete the hydrostatic testing for the entire length of the pipeline within Conservation Halton's jurisdiction. This is requested because water quantity is a limiting factor to fish community productivity in all of Conservation Halton's jurisdiction. Staff request if it would be feasible to direct all of this water into a local sanitary sewer system to avoid having chlorinated water enter any natural watercourses containing aquatic organisms? If this is not feasible, it is requested that options be presented that will prevent the discharge of chlorinated water into any natural watercourses.

15. Section 4.2.6 Groundwater:

Mitigation and Protective Measures:
A comprehensive erosion and sedimentation control plan, that includes details about operations, maintenance and replacement of S&E tools and measures, will be implemented at the detailed design stage. This plan should also include a plan outlining soil handling and stockpiling measures. Once stockpiled soil is replaced around the pipeline right of way, it is important that the living organisms are still alive within the soil to facilitate successful revegetation of the pipeline right of way with appropriate types of vegetation.

16. Section 4.2.6 Groundwater:

a) Mitigation and Protective Measures & Hydrostatic Testing and Trench Dewatering:
Staff previously requested options for treating water to rid it of substances such as chlorine and fluoride prior to being discharged into the watercourse. Please comment.

17. Section 4.4.6 Waste Management:

a) Potential Effects:
Staff previously requested more information to describe the pathway in which soil and groundwater contamination could occur from the pipeline installation. Please provide more details on how this type of contamination may occur.

18. Section 5.5.6 Waste Management:

a) Mitigative and Protective Measures:
Staff previously requested more details on the types of waste materials that could be left onsite during the pipeline installation process.

19. ***Table 5.1: Summary of Potential Effects and Recommended Mitigation and Protective measures:***
Addressed.

20. ***Section 6.0 Cumulative Effects Assessment:***
Staff previously commented that project decommissioning and abandonment are one of the effects of a pipeline project and should be considered in the cumulative effects assessment of the project report.

Staff also suggested that the removal of existing or potential future riparian vegetation for a distance of 30 metres on each side of each watercourse at each watercourse crossing and the fact that this distance of land from the watercourse for the width of the pipeline right of way will need to be maintained without trees or shrubs in perpetuity a cumulative impact of the project. It is suggested that the area of 30 metres times the right of way of the pipeline times two (to represent the area on each side of the creek) times the number of watercourse crossings within CH's jurisdiction be calculated. It is suggested that a commitment to re-vegetate an equal area to the specifications of Conservation Halton's Tree Planting Guidelines be made. Ideally, the re-vegetation should be undertaken on the same watercourse or in the same municipality where it is needed in a riparian setting. Please comment.

21. Staff reiterated our previous comment. Please also refer to the above comment #20.

22. ***Section 6.1 Environmental Studies:***
Section 6.1.1 Watercourse Crossings:

Staff concurs with the need for a field investigation to review the number of watercourse crossings and watercourse and aquatic characteristics. This information needs to be undertaken as soon as possible with the results being published in this project report, prior to the initiation of the detailed design stage of the project. Staff noted that the report indicated 11 watercourse crossings, however only 8 crossing are noted in Appendix F that are relevant to the proposed pipeline. One on Figure 4 of 7 is not relevant to the installation of the pipeline. Please indicate the locations of watercourses relevant to the pipeline installation. Please note Conservation Halton prefers a trenchless installation of the pipeline at all watercourses regardless of their flow permanency. Many of the smaller watercourses within the preferred pipeline route are intermittent and are vegetatively controlled. It is preferred that the herbaceous vegetation lining these channels is not disturbed as it plays an important role in maintaining the form and functions of these watercourses.

23. ***Section 7.0 Monitoring and Contingency Plans:***
Section 7.1 Monitoring:
The previous comment was not addressed.
As indicated in the Ontario Energy Board's (OEB) Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 6th Edition (2011), section 6.2 Monitoring, "To ensure that the construction site is returned to pre-construction conditions as soon as possible, the Board requires that monitoring reports be prepared following construction, to determine the success of the

restoration effort." and that "The reports are designed to provide information on actual impacts related to construction and operation and on success of mitigation measures applied. The monitoring results provide a useful basis for impact prediction and mitigation in future projects." In order to determine any related impacts of the construction of the pipeline on the watercourses staff request water quantity, water flow and water temperature measurements to be completed as part of a monitoring program for a period of one year prior to construction, during construction and for a period of three years post construction.

24. ***Appendix C GIS Data Results:***
Previous comment was not addressed.
The GIS Data Results do not easily correlate to the route figures provided in Appendix B. A more clear method of naming the potential routes in Figure 2 that correspond to the table found in Appendix C is requested. Staff suggests a similar format as Figure 1 in Appendix B. In addition, the new preferred route is not included. Please include evaluation in next submission.

25. ***Appendix E Trafalgar Road Proposed Pipeline Location:***
Please disregard the previous comment as there is no longer an issue since the revised preferred route is east of Trafalgar Road.

26. ***Appendix F DFO-OGLA/UGL Agreement 2008:***
Comment addressed.

Additional Comment

Section 4.2.4 Soil and Soil Capability:
Mitigation and Protective Measures:
Please provide dust suppressants details regarding the type of retardant used.

Terrestrial Ecology Comments:

27. Comment addressed. Staff note that the preferred route has been revised and appreciate the opportunity to provide additional comments as required.

28. ***Section 4.3.3. Designated Natural Areas and Vegetation - Wetlands:***
Previous comment not addressed. While the report includes minimal discussion regarding the Provincially Significant Wetlands (PSWs) and Locally Significant Wetland (LSW) it does not contain enough information on the additional regulated wetlands within the study area. A more thorough discussion regarding these features must be included.

Staff note the addition of the following commitments at the Detailed Design Stage regarding natural areas (Mitigation and Protective Measures, Page 4.2.3):

- Detailed design of the pipeline should be reviewed to avoid wetlands, as possible and minimize disturbance to wetlands were unavoidable (Bullet #1)

- Detailed design should include delineation of wetland in the field by Stantec and CH (Bullet #2)

Ontario Regulation 162/06 and Conservation Halton's Policies, Procedures and Guidelines for the Administration of Ontario Regulation 162/06 and Land Use Planning Policy Document provides direction as it pertains to these features, specifically Section 3.51 Public Infrastructure – Utilities, Trails and Transportation. This policy indicates, among other things, that crossings of wetlands may be permitted for public infrastructure provided that the need for the project has been demonstrated and there is no reasonable alternative, and the area of construction disturbance will be kept to a minimum. While staff recognize there is demonstrated intention to minimize disturbance to the wetlands through commitments at the Detailed Design stage, the Environmental Report continues to propose open trench methodology for the length of the pipeline and associated wetland crossings which would not be in keeping with the policies cited above. Staff will require that the feasibility of trenchless installation be explored for wetland crossings, and that a discussion regarding trenchless methodology be included in the next submission. If determined that trenchless installation is an appropriate and feasible solution for wetland crossings, it should be added to the Environmental Report (ER) as a commitment and carried forward to Detailed Design. The pertinent appendices should also be revised.

29. ***Section 4.3.4. Habitat for Species of Conservation Concern and Species at Risk:***
Previous comment partially addressed. Staff appreciate that Habitat for Species at Risk (Endangered and Threatened Species) has been given its own section.

Staff continue to be concerned that no specific surveys for species at risk or wildlife in general have been conducted and yet the revised preferred alternative has been selected, which may have implications on a yet to be identified species or their associated habitat. We note that Section 4.3.3 in the Potential Effects section indicates that additional field surveys for wildlife will be undertaken prior to construction. We continue to question why these surveys would not occur at this stage as revisions to the pipeline alignment may be required in order to avoid a potential impact on a species or habitat. In addition, no discussion is provided to outline the next steps should something of significance be identified during these surveys. Please clarify.

30. ***Section 4.3.3 Designated Natural Areas Vegetation-Wetlands:***
Previous comment not addressed. Staff previously commented that discussion regarding wetlands other than evaluated wetlands be included in the report as there are a number of regulated wetlands within the project footprint which require discussion and the discussion of these features is very limited within this section. As indicated in Section 4.3.3 Designated Natural Areas and Vegetation - Mitigation and Protective Measures (Page 4.2.3) there is a commitment at the Detailed Design stage to include delineation of wetlands in the field by Stantec and CH. Please provide more context regarding the additional wetland features within the study area.

31. ***Section 4.3.3 Designated Natural Areas Vegetation section and Section 4.3.4 Wildlife and Wildlife Habitat:***
Previous comment not addressed. The Potential Effects paragraphs of these sections indicate that additional field surveys for vegetation and wildlife will be undertaken prior

to construction. We continue to question why these surveys would not occur at this stage as revisions to the pipeline alignment may be required in order to avoid a potential impact on a species or habitat. In addition, no discussion is provided to outline the next steps should something of significance be identified. Please clarify.

32. Previous comments partially addressed. Staff commented previously that under the Mitigation and Protective Measures paragraph of Section 4.3.4 Wildlife and Wildlife Habitat (Bullet #4) that instead of a "licensed ornithologist" that a "qualified ecologist" will be used to receive clearance for work during the breeding bird season. Staff can accept this designation.

As a reminder, all tree or vegetation removal should be completed in compliance with the Migratory Birds Convention Act. Tree and vegetation removal should be completed outside of the bird breeding season (i.e. Avoid May 01 – July 31). However, staff would like to emphasize that many species of birds precede and exceed the breeding bird window (e.g. early April, mid-August to early September), and that nesting surveys prior to removals do not reliably identify all nests in the vicinity of the proposed works. If removals are to take place within the breeding bird window, consultation with the Canadian Wildlife Service (CWS) should take place. It is the proponent's responsibility to avoid contravention of the MBCA.

In addition, staff note that general setback distances have been specified in this bullet (i.e. 5-60m) which are posted on the Environment Canada website, generally relating to songbird nest distances. However, Section 4.3.4 Wildlife and Wildlife Habitat – Potential Effects paragraph (shown in Appendix A, Figure 8) identifies three (3) Great Blue Heron nesting colonies in the broader study area, one of which appears to be in proximity to the proposed pipeline alignment.

Staff note that Figure 8 depicts the colony location within Core 11 (refer to Figure 6.3.12, North Oakville Creeks Subwatershed Study [NOCSS], August 2006, rev. 2007), south of Burnhamthorpe Road, north of Dundas Street East, and west of Ninth Line. Staff are unaware of a colony located within Core 11, and no information on this colony is provided in NOCSS. This species nests early in the year (March-April) and can be quite sensitive to disturbance. CWS and the MNRF should be consulted with regards to this colony, its proximity to the proposed pipeline, and recommendations for appropriate setbacks if required. Please provide more discussion on this colony, and any mitigation measures that are required.

33. Previous comment partially addressed. Staff note that a reference has been provided to our Landscaping and Tree Preservation Guidelines (2010) (http://www.conservationhalton.on.ca/uploads/ch_landscapingtreepreservationguidelines_sept2013.pdf) for restoration of any regulated lands in Section 4.3.3 Designated Natural Areas and Vegetation – Mitigation and Protective Measures (Page 4.24), and that a commitment has been made to develop a restoration / re-vegetation plan at the detailed design and permit application stages for review by CH, CVC and landowners. We note that Bullet #11 indicates that "Union Gas should undertake their standard 2:1 tree replacement program, should native trees be removed". How will this standard be

applied along the project length? Is it only for areas that are not regulated by a Conservation Authority? Will it be used to further enhance restoration standards already in place (e.g. Town of Oakville standards)? Please clarify.

34. Previous comment addressed.
Staff note that Section 4.3.3 Designated Natural Areas and Vegetation – Mitigation and Protective Measures (Bullet #13, Page 4.24), includes a commitment to monitor vegetation for survival, and in areas of severe dieback, dead and diseased planted vegetation should be replaced.

35. **Additional Comment:**
Staff note that in Section 4.3.4 Wildlife and Wildlife Habitat – Mitigation and Protective Measures (Page 4.31) several bullets mention mitigation measures regarding wildlife in the right-of-way and potential encounters. Staff suggest that a commitment be added the Detail Design stage to develop a wildlife encounter protocol for use by the contractor on-site. This will be helpful to identify potential Species at Risk (SAR), procedures if wildlife are encountered, and ease of reference for contacting the on-site inspection team.

36. **Additional Comment:**
Section 4.3.4 Wildlife and Wildlife Habitat – Mitigation and Protective Measures (Bullet #1, Page 4.30). If precautionary measures such as equipment washing stations are indeed found to be necessary to mitigate the spread of invasive species, staff recommend that the "Clean Equipment Protocol for Industry Inspecting and cleaning equipment for the purposes of invasive species prevention" (Ontario Invasive Plant Council, March 2013) be used as a guideline (http://www.ontarioinvasiveplants.ca/files/CleanEquipmentProtocol_Mar152013_D3.pdf).

37. **Additional Comment:**
Section 4.3.4 Wildlife and Wildlife Habitat – Mitigation and Protective Measures (Bullet #2 & #3, Page 4.30): These bullets indicate that construction within 30m of wetland communities during amphibian breeding season (March 1 to June 30) should be avoided where practical, and that only work space adjacent to wetland habitat should be delineated. Staff require that work space adjacent to all natural areas (e.g. woodlands, wetland, creek etc.) be delineated and fenced off to prevent inadvertent intrusion by equipment into sensitive or breeding habitat (e.g. birds, amphibians). Fencing off these areas (preferably prior to breeding season beginning) will essentially exclude wildlife from entering the work zone, and reduce the risk of encounters and possible mortalities.

Hydrogeology Comments:

38. **Section 4.2.6 Groundwater:**
Recent study for Union Gas's Parkway West Compressor Station identified artesian groundwater conditions on that site. A portion of the preferred route of the proposed pipeline crosses an area of similar surficial geology and similar conditions may be experienced. Section 4.2.6 should include a discussion of the expected/known vertical groundwater conditions along the pipeline route and potential groundwater/surface water interactions in watercourses and wetlands. The potential effects from associated

construction or long term impacts on groundwater conditions, and proposed mitigation and protective measures should be discussed.

39. **Section 6.1 Environmental Studies:**

- It is recommended that a field investigation be included to address the lack of discussion in Section 4.2.6 on groundwater/surface water interactions and the potential for artesian conditions along the pipeline route.

- It is recommended that a field investigation be included to characterize the wetlands on and near the preferred pipeline route so we understand better the potential impacts to form and function.

40. **Section 7.2 Contingency:**

A contingency plan should be in place to address artesian groundwater conditions, should they exist, to ensure the aquifer is not depressurized resulting in adverse impacts to watercourses, wetlands, and domestic wells.

41. **Reference:**

Reference to Hamilton-Halton Source Protection Region, 2012 should be changed to Halton-Hamilton Source Protection Committee, Assessment Report for the Halton Region Source Protection Area, Version 2.1, January 2012.

Conservation Halton staff appreciate you involving us in the review of this Environmental Report for the project and staff look forward to working with Stantec Consulting and the proponent (Union Gas) through the review process.

We trust the above is of assistance. If you require additional information please contact the undersigned at extension 2266.

Yours truly,

Leah Chishimba M.A.E.S
Environmental Planner, Watershed Management Services

March 18, 2015
File: 160960763

Attention: Leah Chishimba
Conservation Halton
2596 Britannia Road West
Burlington, ON L7P 0G3

Dear Ms. Chishimba,

Reference: Burlington-Oakville Pipeline Project – Revised Environmental Report
Union Gas Limited
Conservation Halton File: MPR 632

Thank you for taking the time to review the Revised Environmental Report prepared for the Burlington to Oakville Pipeline project (the 'Project'). Union Gas and Stantec appreciate the commitment of both time and energy that Conservation Halton staff have provided on the Project.

In regards to your letter dated February 3, 2015, below please find responses to your various comments.

Engineering Comments:

1. **Section 1.1 Project Description:**

   No new stations are proposed. The northern connection point will be the Parkway West Compressor Station (currently under construction). For the southern connection point Union Gas is proposing to expand the existing Bronte Gate Station, and will work with the Town of Oakville to obtain all necessary planning approvals.

2. **Section 4.2.5 Natural Hazards:**

   Erosion hazards are identified in Section 4.2.2 of the ER on page 4.5.

   Stantec has completed permitting and inspection for numerous water course crossings as a result of pipeline construction and pipeline maintenance activities. Given that the watercourse banks and bottom as surveyed are to be returned to their original grade and that the flood plain will not be altered, impacts to stream morphology are not anticipated. In order to confirm that the morphology of the water course is not altered cross section profiles will be taken 10m upstream and downstream of the crossing location prior to and after the completion of construction. A longitudinal profile will also be taken length wise along the center of the watercourse. Union Gas' standard depth of cover requirements at watercourses is in alignment with the recommendation of Conservation Halton (1.5 m).

Existing grades will be restored post-construction. As reflected in the ER, work spaces such as entry pits and temporary land uses such as stockpiling will be located outside of the floodplain to the extent possible based on the constraints of the topography at each crossing location.

3. **Table 4.1 Watercourses in the Study Area:**

Please see response 2. Conservation Halton's support of the proposed open cut crossing method is appreciated. Given constructability constraints it is anticipated that certain watercourses may be crossed using a trenchless method. Given the size of the pipe diameter (20") it is more conducive to trenchless crossing methods than larger diameter pipe. Union proposes to organize a site visit with Conservation Halton staff in 2015 to review the pipeline route and crossing methods. Union Gas will obtain required permits under O. Reg. 162/06 for each watercourse crossing regulated by Conservation Halton.

4. **Section 4.3.3 Conservation Areas:**

Union Gas will obtain any required permits to access lands owned by Conservation Halton.

Temporary access will be required at watercourse crossings. The location of any temporary crossings will be determined during the detailed design stage and noted in the O. Reg. 162/06 Permit Application.

5. **Section 4.1.1 Construction:**

a. Trench dimensions, including minimum and maximum depth and width will be noted in the O. Reg. 162/06 Permit Application.

b. Conservation Halton's comments have been noted.

c. Details of the hydrostatic test, including source of water, discharge location and procedure will be noted in a Permit to Take Water (PTTW). At this time Union Gas is planning to take water from either a municipal source or from one of the newly constructed ponds at the Parkway West Station site. Discharge would be contained to one of the ponds at Parkway West and completed in such a manner as to not create any erosion. All necessary permits with regard to water taking and discharge will be obtained.

d. The removal of sediment and erosion controls is part of construction clean-up and restoration, and is noted in Section 4.1.1 of the ER on page 4.3. Union will ensure that sediment and erosion controls are removed from the right-of-way once the areas being protected are confirmed to be rehabilitated.

6. **Section 4.2.2 Physiography, Topography & Surficial Geology:**

   Comments regarding erosion and sediment control are noted. A geotechnical consultant will be retained as necessary. Please see response 2 regarding trenchless crossing. Details will be provided at the time of application, and given the size of pipe diameter (20") the proposed pipeline is more conducive to drilling.

7. Please see response 2.

8. All wetlands, including unevaluated wetlands, will be identified during field studies. The results will be summarized in a subsequent Natural Heritage Survey Results Report. The Report will identify all appropriate mitigation and protection measures and will be shared with the appropriate agencies and municipal staff for review and comment.

   Wetland crossing methods will be determined during the detailed design stage.

   Please see response 2.

9. **Figure 1 – Appendix G: Mitigation Photomosaic Burlington Oakville Pipeline:**

   Please see response 8.

10. Please see response 4.

Aquatic Comments:

11. **Table 2.2 Watercourses in the Study Area:**

    A request for up-to-date thermal regime data was made to Conservation Halton and has not been received to date; any updated information received will be incorporated into the 2015 Natural Heritage Survey Report. Alternatively, the data available in the watershed reports and LIO was used.

12. **Section 2.4.3 Aquatic Species at Risk:**

    Recommendations are appreciated and noted. Permitting requirements will be known following the completion of field studies planned for 2015.

13. Section 5.3.1 Fish and Aquatic Habitat:

a. Potential Effects

During Construction:

1. Potential effects from hydrostatic testing and trench dewatering are noted in Section 4.2.6 of the ER on page 4.9.

2. Union Gas can confirm there will be no fording as part of the project and that temporary access will be required at most watercourse crossings and potentially at wetlands. Temporary access locations will be confirmed following the 2015 field study. Inspection staff will monitor that the Contractor follows all work plans.

3. Entry pit locations will be determined during the detailed design stage.

4. Please see Conservation Halton's comment 3.

Long Term and/or Permanent Effects on Aquatic Habitat and Aquatic Biota:

1. There will be no permanent loss of vegetation in the riparian zones as it is Union's practice to re-establish riparian zones and floodplains associated with all watercourse crossings following construction. Shrubs and herbaceous plants will be planted and reseeded within these areas. The extent of the disturbance of these areas will be identified in detailed design; the loss of tree vegetation will not be known until field studies are completed in 2015.

2. Considering water velocity and other site conditions, Union Gas does not see this as a concern with the crossings associated with this project. With proper engineering of watercourse crossings, this effect is not anticipated.

3. Union Gas practices an extensive Pipeline Integrity Management Program. Activities included in this program are summarized in Section 4.1.2 of the ER on page 4.3. The greatest risk of pipeline damage resulting in a leak is the unauthorized excavation and subsequent direct contact from third-parties. Union Gas strives to ensure that all third parties working near pipelines know the correct precautions to take before digging, and encourages all third parties to call before they dig.

   In the unlikely event of a leak or spill, no pooling on the ground would occur as the natural gas would dissipate into the atmosphere. Following pipeline repairs, Union Gas would undertake appropriate clean up and long term restoration of the

impacted area. Permanent effects on aquatic habitat and aquatic biota are not anticipated.

4. Conservation Halton's comments have been noted.

b. Mitigation and Protective Measures

Appropriate site-specific mitigation and protection measures for aquatic species and their habitat will be identified in the Natural Heritage Survey Results Report.

14. Section 4.2.6 Groundwater:

Potential Effects – Hydrostatic Testing and Trench Dewatering

Please see response 5c.

15. Section 4.2.6 Groundwater:

Mitigation and Protective Measures

Erosion and sedimentation controls, including soil handling and stockpiling practices, are provided in Sections 4.2.2 and 4.2.4 of the ER.

16. Section 4.2.6 Groundwater:

a. Potential Effects – Mitigation and Protective Measures & Hydrostatic Testing and Trench Dewatering

Please see response 5c. Please be advised that fluoride is not included in Aquatic Protection Values (APV) or Provincial Water Quality Objective (PWQO) criteria and therefore no treatment is required.

17. Section 4.4.6 Waste Management:

a. Potential Effects

Please see Section 7.2.3 of the ER.

18. Section 5.5.6 Waste Management:

Mitigation and Protective Measures

There will be no waste materials left on site following construction.

19. Table 5.1 Summary of Potential Effects and Recommended Mitigation and Protective Measures:

Conservation Halton indicated that this comment has been addressed.

20. Section 6.0 Cumulative Effects Assessment:

Project decommissioning and abandonment is beyond the temporal boundaries of the cumulative effects assessment and therefore has not been assessed.

Please see Section 4.3.3 of the ER. Union Gas is committed to implementing their standard 2:1 tree replacement program, where Union Gas will replace twice the area of trees removed. The tree replacement program will be applied to all wooded areas along the entire length of the pipeline where it is necessary to remove trees as a result of construction. In addition, it is Union Gas' practice to re-establish all riparian vegetation, and for individual trees removed as part of construction Union Gas will negotiate with the landowner regarding the replacement of trees/vegetation. No permanent loss of vegetation is anticipated.

21. Please see response 20.

22. Section 6.1 Environmental Studies:

Section 6.1.1 Watercourse Crossings

Conservation Halton's comments have been noted. Watercourse crossing methods will be identified during the detailed design stage.

23. Section 7.0 Monitoring and Contingency Plans:

Section 7.1 Monitoring

Based on the limited disturbance that will occur and the relatively short time period of construction, there is not anticipated to be any temperature or hydrological changes, or permanent impacts to the watercourses. Trench plugs will be utilized if necessary, and

bank stability, substrate and stream health will be monitored. As such, hydrological monitoring will not be necessary or required.

24. **Appendix C – GIS Data Results:**

    Conservation Halton's comments have been noted.

25. **Appendix E – Trafalgar Road Proposed Pipeline Location:**

    Conservation Halton have indicated that this comment is no longer an issue.

26. **Appendix F – DFO-OGLA/UGL Agreement 2008:**

    Conservation Halton indicated that this comment has been addressed.

    Section 4.2.4 Soil and Soil Capability

    Mitigation and Protective Measures

    Union Gas only uses water as a dust suppressant.

Terrestrial Ecology Comments:

27. Conservation Halton indicated that this comment has been addressed.

28. **Section 4.3.3 Designated Natural Areas and Vegetation – Wetlands:**

    Please see response 8.

29. **Section 4.3.4 Habitat for Species of Conservation Concern and Species at Risk:**

    Please note that Union Gas is regulated by the Ontario Energy Board Act and not the Environmental Assessment Act. Any party making an application to the Ontario Energy Board (OEB) is required to follow the OEB's Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario (6th Edition, 2011). The Environmental Guidelines state that "the level of detail of the analysis is expected to increase as planning progresses from the comparative evaluation of alternatives, to the analysis of the preferred route or site. For example, the net effects analysis may be relatively generic for the evaluation of alternatives, but more precise and detailed for the preferred route or site." Consistent with the OEB Environmental Guidelines, routing objectives, such as avoiding sensitive environmental features, are set in the early stages of the process to identify a preferred route and detailed surveys are completed

along the preferred route to develop any necessary mitigation measures. All surveys will be completed in 2015.

It is also challenging to complete the level of detail that Conservation Halton is looking for with respect to natural field surveys at the route selection stage, as Union Gas may not have the right to enter private property to carry out the associated studies. Where access to private property is denied, Union Gas can file for an "entry onto lands application" but only after it has filed for a "leave to construct application". In order to file a leave to construct application, Union's environmental report must be completed and form part of Union Gas' OEB application.

It is for these reasons that the site specific surveys that Conservation Halton is looking for are not completed at the route selection stage.

30. **Section 4.3.3 Designated Natural Areas and Vegetation – Wetlands:**

    Please see response 8.

31. **Section 4.3.3 Designated Natural Areas and Vegetation and Section 4.3.4 Wildlife and Wildlife Habitat:**

    Please see response 29. Appropriate site-specific mitigation and protection measures will be identified in the Natural Heritage Survey Results Report.

32. Conservation Halton's comments have been noted. The Great Blue Heron colonies will be confirmed during field studies and noted in the Natural Heritage Survey Results Report. Clearing is planned to occur between January 2016 and March 2016, and the nesting bird timing window is from April 10th to August 9th.

33. Please see response 20.

34. Conservation Halton's comments have been noted.

35. Union Gas' practice is to develop a wildlife protocol for every construction project of this scale. This protocol is discussed with the Contractor and Inspection Staff at the preconstruction training meeting prior to construction. Union proposes to provide a protocol for the Burlington Oakville Pipeline Project.

36. Conservation Halton's comments have been noted.

37. All work spaces will be delineated by an appropriate method.

Hydrogeology Comments:

38. Section 4.2.6 Groundwater:

Conservation Halton's comment referenced recent work at the Union Gas Parkway West Compressor Station. The following provides a brief summary of conditions at the Parkway Station from the Stantec 2014 Hydrogeological Assessment.

Groundwater and geotechnical investigations were completed at the Parkway Station in 2012/2013. The investigations indicated that the overburden at the Parkway Station was generally characterized by silt till, overlying silty sand to sandy silt material of variable thickness followed by shale bedrock.

The shallow groundwater level at the Parkway Station was estimated at 1 m to 3 m below ground surface (BGS), while the potentiometric surface of the confined silty sand to sandy silt material and shale bedrock ranged from about 0.6 m above ground surface (AGS) to 1.3 m BGS. Test pit excavation within overburden material confirmed low permeability material with minor groundwater seepage, with the majority of test pits noted as dry.

In the vicinity of the surface water features at the Parkway Station, groundwater levels were below surface water levels, suggesting that the creek was not receiving groundwater discharge.

Based on these conditions, construction activity within the Parkway Station was managed with standard dewatering activities and mitigation measures.

For the proposed Burlington-Oakville pipeline, additional geotechnical and hydrogeological investigations will be completed along the proposed pipeline route. The geotechnical reports will detail additional construction mitigation measures, if required, such as clay cut off collars or trenchless installation. Monitoring wells will be installed near wetlands and surface water features to document conditions, allow hydraulic conductivity testing and water quality sampling, as required. These results will be used to determine dewatering estimates and discharge options during construction activity. The hydrogeologic report will detail groundwater conditions, potential impacts to surface water and wetlands and include mitigation measures to manage construction dewatering, as needed.

39. Section 6.1 Environmental Studies:

As discussed above in Comment 38, additional investigations will be completed as part of the hydrogeologic assessment in support of the PTTW for the pipeline installation. The hydrogeologic assessment will indicate potential impacts to surface water features,

groundwater supply and wetlands and will indicate mitigation measures and monitoring, as required.

Please see response 8. The Natural Heritage Report will include details on wetland form and function, potential impacts, and appropriate mitigation and protection measures.

40. Section 7.2 Contingency:

As discussed above in Comment 38, additional investigation will be completed in support of the pipeline installation. Based on the results of the investigations, contingency plans will be developed as required. These contingency plans could include adjacent wetlands, surface water features, private supply wells or other features.

As an example, a standard mitigation measure for pipeline installation is to complete a private well monitoring program of nearby wells to document groundwater quality and quantity conditions and as a contingency measure, Union Gas commits to providing potable water in the event of groundwater interference.

41. References:

Conservation Halton's comments have been noted.

Should you have any additional questions or comments regarding the Environmental Report or the Project please do not hesitate to contact the undersigned. Additionally, Stantec would be happy to organize a field tour in the spring with representatives from Conservation Halton and Union Gas; if you could please inform of staff availability in late April / early May for this review.

Regards,

STANTEC CONSULTING LTD.

Mark Knight, MA, MCIP, RPP
Environmental Planner
Phone: (519) 836 6050 x218
mark.knight@stantec.com

cc. Doug Schmidt, Union Gas Limited
Ryan Park, Union Gas Limited

From:	Iamarino, Mark
To:	Iamarino, Mark
Subject:	FW: Union Gas Ltd - Burlington, Oakville - Pipeline Project, Revised Environmental Report
Date:	Thursday, February 12, 2015 4:08:10 PM
Attachments:	image001.png Union Gas - City Comments (Feb-12-2015).pdf

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From: Thomas Nightingale [mailto:Thomas.Nightingale@mississauga.ca]
Sent: Thursday, February 12, 2015 2:18 PM
To: dschmidt@uniongas.com; Knight, Mark
Cc: Iamarino, Mark
Subject: Union Gas Ltd - Burlington, Oakville - Pipeline Project, Revised Environmental Report

Hi Doug, Mark:

Please find an attached copy of the comments from the City of Mississauga following the **revised-environmental report** for the Union Gas - Burlington, Oakville Pipeline Project. Please let me know if you have any questions.

Regards,
Thomas

Thomas Nightingale, *EIT*
Watercourse Management Coordinator, Environmental Services
T 905-615-3200 ext. 5921
thomas.nightingale@mississauga.ca

City of Mississauga | Transportation and Works Department
Transportation Infrastructure Planning Division

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Leading today for tomorrow

February 12, 2015

Mr. Doug Schmidt, Environmental Planner
Union Gas Limited
50 Keil Drive North, P.O. Box 2001
Chatham, ON
N7M 5M1

Dear Mr. Schmidt,

Re: City of Mississauga Comments
Union Gas Limited – Burlington Oakville Pipeline Project

Following the distribution of the revised-Environmental Report for the Burlington, Oakville Pipeline Project, the City of Mississauga provides the following comments from the respective departmental sections for your consideration:

Policy Planning Division, (Planning and Building Department):

- The proposed Union Gas Pipeline project Report provides a brief summary of current land use designations within the subject area. Those lands in Mississauga that fall within the study area, namely west of Highway 403, north of Dundas Street West, East of the town of Oakville boundary limits and south of Burnhamthorpe Road West, that are to be used for the preferred route, are within both Mississauga Green System and the Parkway Belt. It is worth noting that in section 4.7.7 Land Use there is no mention of Mississauga's Green System or the Parkway Belt West Plan.

- Please refer to sections 5.2 and 5.2.1 in Mississauga Official Plan that speak to policies pertaining to the Green System for further policy guidance. I am including the fifth paragraph of section 5.2 for emphasis:

  The Green System is the first layer of the Urban System. It is essential to building a strong community and competitive economy and must be considered in all land use and planning decisions. A robust Green System ensures the health of the natural ecosystem and is an essential contributor to quality of life.

- These lands are within the Green System due to the presence of the Parkway Belt and as such have a land use designation of "Parkway Belt West" within Mississauga Official Plan (2011). Lands designated Parkway Belt West Plan will be governed by the policies of the Parkway Belt West Plan. Further, natural gas pipelines are a permitted use in all land use designations. In addition, the lands are zoned PB1- Parkway Belt 1, which permits passive recreation and conservation uses.

Environmental Services Section, Transportation Infrastructure Planning Division, (Transportation & Works Department):

Drainage

- The revised preliminary preferred route passes through several existing drainage features. Please do not alter the drainage or floodlines in a way that could negatively impact adjacent properties.

Environmental Engineering

- Please note that a Record of Site Condition was filed in 2002 at **3415 Ninth line.**

Thank you for this opportunity to provide comments. Should you have any questions, or require any further information, please do not hesitate to contact me.

Yours Truly,

MISSISSAUGA

Thomas Nightingale, *EIT*
Watercourse Management Coordinator, Environmental Services
T 905-615-3200 ext. 5921
thomas.nightingale@mississauga.ca

City of Mississauga | Transportation and Works Department
Transportation Infrastructure Planning Division

C.C.: Mark Knight, Stantec Inc. (via email)
Mark Iamarino, Stantec Inc. (via email)
Core Team Members, City of Mississauga (via email)

From:	Iamarino, Mark
To:	Iamarino, Mark
Subject:	FW: HDSB Comments - Burlington Oakville Pipeline Project revised ER
Date:	Friday, February 20, 2015 8:54:05 AM
Attachments:	Letter 49.pdf

From: Laureen Choi [mailto:choil@hdsb.ca]
Sent: Wednesday, February 18, 2015 11:06 AM
To: Knight, Mark
Cc: zora.crnojacki@ontarioenergyboard.ca; Michelle D'Aguiar
Subject: HDSB Comments - Burlington Oakville Pipeline Project revised ER

Hi Mark. Thank you for your circulation of the revised environmental report on the Burlington Oakville Pipeline Project. Our comments still remain the same as noted in our letter dated June 12, 2014.

A copy has been attached for your convenience.

Please contact me if you have any questions.

Laureen Choi
Senior Planner
Planning Department
Halton District School Board
tel 905-335-3665 x2201
choil@hdsb.ca

Halton District School Board

Planning Department

June 12, 2014

Mark Knight
Stantec Consulting Ltd.
70 Southgate Drive
Suite 1
Guelph ON N1G 4P5

Dear Mark:

Subject: **Burlington-Oakville Pipeline Project, Environmental Report**

The Halton District School Board has reviewed the "Burlington-Oakville Pipeline Project Environmental Report" dated April 11, 2014 and has the following comments:

- The preferred route shows a route that does not abut any existing public school site.
- The preferred route may abut a future public elementary school and public secondary school which are propose to be east of Trafalgar Road and north of Dundas Street East in the Town of Oakville. The Halton District School Boards prefers to not have school sites abutting pipelines but it is unclear at this time where these schools will be located because draft plans have not been circulated and finalized.

It is understood that according to the current project schedules, construction of the pipeline would start 2016-2017. The Halton District School Board would appreciate and request:

- To inform Halton Student Transportation Services (Karen Lacroix, Manager) of any road closures and any other possible traffic disruptions.
- To continue to keep us up to date on the progression of the project and construction timing.

The Halton District School Board will continue to review all future circulations and re-evaluate all comments associated with this project.

Should you have any questions regarding our comments, please contact the undersigned.

Sincerely,

Laureen Choi
Senior Planner

Cc: Michelle D'Aguiar, Halton District School Board
Zora Crnojacki, Ontario Energy Board

U:\Municipal_Regional Planning\Gas Company Issues\2014 Burlington Oakville Pipeline Project\Burlington-Oakville Pipeline Project ER Comments - June 2014.doc

Mail: J.W. Singleton Education Centre • P.O. Box 5005, Stn. LCD 1, Burlington, Ontario L7R 3Z2
Deliveries: JW Singleton Education Centre • 2050 Guelph Line, Burlington, Ontario L7P 5A8
Phone: (905) 335-3663 ext 2201 • 1-877-618-3456 Website: www.hdsb.ca
Email: choil@hdsb.ca

From:	Iamarino, Mark
To:	Iamarino, Mark
Subject:	FW: Halton Region Comments - Union Gas Burlington-Oakville Pipeline Project - Revised Environmental Report
Date:	Monday, February 23, 2015 5:18:46 PM
Attachments:	Letter - Union Gas Pipeline - Feb 2015 rp-rg final.PDF

From: Partridge, Shelley [mailto:Shelley.Partridge@halton.ca]
Sent: Friday, February 20, 2015 1:41 PM
To: 'Zora.Crnojacki@OntarioEnergyBoard.ca'
Cc: Knight, Mark
Subject: Halton Region Comments - Union Gas Burlington-Oakville Pipeline Project - Revised Environmental Report

Ms. Crnojacki:

Please find attached to this message the comments from Halton Region regarding the Revised Environmental Report for the Union Gas Burlington-Oakville Pipeline Project. The master letter will be sent to you through standard mail.

Regards,

Shelley Partridge, MPl, MCIP, RPP
Senior Planner, Community Planning
Legislative & Planning Services Department
Halton Region
1151 Bronte Road, Oakville, Ontario L6M 3L1
Tel: 905-825-6000 ext. 7180
Toll Free: 1-866-442-5866
Fax: 905-825-8822
E-mail: shelley.partridge@halton.ca
Web: www.halton.ca

Office Location: 1075 North Service Road, Unit 27
Mailing Address: 1151 Bronte Road, Oakville, ON L6M 3L1

immediately by telephone, fax or e-mail and permanently delete the original transmission from us, including any attachments, without making a copy.

Thank you

Legislative & Planning Services
Planning Services
1151 Bronte Road
Oakville ON L6M 3L1
Fax: 905-825-8822

February 20, 2015

Ms. Zora Crnojacki
Chairperson, Ontario Pipeline Coordination Committee
Ontario Energy Board
2300 Yonge Street, 27th Floor
P.O. Box 2319
Toronto ON M4P 1E4

Dear Ms. Crnojacki:

RE: Union Gas Burlington-Oakville Pipeline Project, Revised Environmental Report

Regional staff have reviewed the Union Gas Revised Environmental Report dated December 11, 2014, by Stantec Consulting Ltd., for a proposed 20-inch diameter steel gas pipeline to connect the Dawn-Parkway transmission system, at the Parkway West Compressor Station to the Burlington-Oakville distribution system at the Bronte Gate Station. The construction of this project is expected to begin in 2016.

We appreciate the continued opportunity to participate in this process. The following comments represent the collective Regional position on the provided Revised Environmental Report.

It should be noted that the comments included in this letter apply only to the lands within Halton Region and do not address the lands in the area north of Dundas Street, which fall under the jurisdiction of the Region of Peel and City of Mississauga, who should be consulted for this area. While the City of Mississauga is listed in Appendix D1 as a contact, the Region of Peel does not seem to be on that list.

Regional staff note that the new preferred route falls within both the Conservation Halton and Credit Valley Conservation (CVC) jurisdictions and as partner agencies to the Region of Halton, they provide technical comments on behalf of Halton Region with respect to floodplains, hazard areas and wetlands. Regional staff note that both agencies are listed on the agency contact list included in Appendix D1.

Preferred Route Comments

Within the Town of Milton, the Preferred Route extends from the Parkway West Compressor Station (currently under construction) south through the Parkway Belt West lands to Lower Base Line, where it travels west along Lower Base Line for a short distance and then south across Highway 407. In the Region of Halton letter dated June 16, 2014, there was support for this portion of the route, since it stayed away from lands currently within the Urban Area or proposed for urban development in the near future and it fell within the Parkway Belt West lands, which are specifically designated for this type of use.

As also communicated by Halton Region in the letter dated June 16, 2014, there were significant concerns with the former route that followed along the Trafalgar Road right-of-way, both from policy and technical perspectives. Halton Region appreciates the consideration given to our earlier comments and recognizes that addressing these comments resulted in an expanded study area and another public consultation

process. Once crossing Highway 407, the preferred route travels in the Ninth Line (Regional Road 13) right-of-way until south of Burnhamthorpe Road (Regional Road 27) in the Town of Oakville. The preferred route then parallels existing infrastructure corridors (Highway 403 and Hydro One) in the City of Mississauga and then back into the Town of Oakville to connect to the Bronte Gate Station.

As stated in section 2.7.5 of the Revised Environmental Report, the revised preferred route is illustrated in a general location and the exact pipeline location will be determined based on consultation with various stakeholders, including Halton Region.

The direction within the 2014 Provincial Policy Statement (PPS) is to provide infrastructure in a coordinated, efficient and cost-effective manner and that the planning for infrastructure shall be integrated with land use planning. The Regional Official Plan (ROP) recognizes the importance of energy and utility provision, speaks to the minimization of possible impacts of utility corridors and to this end endorses the principle of multiple-use utility corridors. The revised preferred route optimizes existing utility corridors and road allowances as much as possible and it is the Regional position that it follows the direction of the PPS and ROP with respect to utility location.

Revised Environmental Report Comments

Section 4.2.6 of the Revised Environmental Report addresses groundwater and states that there are approximately 15 water wells within 100 metres of the preferred route, which is significantly reduced from the 44 wells within 100 metres of the former preferred route. The revised report recognizes that trench dewatering has the possibility of negatively affecting water well quality and quantity. Later in that section, it states that if landowners near the preferred route request water well monitoring, it should be considered. It is the Regional position that the need for well monitoring should not need to come from the landowner, but it should be initiated by the proponent. It is not clear from the revised report if Union Gas will approach landowners with private wells and give them the option of well monitoring, but this is something the Region of Halton would expect. It is standard practice within the Region for developers to initiate a well monitoring program, when there is any risk to private wells. This involves visiting potential impacted land owners to seek permission to monitor their well, collecting data prior to any site alteration and commitment by the proponent to repair or restore potable water supply, if impacts are experienced. This process protects the private landowners' wells and protects the proponent from well complaints that may not be linked to the proponent's project. This comment was provided in the Region's June 16, 2014 letter.

Section 4.3.3 (Designated Natural Areas and Vegetation, p. 4.19) of the Revised Environmental Report speaks to municipally designated lands and refers to the Greenlands System developed by Halton Region which refers to policies from the 2006 Regional Official Plan. This comment was also made in the Region's June 16, 2014 letter. The approval of new Natural Heritage System Protection policies through Regional Official Plan Amendment No. 38 means that many of these references are outdated. It would be more appropriate to refer to environmental protection policies relating to Halton's Natural Heritage System and the Regional Natural Heritage System (RNHS) designation in this section. In the vicinity of the Preferred Route, the RNHS and the Natural Heritage System as delineated in the Town of Oakville North Oakville East Secondary Plan coincide. In accordance with Section 116.2 of the 2009 Regional Official Plan (November 2014 Office Consolidation) the Regional Natural Heritage System is to be delineated and implemented in accordance with Town of Oakville Official Plan Amendment No. 272.

Section 4.3.3 (Designated Natural Areas and Vegetation, p. 4.23) of the Revised Environmental Report indicates that there are no significant woodlands located within 120m to the preferred route. It is not clear, however, whether woodlands greater than 0.5 ha were assessed to determine significance. It would

appear that there may be several woodland areas in the vicinity of the preferred route that may meet the Region's definition of significant woodland contained in s. 277 of 2009 Regional Official Plan (November 2014 Office Consolidation), including but not limited to woodlands north and south of Lower Base Line East and woodlands within the North Oakville-Milton East Wetland Complex. It is recommended that all woodlands greater than 0.50 hectares in size located along the preferred route be assessed prior to construction to determine significance. Further, it is recommended that any significant woodlands identified along the preferred route receive appropriate mitigation and protection measures similar to those identified for wetlands. To the extent it is feasible, the detailed design should consider both impact avoidance and minimization. Regional staff would ask that information be included in the work plan for the 2015 update to the Natural Heritage Report.

Section 4.3.3 (Mitigation and Protection Measures, p. 4.24) of the Revised Environmental Report recommends a re-vegetation program to mitigate impacts associated with temporary removal of vegetation. A tree replacement program is also proposed to address removal of trees during construction at a tree replacement ratio of 2:1. It is assumed that the re-vegetation and replanting programs are mutually exclusive, but a distinction between the two programs is unclear. If there is a distinction, Regional staff recommend that this be further clarified.

As all tree removal associated with the pipeline construction must be authorized in accordance with the Halton Region Tree By-law (By-law# 121-05), it should be noted that the replanting plan must also be prepared to the satisfaction of Halton Regional staff. For any trees or woodlands removed to accommodate the pipeline easement, we would recommend that plans be developed to show replanting corresponding with appropriate ratios, to enhance ecological functions of the Regional Natural Heritage System, as close to the area of removal as possible, either prior to or immediately after removal. In instances where landowners are not interested in planting trees on their property, it is recommended that owners of adjacent lands that contain suitable Regional Natural Heritage System enhancement areas be approached to determine their willingness to allow for planting in these areas. If they too are uninterested in planting trees on their properties in the areas identified, the stock can be offered to the relevant Conservation Authority.

With respect to tree replacement ratios, staff notes that an area replacement ratio may be required in addition to a tree replacement ratio if any significant woodland areas are being affected by this project. This ratio may vary depending on the significance of the woodland being affected. Areas that contribute significant ecological functions which cannot be avoided may require a greater replacement ratio (eg. 3:1). The appropriate replacement ratio should be considered in consultation with Regional staff at such time that replanting plans are being developed.

Regional staff recognize that supplemental studies are expected with respect to this project. Halton Region is in receipt of the Natural Heritage Inventory and comments on this document will be prepared by the March 20, 2015 deadline.

<u>Regional Infrastructure Requirements/Approvals</u>

Prior to the undertaking of any works on Halton Regional Roads, there would be a number of Regional requirements to be met by Union Gas. Union Gas must obtain a permit from Halton Region and submit a pipeline construction plan to the Region for approval (location, timing, terms and conditions, etc.) in accordance with Halton Region - Union Gas "2000 Model Franchise Agreement", pursuant to Region By-law 91-03.

In this regard, Halton Region's Water and Wastewater Services Divisions would require, but are not limited to the following:

1. That proposed design drawings be submitted to the Region for review and coordination to avoid potential conflict with existing and future planned infrastructure. The proposed gas main would need to be installed at sufficient depths to avoid the need for lowering any existing or future planned watermains/sewers, as in most cases, the mains cannot be taken out of service without impacting a significant number of existing customers in the Milton/Halton Hills Corridor area.

   Union Gas will be responsible for providing sufficient protective works for Regional municipal infrastructure at their sole expense. As well, Union Gas will be responsible for all costs associated with the relocation of existing or future water or wastewater infrastructure as a result of the gas main interferences/conflicts (including but not limited to protective works, vibratory protection for our linear infrastructure and gas main underground/above ground demarcation).

   All crossing and protective works are to be reviewed with Halton Region and carried out to our technical satisfaction.

   Based on the current preferred alternative route the proposed pipeline location has potential conflicts with existing and future water and wastewater infrastructure as outlined below:

   Existing Water Infrastructure
   - Dundas Street (ends at 9th Line) - 400mm watermain
   - 9th Line from Dundas Street to Hydro Easement – 400mm watermain
   - 9th Line from Dundas Street to approximately 210 metres South of Dundas Street – 400mm watermain
   - Dundas Street from Lynhurst Drive to 9th Line – 300mm watermain
   - 9th Line from Dundas Street to approximately 120 metres North - 300mm watermain

   Existing Wastewater Infrastructure
   - Dundas Street (ends approx. 540 metres west of 9th Line) – two 400mm wastewater forcemains

   Future Planned Water Infrastructure
   - Hydro Easement from 9th Line to Bristol Circle – 400mm watermain in 2015

2. Gas Main Design and Constructability - Watermain and Sewer Access
   In order for Union Gas to ensure Halton Region can properly access and repair our watermain and sewer infrastructure, the proposed gas main would need a 4 metre minimum setback from either side of the existing/future watermains if they are on the same grade and further distance if the gas main is at a higher grade.

The following comments are provided with respect to Transportation Planning and Road Operations.

Burnhamthorpe Road (Regional Road 27) / Future William Halton Parkway:
Union Gas has been advised that if they want to cross existing Burnhamthorpe Road/Future William Halton Parkway (WHP) this needs to be undertaken in advance of the Region's construction at this location. It must also be noted that the Region requires Union Gas to relocate their distribution main/station as part of the Region's construction at Burnhamthorpe Road/Future WHP and Ninth Line. It

is the Region's understanding that Union Gas is proposing to install the transmission main at the same time they relocate their distribution main/station at Burnhamthorpe Road/Future WHP and Ninth Line. The Project Manager for the Design and Construction of William Halton Parkway is Bob Wicklund and he can be contacted at 905-825-6000, ext. 7607 or bob.wicklund@halton.ca.

Ninth Line (Regional Road 13):
Ninth Line (Regional Road 13), is scheduled for widening from 2 to 4 lanes from Dundas Street to Highway 407 in Halton's Roads Capital Budget. The project is proposed for start of construction in 2023/2025. The future Class Environmental Assessment (EA) Study for the Ninth Line widening will review various alignment options in the study limits and will tie back into the Ninth Line/Burnhamthorpe Road (WHP) intersection Roundabout that will be constructed starting in the Fall 2015.

Attached please find a typical cross-section that the Region would consider for the future Class EA for Ninth Line from Dundas St. to Hwy 407. The designated right-of-way for this section of Ninth Line, as identified in the approved Transportation Master Plan (and outlined on the attached cross-section) is 35m. This cross-section was previously provided to Union Gas on February 11th, 2015.

For any proposed gas main on Ninth Line, the main shall be located at a maximum reasonable distance away from the paved portion of Ninth Line in order to provide adequate clearance for future underground infrastructure.

Britannia Road (Regional Road 6):
Britannia Road (Regional Road 6) is scheduled for widening from 2 to 4 lanes from Trafalgar Road to Highway 407 in Halton's Roads Capital Budget. The proposed start of construction is 2018. The Class Environmental Assessment Study for Britannia Road was completed in Fall 2015 with the filing of the Environmental Study Report (ESR). The ESR is available on the project web page via www.halton.ca/eaprojects. The CADD drawings from the ESR for Britannia Road were provided to Union Gas on February 11th, 2015.

Ministry of Transportation:
For the location of the proposed pipeline adjacent to Highway 403, and for the proposed crossing of Dundas Street adjacent to the Highway 403 interchange, review and approval must also include the Ministry of Transportation (MTO).

The jack and boring of the proposed pipeline under Dundas Street will require an agreement with both the MTO and Halton Region. Any proposed works are to be co-ordinated with MTO and the preliminary design for their project - Improvements to Highway 403 and Queen Elizabeth Way from Trafalgar Road to Winston Churchill Boulevard.

General:
Any proposed alignments that are within the Region's right-of-way or cross Regional Roads will require the submission of proposed design drawings to the Region to obtain Municipal Consent on the applicable Regional Road. In addition, any road/lane closures or detours on Regional Roads or affecting Regional Roads must be reviewed and approved prior to construction commencing. To initiate the review please contact our permits group via electronic mail at maprequests@halton.ca.

Constraints to future road widening, culvert extensions, curb and gutter or storm sewers due to the construction of the proposed gas main must be addressed such that maintenance and excavation of this infrastructure can be readily undertaken and any potential for undermining is mitigated.

Conclusion/Recommendations

Based on the comments provided above, the Region of Halton has no objection to the identified Preferred Route, as identified in the Revised Environmental Report.

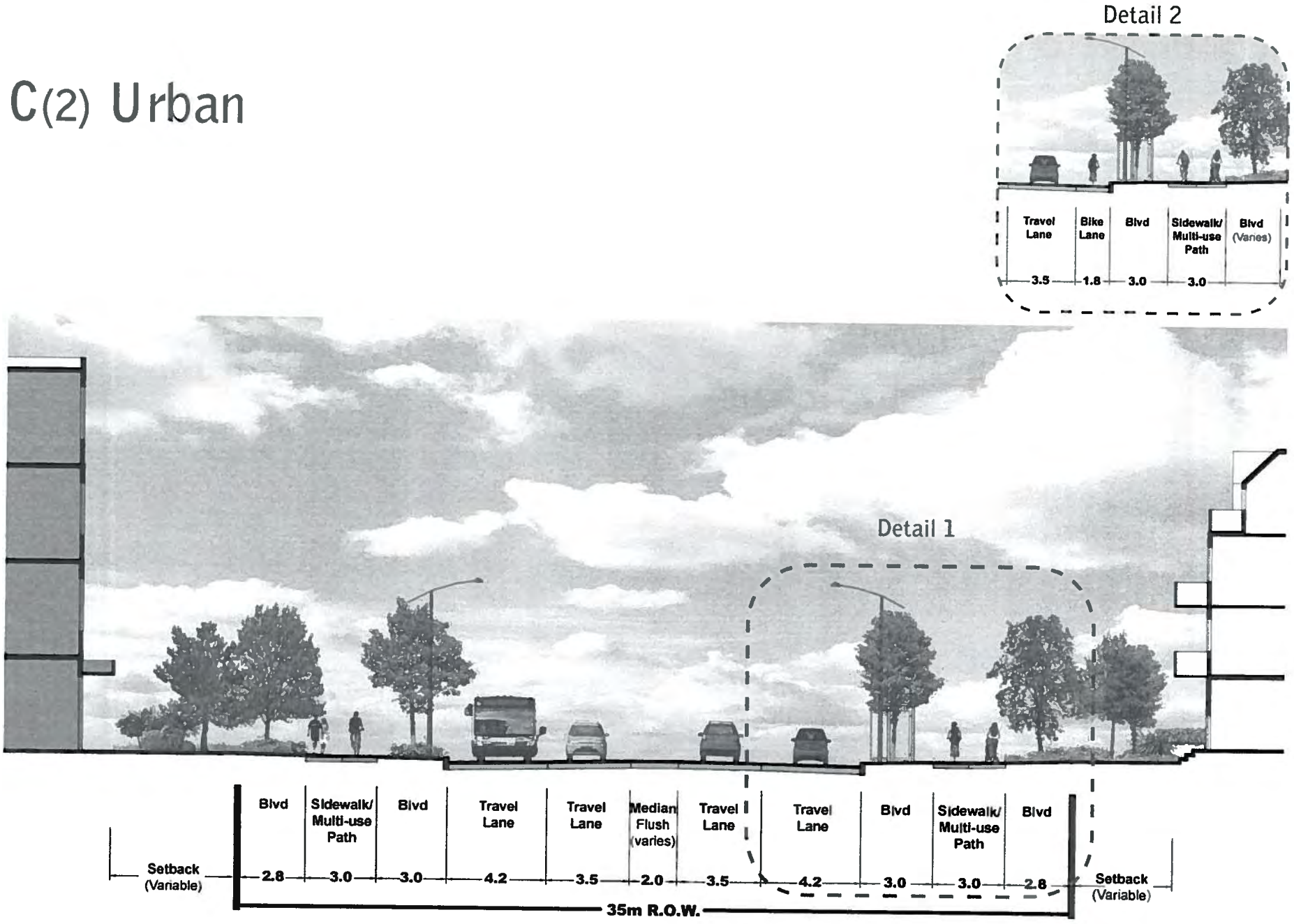
Regional staff are happy to provide any additional information that would assist this project and appreciate the continued opportunity to participate in this project. If there are any questions on the information provided in this letter, please contact Shelley Partridge at Ext. 7180 or shelley.partridge@halton.ca.

Yours truly,

for Ron Glenn, MCIP, RPP
Director of Planning Services and Chief Planning Official

c Tim Dennis, Director of Engineering and Construction
Lisa De Angelis, Director of Infrastructure Planning and Policy
Rob Rivers, Director of Waste Management and Road Operations
David Simpson, Manager of Infrastructure Planning
Trish Holden, Manager of Development Support and Information Management
Shelley Partridge, Senior Planner
Darnell Lambert, Director, Development Engineering, Town of Oakville
Barbara Koopmans, Director, Planning and Development, Town of Milton
Mark Knight, Environmental Planner, Stantec Consulting Ltd.

C(2) Urban


Detail 2
Travel Lane
Bike Lane
Blvd
Sidewalk/ Multi-use Path
Blvd (Varies)
3.5
1.8
3.0
3.0
Detail 1
Setback (Variable)
Blvd
Sidewalk/ Multi-use Path
Blvd
Travel Lane
Travel Lane
Median Flush (varies)
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Travel Lane
Blvd
Sidewalk/ Multi-use Path
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Setback (Variable)
2.8
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3.5
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35m R.O.W.

uniongas
A Spectra Energy Company

March 18, 2015

Attention: Mr. Ron Glenn
Legislative & Planning Services
Planning Services
Oakville ON L6M 3L1

Dear Mr. Glenn,

Reference: Halton Region Comments on Union Gas Burlington-Oakville Pipeline, Revised Environmental Report

Thank you for taking the time to review the Revised Environmental Report prepared for the Burlington to Oakville Pipeline Project (the 'Project'). Union Gas Ltd. (Union) and Stantec Consulting Ltd. (Stantec) appreciate the commitment of both time and energy that staff at Halton Region has provided on the project.

In regards to your letter dated February 20, 2015, please find responses to your various comments in the following text.

We appreciate your comments with respect to the Region of Peel who now have been forwarded a copy of the Revised Environmental Report for comment.

Preferred Route Comments:

Halton Region's comments have been noted.

Revised Environmental Report Comments:

Section 4.2.6

Halton Region's comments have been noted. Union will offer its standard water well monitoring program to landowners within the potential zone of influence as determined by a professional hydrogeologist.

Union's water well monitoring program involves retaining the services of an independent hydrogeologist to review local hydrogeological conditions and gather existing well information from MOE records along the pipeline route. Based on this review, the hydrogeologist will recommend a well monitoring program. The hydrogeologist will be kept on retainer throughout and following construction to advise on mitigation should any well problems or concerns arise due to construction.

Section 4.3.3

The references to Halton Region's Greenlands System will be updated and changed to reflect current policies (Halton's Natural Heritage System and the Regional Natural Heritage System) in the forthcoming 2015 Natural Heritage Survey Results Report where discussed. Potential impacts to the natural areas identified within the updated policies will be identified and discussed as appropriate.

Section 4.3.3

All woodlands greater than 0.5 hectares in size located adjacent to the proposed route, including temporary construction land, will be assessed for significance as part of the 2015 natural heritage surveys.

Mitigation measures for significant woodlands adjacent to permanent and temporary construction lands; similar to those identified for wetlands, will be presented with the detailed design. The mitigation measures may include but not be limited to avoidance using horizontal directional drilling, clearly delineated limits of clearing, narrowing of the easement where feasible, exclusion fencing and additional sediment and erosion control.

Section 4.3.3

The re-vegetation program and tree replacement program are mutually exclusive. The re-vegetation program is intended to restore and reestablish the disturbed herbaceous plant community; typically this program consists of broadcast seeding with an approved native seed mix. The tree replacement program is intended to compensate for the loss of woodland area and consists of a 2:1 replacement of the area removed.

In addition to these programs Union also implements a riparian habitat restoration program and individual tree replacement program. The riparian habitat restoration program aims to restore riparian areas to pre-existing conditions or better and includes bed and bank restoration, soil stabilization, seeding and the planting of shrubs. The individual tree replacement program is implemented to compensate for the removal of isolated or significant individual trees; compensation is determined site by site basis with direct input from individual landowners to determine the number, size, variety and location of trees to be planted.

At this time Union does not intend to seek municipal approvals for tree removal completed as part of the Burlington to Oakville Pipeline Project. Tree removal and compensation will be completed under Union's Ontario Energy Board project approval with a standard tree replacement ratio for woodland area of 2:1. Union would be willing to discuss and seek input on the replanting plan with the Region once it is understood where trees need to be removed to accommodate the pipeline installation. It is Union's practice to plant trees native to Ontario and to work with local landowners and the Conservation Authority to ensure all trees find a home.

Regional Infrastructure Requirements/Approvals

Halton Region's comments have been noted.

Union has and will continue to work with Halton Region's Water and Wastewater Service Division to find a running line that best accommodates all parties' needs. All future replacement or new infrastructure additions will be addressed under the franchise agreement in place at the time.

Burnhamthorpe Road (*Regional Road 27*) / Future William Halton Parkway

Union has held design review meetings with Halton Region's Project Manager, Mr. Bob Wicklund and Halton's Engineering Contractor (Stantec) with respect to the proposed pipeline crossing of Burnhamthorpe Road to work towards a submission for municipal consent for the entire alignment along Ninth Line road allowance.

Union will continue these meetings as required with Halton Region and Mr. Wicklund through detail design during the application process. The proposed drawings of the traffic circle at the Burnhamthorpe Road and Ninth Line intersection and the support provided by Mr. Wicklund and Stantec are much appreciated.

uniongas
A Spectra Energy Company

Ninth Line (*Regional Road 6*)

Halton Region's comments have been noted.

Please see Burnhamthorpe Road response.

The typical cross-section that Halton Region would consider for future Class EA of road widening Ninth Line and the list of existing and future water and wastewater infrastructure as well as the requirement for minimum set-backs for gas line installation from existing and future watermains will be considered during detailed design.

Britannia Road (*Regional Road 6*)

The drawings provided of the scheduled road widening of Britannia Road were received, thank you.

Union is in the process of detailed design and has held several meetings with Halton Region, Hwy 407 ETR and MTO with respect to this crossing and will continue these meetings as necessary throughout the application process. The materials and comments provided to date from all those parties are being considered during design.

Ministry of Transportation

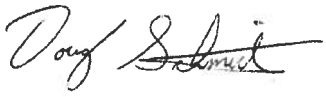
Union had a site meeting with MTO on February 19, 2015 to discuss the proposed pipeline crossing of Dundas and will take their comments in consideration during detailed design. Union notes the comments of Halton Region in this letter and will engage Halton during detailed design as part of the Region's application process in addition to making the appropriate submissions to MTO.

Union is looking forward to continue to work with Halton Region on the Burlington to Oakville Pipeline Project to determine a mutually agreeable running line. Should you have any additional comments or questions about the Environmental Report or the Project please do not hesitate to contact us.

Thank you again for your time and efforts in reviewing the Environmental Report. Union Gas appreciates the time commitment made be Halton Region staff to provide us with these comments.

Regards,

UNION GAS LTD.



Doug Schmidt
Manager, Permitting & Environmental Planning
Phone: 1-866-949-1595
Ext: 5236954
dschmidt@uniongas.com

c. Zora Crnojacki, Chairperson, Ontario Pipeline Coordination Committee
Mark Knight, Environmental Planner, Stantec Consulting Ltd.
Gerry Mallette, Principal Project Manager, Union Gas Ltd.
Blair Warnock, Design Engineer, Union Gas Ltd.

OAKVILLE

February 9, 2015

Mr. Mark Egbedeyi-Emmanuel
District Manager, Hamilton/Halton
Union Gast Limited
918 South Service Road
Stoney Creek, ON L8E 5M4

Dear Mr. Egbedeyi-Emmanuel:

Subject: Burlington-Oakville Pipleline Project

Thank you for arranging last week's teleconference between Union Gas technical staff and town staff (including myself) to discuss the revised ER for the above-noted project. In addition to that discussion, town staff attended the November 13, 2014, project information session held in Oakville at the Joshua Creek Arena.

As a result of our review and discussion with Union Gas representatives, I am able to advise that town staff are supportive of the route analysis and the conclusions reached in that analysis as set out in the ER for the preferred route.

Sincerely,

TOWN OF OAKVILLE

R.G. (Ray) Green, P.Eng.
Chief Administrative Officer

ks

From: Schmidt, Doug
To: Thomas Nightingale
Cc: Roger Da Cunha; Iamarino, Mark; Knight, Mark
Subject: RE: Union Gas Burlington, Oakville Pipeline Project: Revised Environmental Report
Date: Friday, February 27, 2015 10:41:14 AM
Attachments: image001.png

Thomas

Thank you for the additional comment provided by the Community Services Department. Once details are confirmed, Union will make contact to discuss any concerns.

Doug Schmidt
Manager, Permitting & Environmental Planning
Union Gas Limited | A Spectra Energy Company
Tel: 1 866-949-1595
Ext. 5236954

From: Thomas Nightingale [mailto:Thomas.Nightingale@mississauga.ca]
Sent: February 26, 2015 1:08 PM
To: Schmidt, Doug; mark.knight@stantec.com
Cc: Roger Da Cunha; mark.iamarino@stantec.com
Subject: FW: Union Gas Burlington, Oakville Pipeline Project: Revised Environmental Report

Hi Doug, Mark:

If it still possible, please consider the following additional City comments for the **Union Gas Burlington, Oakville Pipeline Project: Revised Environmental Report (ER)**:

> **Community Services Department, Parks & Forestry Division, Park Planning section:**
> In review of Figure ii titled "Revised Preferred Route", please be advised that within the Expanded Study Area, Ninth Line Sports Park (P-300) is adjacent to the proposed route and has been identified in Appendix A, Figure No. 9 – Socio–Economic Facilities. There are two ball diamonds located on these city owned lands and appropriate measures will need to be taken to ensure the that these outdoor recreational facilities are protected and not impacted by the work being proposed. Community Services requests that further details be provided to this department for review once plans are ready to be circulated.

Thank you,
Thomas

MISSISSAUGA

Thomas Nightingale, *EIT*
Watercourse Management Coordinator, Environmental Services

T 905-615-3200 ext. 5921
thomas.nightingale@mississauga.ca

City of Mississauga | Transportation and Works Department
Transportation Infrastructure Planning Division

Please consider the environment before printing.

From: Roger Da Cunha
Sent: 2015/02/24 11:46 AM
To: Thomas Nightingale
Subject: Union Gas Burlington, Oakville Pipeline Project: Revised Environmental Report

Hi Thomas,

As per my voice mail, I wanted to include supplementary comments to the Revised-Environmental Report (ER) provided by Union Gas for the Burlington-Oakville Pipeline Project, received late December:

Further to our previous comments and in review of Figure ii titled "Revised Preferred Route", please be advised that within the Expanded Study Area, Ninth Line Sports Park (P-300) is adjacent to the proposed route and has been identified in Appendix A, Figure No. 9 – Socio–Economic Facilities. There are two ball diamonds located on these city owned lands and appropriate measures will need to be taken to ensure the that these outdoor recreational facilities are protected and not impacted by the work being proposed. Community Services requests that further details be provided to this department for review once plans are ready to be circulated.

Regards,

Roger

From:	Iamarino, Mark
To:	Iamarino, Mark
Subject:	FW: Union Gas Pipeline Burlington-Oakville-Natural Heritage Survey Results 2014-Ch Comments
Date:	Wednesday, March 18, 2015 11:52:47 AM
Attachments:	Union Gas Pipeline Project- Burlington Oakville Natural Heritage Survey.pdf

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From: Leah Chishimba [mailto:lchishimba@hrca.on.ca]
Sent: Wednesday, March 18, 2015 9:12 AM
To: Knight, Mark
Cc: Partridge, Shelley (Shelley.Partridge@halton.ca)
Subject: Re: Union Gas Pipeline Burlington-Oakville-Natural Heritage Survey Results 2014-Ch Comments

Hi Mark,

Please see attached CH comments on the Natural Heritage Survey Results. Should you have any questions, please feel free to contact me.

Thanks.

Leah Chishimba, M.A.E.S
Environmental Planner

Conservation Halton
2596 Britannia Road West, Burlington, ON L7P 0G3
905.336.1158 ext. 2266 | Fax 905.336.6634 | lchishimba@hrca.on.ca
conservationhalton.ca

Conservation Halton

905.336.1158
Fax: 905.336.7014
2596 Britannia Road West
Burlington, Ontario L7P 0G3
conservationhalton.ca

Protecting the Natural Environment from Lake to Escarpment

March 17, 2015

MAIL & EMAIL

Mr. Mark Knight
Environmental Planner
Stantec Consulting Limited
70 Southdgate Drive, Suite 1,
Guelph, Ontario N1G 4P5

Dear Mr. Knight:

Re: Union Gas Pipeline Project Burlington – Oakville
Natural Heritage Survey Results- 2014
Conservation Halton File: MPR 632

Staff of Conservation Halton received the *'Burlington-Oakville Pipeline, Natural Heritage Survey Results-2014 Report, dated February 5, 2015'*, prepared by Stantec.

Staff are of the understanding that this report presents the results of the natural heritage surveys conducted in 2014 and indicates additional recommended field studies that will be completed in 2015. Conservation Halton staff have completed review of the report and offer the following comments below.

Section 2.2.1 Designated Features:

1. Staff note that the preferred alternative appears to cross the Provincially Significant North Oakville-Milton East Wetland Complex (Figure 1.5) and is correctly identified as part of the Natural Heritage System. However, this wetland complex as depicted on Figure 1.5 is also part of Core 11 (North Oakville Creeks Subwatershed Study (NOCSS), 2006). This needs to be identified on the figures and discussed in the report and incorporated into the EA. Please ensure that the full report has consideration for this feature and any implications it may have for the project.

2. Staff note that both the Provincially Significant North Oakville-Milton East Wetland Complex (Figure 1.5) and the Locally Significant Drumquin Wetland (Figure 1.1) are crossed by the proposed pipeline. Impacts to these wetlands (e.g. dewatering), methods of construction, and potential mitigation measures will need to be discussed as part of the full report and incorporated into the EA.

Section 2.2.2 Terrestrial Species of Conservation Concern

3. Staff appreciate that specific surveys for species at risk or wildlife have been conducted for the northern section (north of Highway 407). The report indicates that additional field surveys will be undertaken prior to construction. Please be advised that revisions to the

pipeline alignment may be required in order to avoid potential impact on a species or associated habitat which have yet to be identified.

Section 2.2.4 Aquatic Habitat

4. Please clarify why East Lisgar Branch of Sixteen Mile Creek watershed which is located in the study area north of highway 407 was not included in the report.

Section 3.6 Snake Habitat

5. Staff note that Eastern Milksnake has the potential to occur within the study area. Staff request confirmation as to whether cover board surveys were undertaken in 2014 or will they be undertaken in 2015? This species can be quite cryptic and is often missed in visual field surveys. Please provide further discussion on the methods used and clarify whether or not cover board surveys will be undertaken and if not, why not.

Section 4.2 Significant Wildlife Habitat Assessments

6. Staff note that the EA identified a previously unknown Great Blue Heron colony within Core 11. This is not discussed as part of the Natural Heritage Report. This species nests early in the year (March-April) and can be quite sensitive to disturbance. CWS and the MNRF should be consulted with regards to this colony, its proximity to the proposed pipeline, and recommendations for appropriate setbacks if required. Please provide more discussion on this colony, and any mitigation measures that are required. Please ensure that any recommendations regarding this species and its associated habitat are incorporated into the EA.

Section 4.2.3 Habitat for Species of Conservation Concern

7. Staff note that the presence of Terrestrial Crayfish habitat is noted as occurring within the study and is depicted on Figure 3.2. At a minimum the crayfish species residing there must be identified, and a characterization of the habitat should be undertaken. Please provide further discussion regarding this species in the full report to come and any mitigation measures that may be required to be implemented including but not limited to: removing the individuals present in the active construction zone prior to construction to habitat outside the active zone, staged soil stripping to preserve the preferred soil characteristics, and rehabilitation of the habitat post-construction. Please ensure that any recommendations regarding this species and its associated habitat are incorporated into the EA.

Appendices:

8. Please ensure that the full report contains the ELC field sheets.

We trust the above is of assistance. If you have any further questions, please contact the undersigned at Extension 2266.

Yours truly,

Leah Chishimba
Environmental Planner

cc: Shelley Partridge, Halton Region, by e-mail

UNION GAS LIMITED

Answer to Interrogatory from
Board Staff

Reference: Exhibit A, Tab 12, pages 1-2

Preamble: For the location of the pipeline which is part of the Project, Union needs 30 acres of land rights for permanent easement and about 21.5 acres of total are controlled by Infrastructure Ontario while the rest of the land rights are within road allowances and owned by private landowners. Union stated that specific terms of land rights to be granted by Infrastructure Ontario have not been finalized. Also, negotiations with private landowners for land rights are not concluded.

a) Please provide any updates to the land rights acquisition from Ontario Infrastructure since filing of the application.

b) Please provide any updates to the land rights acquisition from private landowners since filing of the application.

Response:

a) Negotiations are ongoing with Infrastructure Ontario. Union has provided Infrastructure Ontario with the applicable drawings showing the proposed running line. A standard easement agreement will be utilized once all the issues have been resolved.

b) Negotiations are ongoing with all the private landowners along the pipeline route. As part of those meetings, Union has provided the landowners with an Option for Easement and Temporary land use agreements, along with maps showing the proposed running line of the pipeline. No landowners have identified any significant concerns with the Project.

UNION GAS LIMITED

Answer to Interrogatory from
Board Staff

Reference: Exhibit A, Tab 12, page 3, lines 5-16

Preamble: Union indicated that the Region of Halton plans to expand the intersection of Ninth Line and Burnhamthorpe Road (intersection) where the pipeline is to be located. If, prior to the start of the pipeline construction, the Region of Halton acquires lands intersection expansion these lands will become a road allowance and no land rights will be needed by Union. However, if the timing is such that the Region does not acquire these lands prior to Union's construction, Union stated it would negotiate acquisition of these land rights from private landowners.

a) Please discuss construction schedule impacts of Union having to acquire land rights from private landowners for the pipeline segment at the intersection of Ninth Line and Burnhamthorpe Road if the Region of Halton does not acquire the road allowance land prior to construction start.

b) Please provide a copy of the franchise agreement with the Region of Halton that allows Union to use road allowance for the pipeline location. Indicate which clauses in the franchise agreement deal with Union locating the pipeline along regional road allowance.

Response:

a) Union is negotiating with the landowners for a pipeline easement so the pipeline can be installed at a location approved by Halton Region in consideration of the proposed traffic circle. It is Union's understanding that Halton Region has already initiated expropriation proceedings to acquire the land and their efforts should successfully conclude prior to the start of pipeline construction. Union expects to be able to install the pipeline with no delay to the construction schedule.

b) Attachment 1 is a copy of Union's franchise agreement with Halton Region. Clause 3 of the agreement allows Union to construct pipelines within regional road allowances.

2000 Model Franchise Agreement

THIS AGREEMENT effective this 25 day of JUNE , 2003.

BETWEEN:

REGIONAL MUNCIPALITY OF HALTON

hereinafter called the "Corporation"

- and -

LIMITED

hereinafter called the "Gas Company"

WHEREAS the Gas Company desires to distribute and store gas in the Municipality upon the terms and conditions of this Agreement;

AND WHEREAS by by-law passed by the Council of the Corporation (the "By-law"), the duly authorized officers have been authorized and directed to execute this Agreement on behalf of the Corporation;

THEREFORE the Corporation and the Gas Company agree as follows:

Part I - Definitions

1. **In this Agreement**

(a) "decommissioned" and "decommissions" when used in connection with parts of the gas system, mean any parts of the gas system taken out of active use and purged in accordance with the applicable CSA standards and in no way affects the use of the term 'abandoned' pipeline for the purposes of the *Assessment Act*;

(b) "Engineer/Road Superintendent" means the most senior individual employed by the Corporation with responsibilities for highways within the Municipality or the person designated by such senior employee or such other

person as may from time to time be designated by the Council of the Corporation;

(c) "gas" means natural gas, manufactured gas, synthetic natural gas, liquefied petroleum gas or propane-air gas, or a mixture of any of them, but does not include a liquefied petroleum gas that is distributed by means other than a pipeline;

(d) "gas system" means such mains, plants, pipes, conduits, services, valves, regulators, curb boxes, stations, drips or such other equipment as the Gas Company may require or deem desirable for the distribution and storage of gas in or through the Municipality;

(e) "highway" means all common and public highways and shall include any bridge, viaduct or structure forming part of a highway, and any public square, road allowance or walkway and shall include not only the travelled portion of such highway, but also ditches, driveways, sidewalks, and sodded areas forming part of the road allowance now or at any time during the term hereof under the jurisdiction of the Corporation;

(f) "Model Franchise Agreement" means the form of agreement which the Ontario Energy Board uses as a standard when considering applications under the *Municipal Franchises Act*. The Model Franchise Agreement may be changed from time to time by the Ontario Energy Board;

(g) "Municipality" means the territorial limits of the Corporation on the date when this Agreement takes effect, and any territory which may thereafter be brought within the jurisdiction of the Corporation;

(h) "Plan" means the plan described in Paragraph 5 of this Agreement required to be filed by the Gas Company with the Engineer/Road Superintendent prior to commencement of work on the gas system; and

(i) whenever the singular, masculine or feminine is used in this Agreement, it shall be considered as if the plural, feminine or masculine has been used where the context of the Agreement so requires.

Part II - Rights Granted

2. To provide gas service

The consent of the Corporation is hereby given and granted to the Gas Company to distribute and store gas in and through the Corporation and to the inhabitants of those local or lower tier municipalities within the Municipality from which the Gas Company has a valid franchise agreement for that purpose.

3. **To Use Highways**

Subject to the terms and conditions of this Agreement the consent of the Corporation is hereby given and granted to the Gas Company to enter upon all highways now or at any time hereafter under the jurisdiction of the Corporation and to lay, construct, maintain, replace, remove, operate and repair a gas system for the distribution and storage of gas in and through the Municipality.

4. **Duration of Agreement and Renewal Procedures**

(a) If the Corporation has not previously received gas distribution services, the rights hereby given and granted shall be for a term of 20 years from the date of final passing of the By-law.

or

(b) If the Corporation has previously received gas distribution services, the rights hereby given and granted shall be for a term of 20 years from the date of final passing of the By-law provided that, if during the 20 year term of this Agreement, the Model Franchise Agreement is changed, then on the 7th anniversary and on the 14th anniversary of the date of the passing of the By-law, this Agreement shall be deemed to be amended to incorporate any changes in the Model Franchise Agreement in effect on such anniversary dates. Such deemed amendments shall not apply to alter the 20 year term.

(c) At any time within two years prior to the expiration of this Agreement, either party may give notice to the other that it desires to enter into negotiations for a renewed franchise upon such terms and conditions as may be agreed upon. Until such renewal has been settled, the terms and conditions of this Agreement shall continue, notwithstanding the expiration of this Agreement. This shall not preclude either party from applying to the Ontario Energy Board for a renewal of the Agreement pursuant to section 10 of the *Municipal Franchises Act*.

Part III – Conditions

5. **Approval of Construction**

(a) The Gas Company shall not undertake any excavation, opening or work which will disturb or interfere with the surface of the travelled portion of any highway unless a permit therefore has first been obtained from the Engineer/Road Superintendent and all work done by the Gas Company shall be to his satisfaction.

(b) Prior to the commencement of work on the gas system, or any extensions or changes to it (except service laterals which do not interfere with municipal works in the highway), the Gas Company shall file with the Engineer/Road Superintendent a Plan, satisfactory to the Engineer/Road Superintendent, drawn to scale and of sufficient detail considering the complexity of the specific locations involved, showing the highways in which it proposes to lay its gas system and the particular parts thereof it proposes to occupy.

(c) The Plan filed by the Gas Company shall include geodetic information for a particular location:

(i) where circumstances are complex, in order to facilitate known projects, including projects which are reasonably anticipated by the Engineer/Road Superintendent, or

(ii) when requested, where the Corporation has geodetic information for its own services and all others at the same location.

(d) The Engineer/Road Superintendent may require sections of the gas system to be laid at greater depth than required by the latest CSA standard for gas pipeline systems to facilitate known projects or to correct known highway deficiencies.

(e) Prior to the commencement of work on the gas system, the Engineer/Road Superintendent must approve the location of the work as shown on the Plan filed by the Gas Company, the timing of the work and any terms and conditions relating to the installation of the work.

(f) In addition to the requirements of this Agreement, if the Gas Company proposes to affix any part of the gas system to a bridge, viaduct or other structure, if the Engineer/Road Superintendent approves this proposal, he may require the Gas Company to comply with special conditions or to enter into a separate agreement as a condition of the approval of this part of the construction of the gas system.

(g) Where the gas system may affect a municipal drain, the Gas Company shall also file a copy of the Plan with the Corporation's Drainage Superintendent for purposes of the *Drainage Act*, or such other person designated by the Corporation as responsible for the drain.

(h) The Gas Company shall not deviate from the approved location for any part of the gas system unless the prior approval of the Engineer/Road Superintendent to do so is received.

(i) The Engineer/Road Superintendent's approval, where required throughout this Paragraph, shall not be unreasonably withheld.

(j) The approval of the Engineer/Road Superintendent is not a representation or warranty as to the state of repair of the highway or the suitability of the highway for the gas system.

6. **As Built Drawings**

The Gas Company shall, within six months of completing the installation of any part of the gas system, provide two copies of "as built" drawings to the Engineer/Road Superintendent. These drawings must be sufficient to accurately establish the location, depth (measurement between the top of the gas system and the ground surface at the time of installation) and distance of the gas system. The "as built" drawings shall be of the same quality as the Plan and, if the approved pre-construction plan included elevations that were geodetically referenced, the "as built" drawings shall similarly include elevations that are geodetically referenced. Upon the request of the Engineer/Road Superintendent, the Gas Company shall provide one copy of the drawings in an electronic format and one copy as a hard copy drawing.

7. **Emergencies**

In the event of an emergency involving the gas system, the Gas Company shall proceed with the work required to deal with the emergency, and in any instance where prior approval of the Engineer/Road Superintendent is normally required for the work, the Gas Company shall use its best efforts to immediately notify the Engineer/Road Superintendent of the location and nature of the emergency and the work being done and, if it deems appropriate, notify the police force, fire or other emergency services having jurisdiction. The Gas Company shall provide the Engineer/Road Superintendent with at least one 24 hour emergency contact for the Gas Company and shall ensure the contacts are current.

8. **Restoration**

The Gas Company shall well and sufficiently restore, to the reasonable satisfaction of the Engineer/Road Superintendent, all highways, municipal works or improvements which it may excavate or interfere with in the course of laying, constructing, repairing or removing its gas system, and shall make good any settling or subsidence thereafter caused by such excavation or interference. If the Gas Company fails at any time to do any work required by this Paragraph within a reasonable period of time, the Corporation may do or cause such work to be done and the Gas Company shall, on demand, pay the Corporation's reasonably incurred costs, as certified by the Engineer/Road Superintendent.

9. **Indemnification**

The Gas Company shall, at all times, indemnify and save harmless the Corporation from and against all claims, including costs related thereto, for all damages or

injuries including death to any person or persons and for damage to any property, arising out of the Gas Company operating, constructing, and maintaining its gas system in the Municipality, or utilizing its gas system for the carriage of gas owned by others. Provided that the Gas Company shall not be required to indemnify or save harmless the Corporation from and against claims, including costs related thereto, which it may incur by reason of damages or injuries including death to any person or persons and for damage to any property, resulting from the negligence or wrongful act of the Corporation, its servants, agents or employees.

10. **Insurance**

(a) The Gas Company shall maintain Comprehensive General Liability Insurance in sufficient amount and description as shall protect the Gas Company and the Corporation from claims for which the Gas Company is obliged to indemnify the Corporation under Paragraph 9. The insurance policy shall identify the Corporation as an additional named insured, but only with respect to the operation of the named insured (the Gas Company). The insurance policy shall not lapse or be cancelled without sixty (60) days' prior written notice to the Corporation by the Gas Company.

(b) The issuance of an insurance policy as provided in this Paragraph shall not be construed as relieving the Gas Company of liability not covered by such insurance or in excess of the policy limits of such insurance.

(c) Upon request by the Corporation, the Gas Company shall confirm that premiums for such insurance have been paid and that such insurance is in full force and effect.

11. **Alternative Easement**

The Corporation agrees, in the event of the proposed sale or closing of any highway or any part of a highway where there is a gas line in existence, to give the Gas Company reasonable notice of such proposed sale or closing and, if it is feasible, to provide the Gas Company with easements over that part of the highway proposed to be sold or closed sufficient to allow the Gas Company to preserve any part of the gas system in its then existing location. In the event that such easements cannot be provided, the Corporation and the Gas Company shall share the cost of relocating or altering the gas system to facilitate continuity of gas service, as provided for in Paragraph 12 of this Agreement.

12. **Pipeline Relocation**

(a) If in the course of constructing, reconstructing, changing, altering or improving any highway or any municipal works, the Corporation deems that it is necessary to take up, remove or change the location of any part of the gas system, the Gas Company shall, upon notice to do so, remove and/or

relocate within a reasonable period of time such part of the gas system to a location approved by the Engineer/Road Superintendent.

(b) Where any part of the gas system relocated in accordance with this Paragraph is located on a bridge, viaduct or structure, the Gas Company shall alter or relocate that part of the gas system at its sole expense.

(c) Where any part of the gas system relocated in accordance with this Paragraph is located other than on a bridge, viaduct or structure, the costs of relocation shall be shared between the Corporation and the Gas Company on the basis of the total relocation costs, excluding the value of any upgrading of the gas system, and deducting any contribution paid to the Gas Company by others in respect to such relocation; and for these purposes, the total relocation costs shall be the aggregate of the following:

(i) the amount paid to Gas Company employees up to and including field supervisors for the hours worked on the project plus the current cost of fringe benefits for these employees,

(ii) the amount paid for rental equipment while in use on the project and an amount, charged at the unit rate, for Gas Company equipment while in use on the project,

(iii) the amount paid by the Gas Company to contractors for work related to the project,

(iv) the cost to the Gas Company for materials used in connection with the project, and

(v) a reasonable amount for project engineering and project administrative costs which shall be 22.5% of the aggregate of the amounts determined in items (i), (ii), (iii) and (iv) above.

(d) The total relocation costs as calculated above shall be paid 35% by the Corporation and 65% by the Gas Company, except where the part of the gas system required to be moved is located in an unassumed road or in an unopened road allowance and the Corporation has not approved its location, in which case the Gas Company shall pay 100% of the relocation costs.

Part IV - Procedural And Other Matters

13. Municipal By-laws of General Application

The Agreement is subject to the provisions of all regulating statutes and all municipal by-laws of general application, except by-laws which have the effect of amending this Agreement.

14. Giving Notice

Notices may be delivered to, sent by facsimile or mailed by prepaid registered post to the Gas Company at its head office or to the authorized officers of the Corporation at its municipal offices, as the case may be.

15. Disposition of Gas System

(a) If the Gas Company decommissions part of its gas system affixed to a bridge, viaduct or structure, the Gas Company shall, at its sole expense, remove the part of its gas system affixed to the bridge, viaduct or structure.

(b) If the Gas Company decommissions any other part of its gas system, it shall have the right, but is not required, to remove that part of its gas system. It may exercise its right to remove the decommissioned parts of its gas system by giving notice of its intention to do so by filing a Plan as required by Paragraph 5 of this Agreement for approval by the Engineer/Road Superintendent. If the Gas Company does not remove the part of the gas system it has decommissioned and the Corporation requires the removal of all or any part of the decommissioned gas system for the purpose of altering or improving a highway or in order to facilitate the construction of utility or other works in any highway, the Corporation may remove and dispose of so much of the decommissioned gas system as the Corporation may require for such purposes and neither party shall have recourse against the other for any loss, cost, expense or damage occasioned thereby. If the Gas Company has not removed the part of the gas system it has decommissioned and the Corporation requires the removal of all or any part of the decommissioned gas system for the purpose of altering or improving a highway or in order to facilitate the construction of utility or other works in a highway, the Gas Company may elect to relocate the decommissioned gas system and in that event Paragraph 12 applies to the cost of relocation.

16. **Use of Decommissioned Gas System**

(a) The Gas Company shall provide promptly to the Corporation, to the extent such information is known:

(i) the names and addresses of all third parties who use decommissioned parts of the gas system for purposes other than the transmission or distribution of gas; and

(ii) the location of all proposed and existing decommissioned parts of the gas system used for purposes other than the transmission or distribution of gas.

(b) The Gas Company may allow a third party to use a decommissioned part of the gas system for purposes other than the transmission or distribution of gas and may charge a fee for that third party use, provided

(i) the third party has entered into a municipal access agreement with the Corporation; and

(ii) the Gas Company does not charge a fee for the third party's right of access to the highways.

(c) Decommissioned parts of the gas system used for purposes other than the transmission or distribution of gas are not subject to the provisions of this Agreement. For decommissioned parts of the gas system used for purposes other than the transmission and distribution of gas, issues such as relocation costs will be governed by the relevant municipal access agreement.

17. **Franchise Handbook**

The Parties acknowledge that operating decisions sometimes require a greater level of detail than that which is appropriately included in this Agreement. The Parties agree to look for guidance on such matters to the Franchise Handbook prepared by the Association of Municipalities of Ontario and the gas utility companies, as may be amended from time to time.

18. **Other Conditions**

Notwithstanding the cost sharing arrangements described in Paragraph 12, if any part of the gas system altered or relocated in accordance with Paragraph 12 was constructed or installed prior to January 1, 1981, the Gas Company shall alter or relocate, at its sole expense, such part of the gas system at the point specified, to a location satisfactory to the Engineer/Road Superintendent.

19. **Agreement Binding Parties**

This Agreement shall extend to, benefit and bind the parties thereto, their successors and assigns, respectively.

IN WITNESS WHEREOF the parties have executed this Agreement effective from the date written above.

THE CORPORATION OF THE
REGIONAL MUNICIPALITY OF HALTON

Per: _____
Joyce Savoline, Chair

Per: _____
Brent Marshall
Chief Administrative Officer

UNION GAS LIMITED

Per: _____
(Authorized Signing Officer)

Christine Jackson
Assistant Secretary

UNION GAS LIMITED

Answer to Interrogatory from
Board Staff

Reference: Exhibit A, Tab 13, pages 1-6

Preamble: Union conducted consultations with potentially affected First Nations and Metis Nations to address concerns and resolve issues triggered by the proposed pipeline.

Please provide an update on the progress of Union's actions to address the concerns raised by First Nations and Metis Nations affected by the proposed project.

Response:

Union has instructed its archaeology and environmental consultants to ask for monitors from the First Nations that were requesting to be engaged in the surveys (Haudenosaunee Development Institute, Six Nations of the Grand, and Mississaugas of New Credit First Nations) and Union has agreed to compensate the First Nations monitors for time spent attending the site.

Union has executed Capacity Funding Agreements with the various First Nations that required the funding to adequately review the proposed Project.

Union will continue to consult with the First Nations and the Métis Nation throughout the completion of the Project to ensure any concerns raised are dealt with in a timely manner.

UNION GAS LIMITED

Answer to Interrogatory from
Board Staff

Reference: Exhibit A, Tab 13, page 4, lines 10-12

Preamble: Regarding First Nations and Metis Nations consultation, Union stated in the evidence that a settlement agreement with Haudenosaunee Development Institute (representing Haudenosaunee First Nations interests) has been developing and would be finalized.

Please provide and update on the status and prospect of finalizing Union's settlement agreement with Haudenosaunee.

Response:

Union has finalized negotiations and completed an agreement with the Haudenosaunee Confederacy Chiefs on December 16, 2014.

UNION GAS LIMITED

Answer to Interrogatory from
Board Staff

Reference: EB-2014-0182 Application

Preamble: Union applied for OEB order for leave to construct facilities-under section 90 of the OEB Act.

Please comment on the attached Board staff proposed draft conditions of approval. Please note that these conditions are draft version subject to additions or changes.

Union Gas Limited
Leave to Construct Application under section 90 of OEB Act
EB-2014-0182
Board Staff Proposed Draft
Conditions of Approval

1 General Requirements

1.1 Union Gas Limited ("Union") shall construct the facilities and restore the land in accordance with its application and the evidence filed in EB-2014-0182 except as modified by this Order and these Conditions of Approval.

1.2 Unless otherwise ordered by the Board, authorization for Leave to Construct shall terminate December 31, 2016, unless construction has commenced prior to that date.

1.3 Union shall implement all the recommendations of the Environmental Report filed in the pre-filed evidence, and all the recommendations and directives identified by the Ontario Pipeline Coordinating Committee ("OPCC") review.

1.4 Union shall advise the Board's designated representative of any proposed material change in construction or restoration procedures and, except in an emergency, Union shall not make such change without prior approval of the Board or its designated representative. In the event of an emergency, the Board shall be informed immediately after the fact.

1.5 Within 15 months of the final in-service date, Union shall file with the Board Secretary a Post Construction Financial Report. The Report shall indicate the actual capital costs of the project and an explanation for any significant variances from the estimates filed in this proceeding.

2 Project and Communications Requirements

2.1 The Board's designated representative for the purpose of these Conditions of Approval shall be the Manager, Natural Gas Applications.

2.2 Union shall designate a person as project engineer and shall provide the name of the individual to the Board's designated representative. The project engineer will be responsible for the fulfillment of the Conditions of Approval on the construction site. Union shall provide a copy of the Order and Conditions of Approval to the project engineer, within seven days of the Board's Order being issued.

2.3 Union shall give the Board's designated representative and the Chair of the OPCC ten days written notice in advance of the commencement of the construction.

2.4 Union shall furnish the Board's designated representative with all reasonable assistance for ascertaining whether the work is being or has been performed in accordance with the Board's Order.

2.5 Union shall file with the Board's designated representative notice of the date on which the installed pipelines were tested, within one month after the final test date.

2.6 Union shall furnish the Board's designated representative with five copies of written confirmation of the completion of construction. A copy of the confirmation shall be provided to the Chair of the OPCC.

3 Monitoring and Reporting Requirements

3.1 Both during and after construction, Union shall monitor the impacts of construction, and shall file four copies of both an interim and a final monitoring report with the Board. The interim monitoring report shall be filed within six months of the in-service date, and the final monitoring report shall be filed within fifteen months of the in-service date. Union shall attach a log of all complaints that have been received to the interim and final monitoring reports. The log shall record the times of all complaints received, the substance of each complaint, the actions taken in response, and the reasons underlying such actions.

3.2 The interim monitoring report shall confirm Union's adherence to Condition 1.1 and shall include a description of the impacts noted during construction and the actions taken or to be taken to prevent or mitigate the long-term effects of the impacts of construction. This report shall describe any outstanding concerns identified during construction.

3.3 The final monitoring report shall describe the condition of any rehabilitated land and the effectiveness of any mitigation measures undertaken. The results of the monitoring programs and analysis shall be included and recommendations made as appropriate. Any deficiency in compliance with any of the Conditions of Approval shall be explained.

4 Other Approvals

4.1 Union shall obtain all other approvals, permits, licences, and certificates required to construct, operate and maintain the proposed project, and shall provide an affidavit that all such approvals, permits, licences, and certificates have been obtained.

Response:

Union can accept Board Staff's proposed Conditions of Approval.

UNION GAS LIMITED

Answer to Interrogatory from
The Association of Power Producers of Ontario ("APPrO")

Reference: i) Exhibit A, Tab 3, page 2
ii) EB-2014-0261 Exhibit B.APPrO.4
iii) Exhibit A, Tab 7, page 9

Preamble: In Reference i) above, Union indicates that Burlington Oakville reinforcement is required by November 1, 2016 and in Reference ii), Union indicates that its 60,000 GJ/d TransCanada firm transportation (FT) contract has an expiry of October 31, 2017.

a) Recognizing that Union's FT contract with TransCanada continues until October 31, 2017, what is the actual capacity shortfall prior to October 31, 2017 that requires this line in service in 2016?

b) In Reference ii) above, Union indicates that secondary market capacity is not likely to be available after October 31, 2016. Please describe the attempts Union has made to acquire secondary services for the period after November 1, 2016, and explain why such attempts have led Union to this conclusion?

c) Does Union have standard renewal rights on the 60,000 GJ/d FT contract with TransCanada?

Response:

a) Although the TransCanada contract shows an expiry date of October 31, 2017, it will actually expire once the proposed Burlington Oakville Pipeline Project ("the Project") is in-service. The Project was incorporated within the Settlement Agreement with an anticipated in-service date of November 1, 2016. In a similar manner to how TransCanada handles long haul conversions, TransCanada offered to link the short haul contract termination (60,000 GJ/d Dawn to Union CDA and 16,000 GJ/d Parkway to Union CDA) to the in-service date of the Project. Union could have elected to not renew the 60,000 GJ/d contract effective November 1, 2016, but chose to link the expiry of that contract to the in-service date of the Project. In doing so, this will allow Union to manage any potential construction delays and not risk a gap in supply. Attachment 1 is the letter linking the termination of the TransCanada short haul contracts with the Project in-service as well as the commencement of the Kirkwall to Amended Union CDA contract. The anticipated shortfall in capacity to serve the Burlington Oakville System in winter 2016/2017 is approximately 65 TJ/d (Exhibit A, Tab 5, pg. 8).

b) Union describes in detail throughout Exhibit A, Tab 5, the issues related to relying on the secondary market and in this case, the lack of secondary market capacity expected post November 1, 2016. For 2014/15 winter there has only been one market particpant that could provide Union a firm third party service to the Union CDA. In discussions with this last remaining holder of Union CDA capacity, they indicated that they will no longer have this TransCanada capacity going to the Union CDA beyond October 31, 2016. The Union CDA is a very limited market, one which only Union would be expected to have contracts to this area. Union requires Direct Purchase customers to deliver to Dawn or to Parkway. There will therefore not be any firm secondary market capacity available after November 1, 2016, leaving Union with approximately 40% of firm capacity required to meet firm market demands in the Burlington Oakville area.

c) Yes. However, as noted above the contract will automatically terminate once the Project is in-service.

TransCanada
In business to deliver

September 22, 2014

TransCanada PipeLines Limited
200 Bay Street, South Tower
Toronto, Ontario
M5J 2J1

tel 416.869.2191
fax 416.869.2119
email don_bell@transcanada.com
web www.transcanada.com

Union Gas Limited
50 Keil Drive North
Chatham, Ontario
N7M 5M1

Attention: Chris Shorts
Director, Gas Supply

Dear Chris:

Reference: 135 TJ/d Short Haul Firm Transportation Service Request

TransCanada PipeLines Limited ("**TransCanada**"), Union Gas Limited ("**Union Gas**"), Enbridge Gas Distribution Inc. and Gaz Metro Limited Partnership entered into a settlement agreement dated October 31, 2013 as amended from time to time (the "**Settlement Agreement**").

As contemplated in Section 8.1 (d) of the Settlement Agreement Union Gas has entered into a precedent agreement with TransCanada dated June 2, 2014 for the transportation of 135,000 GJ/d of firm transportation service on TransCanada's Mainline system from Kirkwall to the Amended CDA effective November 1, 2016 (the "**TransCanada FT Contract**").

In addition, as set out in Section 8.1 (d) Union Gas's request for the 135,000 GJ/d of firm transportation service on TransCanada's Mainline system along with TransCanada's changes related to the Union CDA, are contingent on the approval of an application by Union Gas for the Burlington to Oakville pipeline which is expected to be in-service November 1, 2016 (the "**Burlington to Oakville Pipeline Project**").

In order to provide service under the TransCanada FT Contract TransCanada entered into a precedent agreement and firm transportation agreement dated June 19, 2014 for up to 36,301 GJ/d of incremental firm transportation service on the Union Gas's pipeline system from Kirkwall to Parkway effective November 1, 2016 (the "**Union TBO Contract**") subject to Union obtaining approval for the Expansion Facilities (as defined in the Union TBO Contract).

Union Gas also has indicated that it will not require its existing TransCanada firm transportation contracts of 60,000 GJ/d from Union Dawn to the Union CDA ("**Contract #20259**") and 16,000 GJ/d of Union Parkway Belt to Union CDA ("**Contract #42581**") once the Burlington to Oakville Pipeline Project is placed into service.

In order to align the start dates for the TransCanada FT Contract, and the Union TBO Contract with the commencement of the Burlington to Oakville Pipeline Project, and to align the termination of Contract

#20259 and Contract #42581 with the commencement of the TransCanada FT Contract, Union Gas and TransCanada agree to paragraphs 1 to 5, subject to the following conditions:

(a) TransCanada receiving regulatory approval of the Settlement Agreement in accordance with the terms and conditions of the Settlement Agreement;

(b) TransCanada receiving regulatory approval to restructure the Union CDA in accordance with Section 8.1 (d) of the Settlement Agreement effective on the in-service date of the Burlington to Oakville Pipeline Project;

(c) Union Gas receiving regulatory approval for and placing it into service its Burlington to Oakville Pipeline Project; and

(d) Union Gas receiving regulatory approval for and placing into service the Expansion Facilities (as defined in the Union TBO Contract).

Subject to all of the conditions set out above being satisfied on or before November 1, 2017 TransCanada and Union Gas agree as follows:

1. Union Gas shall provide notice (the "**Notice**") to TransCanada: a) 30 days prior to the expected in-service date of the Burlington to Oakville Pipeline Project or the Expansion Facilities (as defined in the Union TBO Contract) whichever is later; or b) 30 days prior to the expected in-service date of the Burlington Oakville Pipeline Project if TransCanada has elected a quantity of zero for the Union TBO Contract in accordance with the terms of the Union Gas precedent agreement.

2. Union Gas shall execute the TransCanada FT Contract within 10 days of TransCanada providing the TransCanada FT Contract to Union Gas.

3. The Union TBO Contract shall not commence unless the TransCanada FT Contract commences. The commencement date for the TransCanada FT Contract and the Union TBO Contract shall:

   (a) occur on the first day of the month immediately following the 30 days Notice; and

   (b) be the same date for both contracts.

   TransCanada and Union shall not liable to the other Party for any damages or claims whatsoever if the TransCanada FT Contract and/or the Union TBO Contract does not commence.

4. Union Gas shall renew Contract #20259 and Contract #42581 at the required notice date for a term ending October 31, 2017.

5. Union Gas and TransCanada agree to terminate Contract #20259 and Contract #42581 effective on the commencement date of the TransCanada FT Contract and the Union TBO Contract.

The terms and conditions set out herein are agreed to the 26th day of September, 2014.

TRANSCANADA PIPELINES LIMITED

Per: _____

Don Bell
Director, Commercial East

UNION GAS LIMITED

Per: _____

Chris Shorts
Director, Gas Supply

UNION GAS LIMITED

Answer to Interrogatory from
The Association of Power Producers of Ontario ("APPrO")

Reference: i) Exhibit A, Tab 5, page 6
ii) National Energy Board (NEB) Decision RH-001-2014

Preamble: Union indicates TransCanada was not able to provide additional shorthaul transportation to the Union Central Delivery Area. In light of the RH-001-2014 NEB decision in Reference ii) above, APPrO would like to understand whether TransCanada's ability to provide such service has changed.

a) Has Union approached TransCanada since the RH-001-2014 decision to see if TransCanada could provide any or all of the shortfall capacity to Burlington and Oakville? If so, please provide the details of any service that TransCanada was able to offer. If Union has not approached TransCanada subsequent to this NEB decision, please explain why it has not.

Response:

Union continues to have discussions with TransCanada, including since the RH-001-2014 decision, regarding the build out of facilities in the Parkway area. The Burlington Oakville Pipeline Project remains the most economic means of supplying the Burlington Oakville System. The tolls and tariff amendments based on the Settlement Agreement (which included the construction of the Burlington Oakville Pipeline Project) and the resulting billing determinant changes on the TransCanada Mainline, were approved substantively as filed by the National Energy Board on November 28, 2014. Please also see the response at Exhibit B.LPMA.3

As noted at Exhibit A, Tab 5, pgs. 5-7, Union has attempted to secure firm TransCanada short haul capacity for the needs of the Union CDA since 2012. However, TransCanada has not had any capacity available (please see the response at Exhibit B.LPMA.3 b)). As discussed at Exhibit A, Tab 7, Union has concluded that based on the Settlement Agreement tolls effective January 1, 2015, the proposed Project is economic to build (i.e. lower cost to ratepayers) relative to contracting with TransCanada for capacity between Parkway and the Union CDA, even if capacity was available. It should also be noted that with the recently NEB-approved Abandonment surcharge to the TransCanada tolls, these economics would be enhanced further. The fundamentals for the Project therefore remain unchanged.

The proposed Project provides security of supply and enough capacity to serve the rapidly growing Burlington, Oakville and southern Milton areas over a long period of time (please see the response at Exhibit B.Staff.4-1) .

UNION GAS LIMITED

Answer to Interrogatory from
The Association of Power Producers of Ontario ("APPrO")

Reference: i) Exhibit A, Tab 7, Table 7-5

Preamble: APPrO would like to better understand the assumptions that were included in the Net Present Value (NPV) analysis. APPrO also wishes to understand the NPV of each of the alternatives assuming that the supply originates at Dawn.

a) Please provide the annual detail of costs for each of the alternatives shown in Table 7-5. Please include any key assumptions and illustrate the volumes that would be contracted for each years from TransCanada.

b) For the Burlington Oakville reinforcement alternative, please show the NPV of the proposed reinforcement plus the incremental revenue requirement on the Union Dawn-Parkway system to meet the forecasted market requirements for the same period. Please provide the annual detail and note the capacity and other key assumptions.

c) Alternative 2) in Table 7-5 shows the NPV for the scenario originating at Kirkwall whereas the Burlington Oakville reinforcement originates at Parkway. In order to compare the alternatives on an equivalent basis, please provide a NPV analysis for alternative 2) originating at Dawn and include the revenue requirement associated with future Dawn-Kirkwall builds for a similar period.

Response:

a) and b)

Please see Attachment 1 which outlines the annual detail of costs for each of the short haul transportation options shown at Exhibit A, Tab 7, Table 7-5. Each of these options assumes that TransCanada would build incremental capacity as required and there would be no toll increase for the increased capacity.

The NPV for the build option is $102.6 million and can be found at Exhibit A, Tab 9, Schedule 2. The Dawn Parkway System can deliver all of the current Burlington Oakville volumes. The 20-year growth will be met on a graduated basis over 20 years and is not a cost that is attributable to the cost of building the pipeline. It is also not relevant to the comparison between the build and the short haul transportation options in Table 7-5. The need for capacity for growth is common to all alternatives assuming gas travels the Dawn Parkway System to Parkway before delivery to the Union ECDA.

Dawn to Parkway Impacts

The question appears to suggest a cost for Dawn Parkway capacity should be added to the cost of the proposed Project build option. Attributing a Dawn to Parkway cost to the Project build option is incorrect.

Dawn to Parkway Impacts for Existing Burlington Oakville Demands

Union holds 60 TJ/d of capacity with TransCanada for Dawn to Union CDA service which serves a portion of the existing Burlington Oakville System demands. The Dawn to Parkway impacts related to this 60 TJ/d are properly recognized in the economics of the four short haul commercial options not the build option. The impact is a NPV of $25.1 million and has been included as a credit to the short haul commercial options as shown at Exhibit A, Tab 9, Schedule 2.

The reason it is a credit is that if Union does not build the Project, Union does not turn the capacity back to TransCanada, and Union does not need to reserve 2016 Dawn to Parkway capacity for infranchise needs. Union would have 60 TJ/d more capacity in the 2016 Dawn to Parkway project than it could sell. The revenue would be at the M12 rate. This is an opportunity for revenue but it only occurs if a short haul commercial service is used to serve the Burlington Oakville System instead of building the Project.

Since the Project analysis is a least cost analysis (build versus buy), recognizing the impact is appropriate when comparing options. The proper treatment is an offset to the short haul commercial options. This treatment also best matches how the amounts would appear in Union's financial statements under each of the build or buy alternatives.

The Table below provides a simplified example of the annual cost (2017 figures) to illustrate the annual impact.

	Build the Project ($ millions)	Buy Services
Annual Cost [(1)]	$ 8.3	$ 12.1
Incremental Dawn to Parkway Revenue	$0	$ 2.0
Net Impact	$8.3	$ 10.1

Note 1:
The Project cost reference Exhibit A, Tab 9, Schedule 4, Line 11
Buy services is short haul option 1. Note that Option 1 is the least cost commercial alternative and assumes that TransCanada can provide the capacity.

Dawn to Parkway Impacts for Burlington Oakville Growth (Future) Demands

Described below is an overview of each option. Attachment 1 provides the calculations. In each of the descriptions below the term "Renewable TransCanada Contracts" means Dawn to Union ECDA capacity of 68 TJ/d and Parkway to Union ECDA capacity of 16 TJ/d.

Commercial Services Alternative 1 (Parkway to Union ECDA from TransCanada)
This follows the same path as the build option up to Parkway and from there is shipped by TransCanada to Union ECDA. The Renewable TransCanada Contracts are retained and the rest of the demands (current and future growth) are shipped by TransCanada from Parkway to Union ECDA. The cost of Parkway to Union ECDA route is the toll times the demand and does not include a Dawn to Parkway cost for future growth.

Commercial Services Alternative 2 (Kirkwall to Union ECDA from TransCanada)
This option is a landed cost service from Kirkwall to Union ECDA. The renewable TransCanada contracts are retained and the rest of the demands (current and future growth) are shipped by TransCanada as a landed service to Union ECDA. Column (f) in Attachment 2 is a credit of $2.4 million representing Union's Kirkwall to Parkway toll which is embedded within the growth component of this option.

Commercial Services Alternative 3 (Dawn to Union ECDA from TransCanada)
This option is a landed cost service from Dawn to Union ECDA. The renewable TransCanada contracts are retained and the rest of the demands (current and future growth) are shipped by TransCanada as a landed service to Union ECDA. Column (f) in Attachment 2 is a credit of $18.7 million representing Union's Dawn to Parkway toll which is embedded within the growth component of this option.

Commercial Services Alternative 4 (Parkway to Union ECDA from Secondary Market)
This option is a landed cost service from Parkway to Union ECDA. The renewable TransCanada contracts are retained and the rest of the demands (current and future growth) are shipped on secondary market as a landed service to Union ECDA. Column (f) in Attachment 2 is a credit of $18.7 million representing Union's Dawn to Parkway toll which is embedded within the growth component of this option.

The credits in column (f) of Attachment 2 are used only to create an approximation of the comparable cost of each option relative to the build and short haul commercial (transportation services) option 1 alternatives. The real cash costs of short haul transportation options 2, 3 and 4 include the cost paying TransCanada or a third party to ship the growth demand. These are found in column (c).

c) The adjustment of $ 2.4 million found in Attachment 2 column (f) provides an equivalent basis to the build option.

Annual Detail of Costs

Line No.	Project Year ($ millions)	1	2	3	4	5	6	7
1	**Existing Renewable Contracts**							
2	TransCanada Dawn to Union ECDA:							
3	Volume (GJ/d)	68,000	68,000	68,000	68,000	68,000	68,000	68,000
4	Rate ($/GJ/d)	0.3161	0.3161	0.3161	0.3161	0.3161	0.3161	0.3161
5	Annual Cost (Line 3 x Line 4 x 365 days)	$ 7.8	$ 7.8	$ 7.8	$ 7.8	$ 7.8	$ 7.8	$ 7.8
6	TransCanada Parkway to Union ECDA:							
7	Volume (GJ/d)	16,000	16,000	16,000	16,000	16,000	16,000	16,000
8	Rate ($/GJ/d)	0.1393	0.1393	0.1393	0.1393	0.1393	0.1393	0.1393
9	Annual Cost (Line 7 x Line 8 x 365 days)	$ 0.8	$ 0.8	$ 0.8	$ 0.8	$ 0.8	$ 0.8	$ 0.8
10	Total Annual Cost Existing Renewable Contracts	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7

Annual Detail of Costs

Line No.	Project Year ($ millions)	8	9	10	11	12	13	14
1	**Existing Renewable Contracts**							
2	TransCanada Dawn to Union ECDA:							
3	Volume (GJ/d)	68,000	68,000	68,000	68,000	68,000	68,000	68,000
4	Rate ($/GJ/d)	0.3161	0.3161	0.3161	0.3161	0.3161	0.3161	0.3161
5	Annual Cost (Line 3 x Line 4 x 365 days)	$ 7.8	$ 7.8	$ 7.8	$ 7.8	$ 7.8	$ 7.8	$ 7.8
6	TransCanada Parkway to Union ECDA:							
7	Volume (GJ/d)	16,000	16,000	16,000	16,000	16,000	16,000	16,000
8	Rate ($/GJ/d)	0.1393	0.1393	0.1393	0.1393	0.1393	0.1393	0.1393
9	Annual Cost (Line 7 x Line 8 x 365 days)	$ 0.8	$ 0.8	$ 0.8	$ 0.8	$ 0.8	$ 0.8	$ 0.8
10	Total Annual Cost Existing Renewable Contracts	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7

Annual Detail of Costs

Line No.	Project Year ($ millions)	15	16	17	18	19	20	21-40
1	**Existing Renewable Contracts**							
2	TransCanada Dawn to Union ECDA:							
3	Volume (GJ/d)	68,000	68,000	68,000	68,000	68,000	68,000	68,000
4	Rate ($/GJ/d)	0.3161	0.3161	0.3161	0.3161	0.3161	0.3161	0.3161
5	Annual Cost (Line 3 x Line 4 x 365 days)	$ 7.8	$ 7.8	$ 7.8	$ 7.8	$ 7.8	$ 7.8	$ 7.8
6	TransCanada Parkway to Union ECDA:							
7	Volume (GJ/d)	16,000	16,000	16,000	16,000	16,000	16,000	16,000
8	Rate ($/GJ/d)	0.1393	0.1393	0.1393	0.1393	0.1393	0.1393	0.1393
9	Annual Cost (Line 7 x Line 8 x 365 days)	$ 0.8	$ 0.8	$ 0.8	$ 0.8	$ 0.8	$ 0.8	$ 0.8
10	Total Annual Cost Existing Renewable Contracts	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7

Annual Detail of Costs

Line No.	Project Year ($ millions)		1	2	3	4	5	6	7
11	**Option 1 - Existing Renewable plus Incremental TransCanada Parkway to Union ECDA**								
12	Incremental:								
13	Volume (GJ/d)		64,645	68,348	72,051	75,754	82,457	86,850	91,243
14	Rate ($/GJ/d)		0.1393	0.1393	0.1393	0.1393	0.1393	0.1393	0.1393
15	Incremental Cost		$ 3.3	$ 3.5	$ 3.7	$ 3.9	$ 4.2	$ 4.4	$ 4.6
16	Existing Renewable Contracts (Line 10)		$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7
17	Dawn-Parkway Benefit Adjustment	(1)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)
18	Total Cost Option 1		$ 9.9	$ 10.1	$ 10.3	$ 10.5	$ 10.8	$ 11.1	$ 11.3
19	**Option 2 - Existing Renewable plus Incremental TransCanada Kirkwall to Union ECDA**								
20	Incremental:								
21	Volume (GJ/d)		64,645	68,348	72,051	75,754	82,457	86,850	91,243
22	Rate ($/GJ/d)		0.1690	0.1690	0.1690	0.1690	0.1690	0.1690	0.1690
23	Incremental Cost		$ 4.0	$ 4.2	$ 4.4	$ 4.7	$ 5.1	$ 5.4	$ 5.6
24	Existing Renewable Contracts (Line 10)		$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7
25	Dawn-Parkway Benefit Adjustment	(1)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)
26	Total Cost Option 2		$ 10.6	$ 10.9	$ 11.1	$ 11.3	$ 11.7	$ 12.0	$ 12.3
27	**Option 3 - Existing Renewable plus Incremental TransCanada Dawn to Union ECDA**								
28	Incremental:								
29	Volume (GJ/d)		64,645	68,348	72,051	75,754	82,457	86,850	91,243
30	Rate ($/GJ/d)		0.3161	0.3161	0.3161	0.3161	0.3161	0.3161	0.3161
31	Incremental Cost		$ 7.5	$ 7.9	$ 8.3	$ 8.7	$ 9.5	$ 10.0	$ 10.5
32	Existing Renewable Contracts (Line 10)		$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7
33	Dawn-Parkway Benefit Adjustment	(1)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)
34	Total Cost Option 3		$ 14.1	$ 14.5	$ 15.0	$ 15.4	$ 16.2	$ 16.7	$ 17.2
35	**Option 4 - Existing Renewable plus Secondary Market Dawn/Parkway to Union ECDA**								
36	Incremental:								
37	Volume (GJ/d)		64,645	68,348	72,051	75,754	82,457	86,850	91,243
38	Rate ($/GJ/d)		0.3516	0.3516	0.3516	0.3516	0.3516	0.3516	0.3516
39	Incremental Cost		$ 8.3	$ 8.8	$ 9.2	$ 9.7	$ 10.6	$ 11.1	$ 11.7
40	Existing Renewable Contracts (Line 10)		$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7
41	Dawn-Parkway Benefit Adjustment	(1)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)
42	Total Cost Option 4		$ 14.9	$ 15.4	$ 15.9	$ 16.4	$ 17.2	$ 17.8	$ 18.4

Notes:

(1) Dawn-Parkway credit of $2.0 million (60,000 GJ/d x $0.0919 x 365) as per Exh A Tab 9 Sch 2

Annual Detail of Costs

Line No.	Project Year ($ millions)		8	9	10	11	12	13	14
11	**Option 1 - Existing Renewable plus Incremental TransCanada Parkway to Union ECDA**								
12	Incremental:								
13	Volume (GJ/d)		95,636	100,029	104,422	108,423	112,424	116,425	120,426
14	Rate ($/GJ/d)		0.1393	0.1393	0.1393	0.1393	0.1393	0.1393	0.1393
15	Incremental Cost		$ 4.9	$ 5.1	$ 5.3	$ 5.5	$ 5.7	$ 5.9	$ 6.1
16	Existing Renewable Contracts (Line 10)		$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7
17	Dawn-Parkway Benefit Adjustment	(1)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)
18	Total Cost Option 1		$ 11.5	$ 11.7	$ 12.0	$ 12.2	$ 12.4	$ 12.6	$ 12.8
19	**Option 2 - Existing Renewable plus Incremental TransCanada Kirkwall to Union ECDA**								
20	Incremental:								
21	Volume (GJ/d)		95,636	100,029	104,422	108,423	112,424	116,425	120,426
22	Rate ($/GJ/d)		0.1690	0.1690	0.1690	0.1690	0.1690	0.1690	0.1690
23	Incremental Cost		$ 5.9	$ 6.2	$ 6.4	$ 6.7	$ 6.9	$ 7.2	$ 7.4
24	Existing Renewable Contracts (Line 10)		$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7
25	Dawn-Parkway Benefit Adjustment	(1)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)
26	Total Cost Option 2		$ 12.5	$ 12.8	$ 13.1	$ 13.3	$ 13.6	$ 13.8	$ 14.1
27	**Option 3 - Existing Renewable plus Incremental TransCanada Dawn to Union ECDA**								
28	Incremental:								
29	Volume (GJ/d)		95,636	100,029	104,422	108,423	112,424	116,425	120,426
30	Rate ($/GJ/d)		0.3161	0.3161	0.3161	0.3161	0.3161	0.3161	0.3161
31	Incremental Cost		$ 11.0	$ 11.5	$ 12.0	$ 12.5	$ 13.0	$ 13.4	$ 13.9
32	Existing Renewable Contracts (Line 10)		$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7
33	Dawn-Parkway Benefit Adjustment	(1)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)
34	Total Cost Option 3		$ 17.7	$ 18.2	$ 18.7	$ 19.2	$ 19.6	$ 20.1	$ 20.5
35	**Option 4 - Existing Renewable plus Secondary Market Dawn/Parkway to Union ECDA**								
36	Incremental:								
37	Volume (GJ/d)		95,636	100,029	104,422	108,423	112,424	116,425	120,426
38	Rate ($/GJ/d)		0.3516	0.3516	0.3516	0.3516	0.3516	0.3516	0.3516
39	Incremental Cost		$ 12.3	$ 12.8	$ 13.4	$ 13.9	$ 14.4	$ 14.9	$ 15.5
40	Existing Renewable Contracts (Line 10)		$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7
41	Dawn-Parkway Benefit Adjustment	(1)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)
42	Total Cost Option 4		$ 18.9	$ 19.5	$ 20.0	$ 20.6	$ 21.1	$ 21.6	$ 22.1

Notes:

(1) Dawn-Parkway credit of $2.0 million (60,000 GJ/d x $0.0919 x 365) as per Exh A Tab 9 Sch 2

Annual Detail of Costs

Line No.	Project Year ($ millions)		15	16	17	18	19	20	21-40
11	**Option 1 - Existing Renewable plus Incremental TransCanada Parkway to Union ECDA**								
12	Incremental:								
13	Volume (GJ/d)		124,427	127,113	129,799	132,485	135,171	137,857	137,857
14	Rate ($/GJ/d)		0.1393	0.1393	0.1393	0.1393	0.1393	0.1393	0.1393
15	Incremental Cost		$ 6.3	$ 6.5	$ 6.6	$ 6.7	$ 6.9	$ 7.0	$ 7.0
16	Existing Renewable Contracts (Line 10)		$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7
17	Dawn-Parkway Benefit Adjustment	(1)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)
18	Total Cost Option 1		$ 13.0	$ 13.1	$ 13.2	$ 13.4	$ 13.5	$ 13.7	$ 13.7
19	**Option 2 - Existing Renewable plus Incremental TransCanada Kirkwall to Union ECDA**								
20	Incremental:								
21	Volume (GJ/d)		124,427	127,113	129,799	132,485	135,171	137,857	137,857
22	Rate ($/GJ/d)		0.1690	0.1690	0.1690	0.1690	0.1690	0.1690	0.1690
23	Incremental Cost		$ 7.7	$ 7.8	$ 8.0	$ 8.2	$ 8.3	$ 8.5	$ 8.5
24	Existing Renewable Contracts (Line 10)		$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7
25	Dawn-Parkway Benefit Adjustment	(1)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)
26	Total Cost Option 2		$ 14.3	$ 14.5	$ 14.7	$ 14.8	$ 15.0	$ 15.2	$ 15.2
27	**Option 3 - Existing Renewable plus Incremental TransCanada Dawn to Union ECDA**								
28	Incremental:								
29	Volume (GJ/d)		124,427	127,113	129,799	132,485	135,171	137,857	137,857
30	Rate ($/GJ/d)		0.3161	0.3161	0.3161	0.3161	0.3161	0.3161	0.3161
31	Incremental Cost		$ 14.4	$ 14.7	$ 15.0	$ 15.3	$ 15.6	$ 15.9	$ 15.9
32	Existing Renewable Contracts (Line 10)		$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7
33	Dawn-Parkway Benefit Adjustment	(1)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)
34	Total Cost Option 3		$ 21.0	$ 21.3	$ 21.6	$ 21.9	$ 22.2	$ 22.6	$ 22.6
35	**Option 4 - Existing Renewable plus Secondary Market Dawn/Parkway to Union ECDA**								
36	Incremental:								
37	Volume (GJ/d)		124,427	127,113	129,799	132,485	135,171	137,857	137,857
38	Rate ($/GJ/d)		0.3516	0.3516	0.3516	0.3516	0.3516	0.3516	0.3516
39	Incremental Cost		$ 16.0	$ 16.3	$ 16.7	$ 17.0	$ 17.3	$ 17.7	$ 17.7
40	Existing Renewable Contracts (Line 10)		$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7	$ 8.7
41	Dawn-Parkway Benefit Adjustment	(1)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)	$ (2.0)
42	Total Cost Option 4		$ 22.6	$ 23.0	$ 23.3	$ 23.7	$ 24.0	$ 24.3	$ 24.3

Notes:

(1) Dawn-Parkway credit of $2.0 million (60,000 GJ/d x $0.0919 x 365) as per Exh A Tab 9 Sch 2

2016 BURLINGTON-OAKVILLE PIPELINE EXPANSION

Physical vs. Commercial Service Least Cost Economic Analysis - Illustrative

($ Millions)

Proposed Pipeline

		Total NPV Costs/ (Benefits)
1	Proposed NPS 20 Facility	102.6

Commercial Service Alternatives (Note 1)

			Add Abandonment	Total with Abandonment	Build NPV	Difference	Net NPV Benefit Proposed Facility vs. Alternatives
Firm Short Haul Service		(a)	(b)	(c)=(a)+(b)	(d)	(e)=(d)-(c)	
1	Parkway to Union ECDA from TransCanada	151.3	5.5	156.8	102.6	(54.2)	
2	Kirkwall to Union ECDA from TransCanada	165.9	5.8	171.7	102.6	(69.1)	
3	Dawn to Union ECDA from TransCanada	238.3	10.5	248.8	102.6	(146.2)	
4	Dawn/Parkway to Union ECDA from Secondary Market	255.7	10.5	266.2	102.6	(163.6)	
Firm Long Haul Service							
1	Empress to Union ECDA from TransCanada	527.8	129	656.8	102.6	(554.2)	

Illustrative
Net NPV Benefit
Proposed Facility
vs. Alternatives adjusted for M12 Tolls in Growth Portion

Growth Portion of M12 Toll (2) (f)	Sub total (g)=(c) -(f)	**Difference** (h)=(d)-(g)	As filed (i)	Variance to Filed (j)=(h)-(i)
-	156.8	(54.2)	(48.7)	5.5
2.4	169.3	(66.7)	(63.3)	3.4
18.7	230.1	(127.5)	(135.7)	(8.2)
18.7	247.5	(144.9)	(153.1)	(8.2)

Note:

(1) All commercial alternatives evaluated include an adjustment to reflect benefit associated with incremental 2016 Dawn-Parkway capacity available for sale if Union continues to hold existing TCPL renewable contract:

Union Bid in 2016 Dawn-Parkway open season to replace TCPL renewalable contract:

Contract Volume	60	TJd
Projected Rate M12 Toll	$0.0000	$/GJd
Dawn-Parkway Adjustment per Year	-	$Million
NPV Benefit (over 40 year time period of analysis)	(25.1)	$Million

Example:

NPV cost of Parkway-ECDA Alternative before adjustment	176.4	$Million
NPV benefit of M12 available for sale to 3rd parties	(25.1)	$Million
NPV Net Cost of Parkway-ECDA Alternative	151.3	$Million

(2) Options 2, 3, 4 are landed cost services from TCPL or a third party. The growth demands are delivered using this route and incur the costs for delivery to ECDA.
Neither the build proposal nor Option 1 include the growth volumes, nor it is appropriate to include them for the least cost analysis
The Dawn-Parkway costs for future demands are not a function of the decision to build the pipeline as an alternative to the current status of paying TransCanada to ship from Parkway to Union ECDA
Options 2,3,4 are the cash costs to land the gas in the Union ECDA and inherently incur an incremental expense for the growth demands because they are services landed to the Union ECDA
As such Options 2,3 and 4 are a higher cost than Option 1 and the build proposal by their own tolls costs plus the amount of the tolls for the growth demands

It is incorrect to add the M12 toll (for the growth demands) to the NPV of the build option. Put another way growth costs for Options 2,3, and 4 only occur in the analysis because the service originates at Dawn or Parkway. Creating a new option for economic assessment such as Option 2 does not change the cost of the build proposal

However, for illustrative puposes only this schedule has been modifed to incorporate the growth tolls.
Column (f) shows the M12 toll that is assumed to be embedded in the landed costs for the growth volumes.
Column (h) shows the difference among the alternatives including this adjustment

UNION GAS LIMITED

Answer to Interrogatory from
The Association of Power Producers of Ontario ("APPrO")

Reference: i) Exhibit A, Tab 9, Schedule 2
ii) Exhibit A, Tab 9, Schedule 9

Preamble: APPrO would like to understand whether Union's NPV analysis reflected the distribution rate implications to in-franchise customers as a result of the new build costs being allocated to all rate classes.

a) Did Union include the rate implications to in-franchise distribution customers in the NPV analysis for the new build option? If not, please recalculate the NPV and include these ongoing rate implications.

Response:

Yes. Union included the rate implications to in-franchise distribution customers in the NPV analysis.

UNION GAS LIMITED

Answer to Interrogatory from
The Association of Power Producers of Ontario ("APPrO")

Reference: i) EB-2012-0092 decision and specifically:
"Any project brought before the Board for approval should be supported by an assessment of the potential impacts of the proposed natural gas pipeline(s) on the existing transportation pipeline infrastructure in Ontario, including an assessment of the impacts on Ontario consumers in terms of cost, rates, reliability and access to supplies."

ii) EB-2014-0261 Union Letter to the Board dated February 6, 2015 indicates:
" The aggregate Contract Demand of all FT contracts with primary delivery point in Ontario (non-export) is approximately 40% of the total TransCanada Mainline FT Contract Demand (energy-distance basis) as of November 1, 2016."

iii) Exhibit A, Tab 7, page 11, Table 7-5

Preamble: APPrO would like to understand how Union has taken into account the Board's requirements in Reference i) above, including the impact of these requirements on the NPV analysis.

a) Please describe in detail how Union has complied with the Board's requirements in Reference i), above.

b) Did Union request and/or receive any feedback from TransCanada on its assessment of the implications on its Mainline system from this proposed build? If so, please provide the feedback.

c) In Reference ii) above, Union indicates that approximately 40% of TransCanada's Contract Demand FT has a primary delivery point in Ontario. Please recalculate the NPV analysis for the scenarios in Table 7-5 and assume that tolls to other Ontario customers will decline by 40% of the revenue that would be paid to TransCanada if Union were to contract for a service from TransCanada and include these benefits in the NPV analysis.

Response:

a) Please see the response at Exhibit B.Staff.2-1.

b) Union consulted extensively with TransCanada during the negotiation of the Settlement

Agreement. The resulting Settlement Tolls included TransCanada billing determinants that reflect the shift of Eastern LDC (Union, Enbridge and Gaz Métro) supply portfolios from long haul transportation to more short haul transportation. TransCanada's costs in calculating the Settlement Tolls included the costs for facility expansions associated with incremental short haul transportation capacity. TransCanada's Settlement Tolls also assumed that the Burlington Oakville Pipeline Project would be in-service November 1, 2016 and that the resulting firm transportation contracting changes would occur on the in-service date. Please also see Exhibit B. LPMA.3(a).

c) In order to respond to the question, Union has made a number of high level assumptions. The recalculation of the NPV analysis is based on the assumption that costs to other Ontario customers will decline by 40% of the revenue paid to TransCanada if Union contracted for a firm short haul service instead of building the Project. The Settlement Tolls are used in the calculation of the NPV; however, TransCanada may require incremental facilities to provide the short haul transportation services. The cost of these incremental facilities are not factored into the Settlement Tolls.

Union completed the NPV calculations for short haul transportation option 1 only (Parkway – Union ECDA) as it is the lowest cost of the alternatives to building the Project. The benefit to Ontario based on 40% of the revenue paid to TransCanada is $11.4 million on an NPV basis. This is offset by increased costs for the TransCanada abandonment surcharge of $5.5 million on an NPV basis, which were not included in Exhibit A, Tab 7, Table 7-5. Therefore the NPV of short haul transportation option 1 (Parkway – Union ECDA) would be reduced by $5.9 million from $151.3 million to $145.4 million. The resulting NPV is much higher than the NPV of building the Project ($102.6 million).

UNION GAS LIMITED

Answer to Interrogatory from
Building Owners and Managers Association ("BOMA")

Reference: Exhibit A, Tab 3, Page 1

a) The evidence shows that approximately 45% of design day demand in Oakville and Burlington is currently provided by TCPL's Domestic Line under (direct) contracts between Union and TCPL. With respect to each of those contracts, please provide:

   i) the contract demand and annual volumes;

   ii) the identification number;

   iii) the expiry date, and whether the contract is renewable; and

   iv) the delivery point (to Union).

Response:

a)

Contract #1:

i) TransCanada FT Union Dawn to Union CDA - 60,000 GJ/day

ii) 20259

iii) The expiry of this contract is the in-service date of the proposed Burlington Oakville Pipeline Project ("the Project") which is planned for October 31, 2016. The current contract shows an expiry of October 31, 2017 to cover any construction delays. Although it has renewal rights, the contract will be automatically terminated upon completion of the Project. Please see the response at Exhibit B.APPrO.1

iv) Union CDA

Contract #2

i) TransCanada FT Union Parkway Belt to Union CDA – 16,000 GJ/day

ii) 42581

iii) The expiry of this contract is the in-service date of the Project which is planned for October 31, 2016. The current contract shows an expiry of October 31, 2017 to cover any construction delays. Although it has renewal rights, the contract will be automatically terminated upon completion of the Project. Please see the response at Exhibit B.APPrO.1.

iv) Union CDA

Contract #3

i) TransCanada FT Union Dawn to Union CDA – 8,000 GJ/day

ii) 49492

iii) The expiry of the contract is October 31, 2017. The contract has renewal rights.

iv) Union CDA

UNION GAS LIMITED

Answer to Interrogatory from
Building Owners and Managers Association ("BOMA")

Reference: Exhibit A, Tab 3, Page 4

a) Please provide the calculation which supports the assertions made in the sentence beginning at line 9, including the ranges shown for avoided transportation costs ($11.4 million to $37.3 million) and in annual ratepayer savings ($2.9 million and $28 million).

Response:

a)

	Receipt Point	Delivery Point	Volume (GJ)	Daily Toll ($/GJ/d)	Annual Cost ($MM)	Yearly Revenue Requirement ($MM)	Annual Savings ($MM)
			(A)	(B)	(C)= A x B x 365	(D)	(E) = C - D
Least Cost	Union Dawn	Union ECDA	60,000	0.3161	$ 6.9		
	Union Parkway	Union ECDA	16,000	0.1393	$ 0.8		
	Union Parkway	Union ECDA	72,051	0.1393	$ 3.7		
	Total				**$ 11.4**	**$ 8.5**	**$ 2.9**
Highest Cost	Union Dawn	Union ECDA	60,000	0.3161	$ 6.9		
	Union Parkway	Union ECDA	16,000	0.1393	$ 0.8		
	Empress	Union ECDA	72,051	1.1250	$ 29.6		
	Total				**$ 37.3**	**$ 8.5**	**$ 28.8**

Please note that the increased transport cost from Empress to Union ECDA toll is partially offset by the gas price being lower at Empress as compared to Dawn. From an overall market perspective, it is assumed that the gas price at Empress is $0.70/GJ/d lower than gas priced at Dawn. Thus, for the calculation above, the TCPL Empress to Union ECDA toll is reduced by $0.70/GJ/d (see Exhibit A, Tab 7, page 14).

UNION GAS LIMITED

Answer to Interrogatory from
Building Owners and Managers Association ("BOMA")

Reference: Exhibit A, Tab 4, Page 1

a) What are the boundaries of Union's Hamilton Halton District? Please provide a map, with the municipal boundaries superimposed. Please show the parts of Burlington, Oakville, Milton, and any other communities served and separately, to be served, by Union's Burlington-Oakville system. Please show all the pipeline systems in the area on the map, including those of Union, TCPL and EGD, all pipeline gate stations, and the boundaries of the three new TCPL delivery areas.

Response:

Please see the responses at Exhibit B.OGVG,1 and Exhibit B.BOMA.4 a).

UNION GAS LIMITED

Answer to Interrogatory from
Building Owners and Managers Association ("BOMA")

Reference: Exhibit A, Tab 4, Page 9

a) Please provide a map showing the boundaries of Union Parkway Belt, the newly created Union ECDA, and the amended Union CDA, which also shows each TCPL delivery point for each of these three areas. What is Union's understanding of the reasons TCPL created three delivery areas from the previous Union CDA?

b) Why was it necessary for Union to bid for 135 TJ/d in TCPL open season to meet design day requirements at Kirkwall/Dawn and Hamilton Gate #3 Station? How are those design day requirements currently being met?

c) What is the effective date (i.e. when will service commence) of the new TCPL transportation contract? Please explain fully.

d) Has Union amended its firm service contracts to the new ECDA or its contracts to the amended Union CDA? Please provide the documentation which changed delivery point.

e) What was the date of the open season? Please provide documentation used by TCPL. Was Union successful in obtaining the sought after capacity?

Response:

a) TransCanada has not produced a map that delineates the boundaries of the newly created Union ECDA and the amended Union CDA. This mapping will be produced following Ontario Energy Board approval of the present application (EB-2014-0182). Union has provided a sample map (see Attachment 1) that highlights the Gate Stations located within each new/modified delivery area. As described in Exhibit A, Tab 4, Union's delivery points on the TransCanada System at the Burlington Gate Station and Bronte Gate Station will be located within the newly created Union ECDA (also described in Transcanada's application RH-001-2014[1]). Union's delivery points on the TransCanada System at Hamilton Gate #3 Station (called Hamilton Gate Station on the TransCanada System) and Kirkwall/Dominion Gate Station (called Nanticoke Station on the TransCanada System) will be located within the amended Union CDA. This was also described in TransCanada's application in RH-001-2014, an excerpt of which is included as Attachment 2.

[1] TransCanada Pipelines Limited Application for Approval of Mainline 2013-2030 Settlement, RH-001-2014, B1-2 Settlement Application and Evidence, adobe pages 50 and 51

The Union Parkway Belt delivery point is located at the interconnection of Union's facilities with TransCanada at the Parkway Compressor Station. Upon completion of the Parkway West Compressor Station, Union expects TransCanada to modify the Union Parkway Belt delivery point to include the Parkway West interconnection(s).

TransCanada requested the creation of the three delivery areas to facilitate Union's request to build the Project, and to better schedule its system, given the size and scope of the Parkway flows relative to the much smaller flows expected in the Union ECDA and amended Union CDA.

b) On a design day, Union plans to deliver to Kirkwall an amount of gas equivalent to the design day demand at Hamilton Gate #3 Station and the Kirkwall/Dominion Gate Station. Operationally, deliveries at Kirkwall have been considered as deliveries to Hamilton Gate #3 Station and the Kirkwall/Dominion Gate Station. This is similar to the Parkway/Union CDA deliveries treatment prior to 2011 (Exhibit A, Tab 5, page 2 of 8).

As noted at Exhibit A, Tab 4, Page 8 as a result of the discussions and negotiations regarding the TransCanada Settlement Agreement, TransCanada will amend its Union CDA Domestic Delivery Area into three distinct delivery areas:

1. Amended Union CDA – Union's Hamilton Gate #3 Station and Union's Kirkwall/Dominion Gate Station
2. Union Parkway Belt
3. Union ECDA – Union's Burlington Gate Station and Bronte Gate Station

This will allow for better scheduling on the TransCanada System and a reduction in the operational risks. To ensure reliable supply to the Amended Union CDA, Union bid into a TransCanada 2016 open season for 135 TJ/d of renewable firm transport from Kirkwall to the Amended Union CDA.

The changes to TransCanada's Union CDA are subject to Union receiving approval to construct its Burlington Oakville Pipeline (with an anticipated in-service date of November 1, 2016), including amending the existing Union CDA, creating the new Union ECDA and designating the Parkway-Union meter as a stand-alone delivery point. Union entering into a minimum 16 year term for 135 TJ/d of firm transportation capacity between Kirkwall and the Amended Union CDA (Hamilton Gate #3 Station and Kirkwall/Dominion Gate Station) is also subject to Union receiving approval to construct its Burlington Oakville Pipeline[2].

c) The new TransCanada contract for 135 TJ/d of Kirkwall to the amended Union CDA will commence once the proposed Project is in-service as per the Settlement Agreement (which is

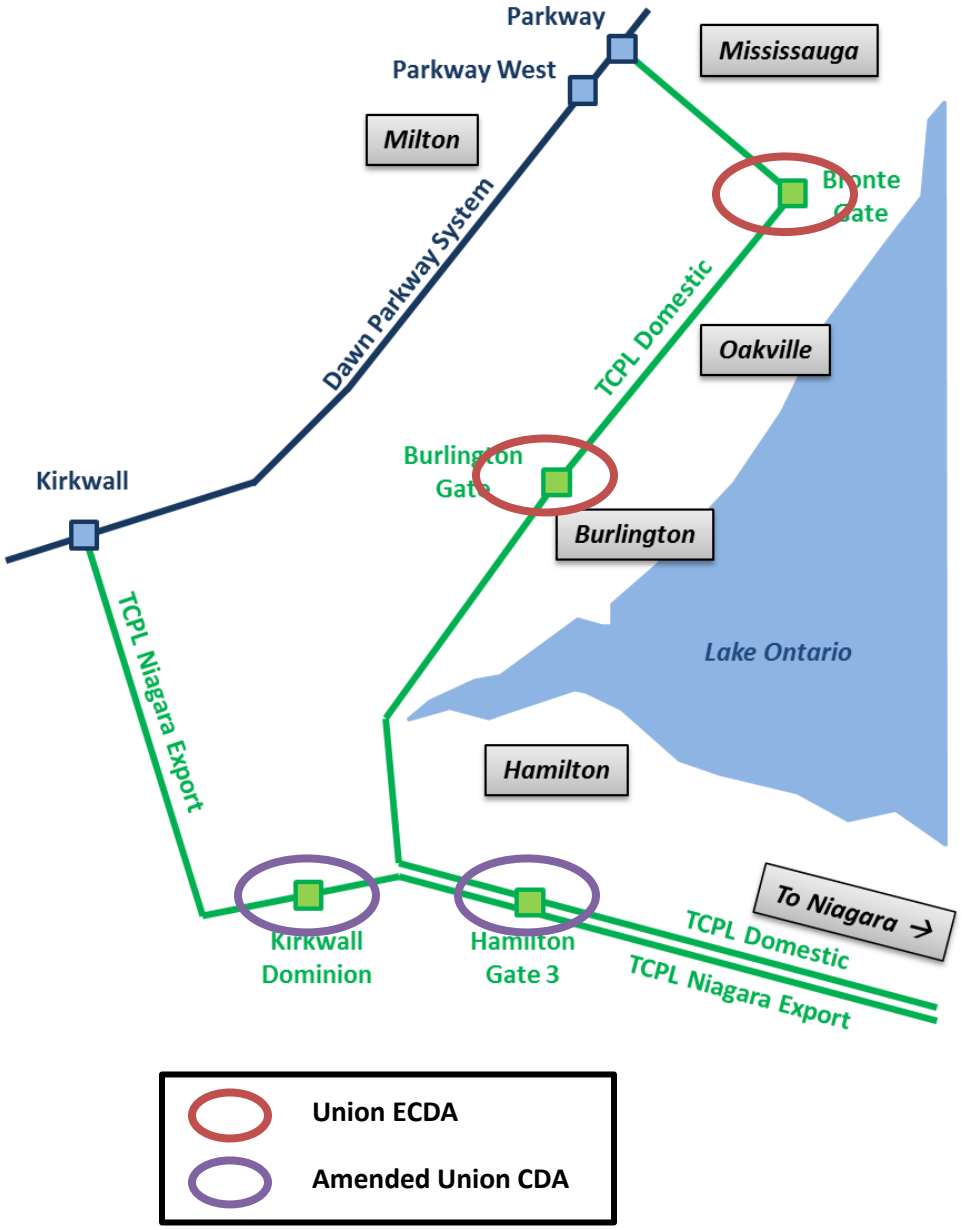
[2] Settlement Agreement, Section 8.1(d), pp. 14-15.

expected to be November 1, 2016). Please also see the response at Exhibit B.APPrO.1 a).

d) Union has submitted its election to amend its existing TransCanada contracts to the Union ECDA delivery point. These changes will take effect once the Project is in-service. Attachment 3 is an election form dated January 8, 2015. This form was initially provided by TransCanada for Union to complete and submit. The format contracts will be completed closer to the Project's in-service date.

e) The TransCanada New Capacity Open Season was held between November 29, 2013 through January 15, 2014, for an effective date of November 1, 2016. Union was awarded the full 135,000 GJ/d capacity from Kirkwall to the Amended Union CDA, to be effective on the Project's in-service date. Attachment 4 is the bid form used by TransCanada. This is the standard TransCanada bid form for all transportation capacity requests which Union filled out and submitted on January 15, 2014.

Location of Union's Gate Stations in the Union CDA



- if a shipper's existing long-haul FT contract is used for STS or STS-L injection purposes, and the shipper converts this contract to a short-haul contract, the shipper's STS or STS-L injection rights will be reduced
- conversion bids will be subject to bid deposits and financial assurances as applicable
- TransCanada will amend or terminate a shipper's long-haul contract and issue a new short-haul contract as appropriate to affect a conversion

4.1.4 Diversion and Alternate Receipt Point Rights

Diversions and ARPs are features of FT, FT-NR, FT-SN and MFP services. A shipper who has a contract for these services can utilize Diversions and ARPs as part of its nominations for transportation. Diversions and ARPs have a service priority above IT service and, in certain circumstances, are available at a firm priority level.[37]

Currently, Diversions can be nominated to delivery points that are either upstream or downstream of the contracted delivery point, but not upstream of the contracted receipt point. ARPs currently can be nominated from receipt points that are downstream of the contracted receipt point, but not downstream of the contracted delivery point. Generally, only Diversions and ARPs that result in a greater distance of haul are subject to an incremental toll, which is based on the difference between the toll for the longer nominated path and the contracted path. This toll is only paid for the days the ARP or Diversion features are utilized.

The eligible Diversion and ARP locations for contracted paths in the Settlement are essentially unchanged from the Diversion and ARP flexibility currently permitted. However, minor changes to the matrix of eligible ARP and Diversion locations by contract path is included in the First Amended Appendix G to the Settlement Agreement, which was implemented as part of the Second Amending Agreement. The matrix will be maintained and posted to the TransCanada website. The changes are consistent with the existing Tariff provisions governing Diversion and ARPs.

4.1.5 Modifications to Certain DDAs and the Creation of New Delivery Locations

The Settlement includes changes to two DDAs and the establishment of new delivery locations.

Effective November 1, 2015, the Enbridge CDA will be modified such that the Parkway-Enbridge meter station will be removed from the Enbridge CDA and placed within a new DDA called the Enbridge Parkway CDA. The remaining Enbridge CDA meter stations will continue to reside within the Enbridge CDA. This modification

[37] See Section XV Impaired Deliveries of the General Terms and Conditions of the Mainline Tariff. Diversions or ARPs that increase flow through a capacity "bottleneck" relative to the primary contracted path have a service priority below firm; however, Diversions and ARPs that do not increase flow through a capacity bottleneck are treated at the firm priority level.

will facilitate the movement of gas from locations such as Niagara Falls and Chippawa directly to the Enbridge Parkway CDA. Shippers who hold contracts to the Enbridge CDA will go through a one-time contract election process before November 1, 2015 to determine how they wish to split their contract quantities between the Enbridge CDA and the new Enbridge Parkway CDA.

Subject to Union receiving regulatory approval to construct its proposed Burlington Oakville pipeline, TransCanada expects that effective November 1, 2016, the Union CDA will be modified by removing the Parkway-Union, Bronte and Burlington meter stations from the Union CDA. The Bronte and Burlington meter stations will form a new DDA called the Union East Central Delivery Area (Union ECDA), and the Parkway-Union meter will become a new standalone delivery location called the Union Parkway Belt.[38] The remaining Union CDA meter stations, Nanticoke and Hamilton Gate, will continue to reside within the Union CDA. Shippers who hold contracts to the Union CDA will go through a one-time contract election process before November 1, 2016 to determine how they wish to split their contract quantities between the Union CDA, the Union ECDA and the Union Parkway Belt delivery point.

The applicable tolls to and from these new and revised locations are reflected in Second Amended Appendix D to the Settlement.

Prior to these DDA modifications and new delivery locations becoming effective, TransCanada will post an updated List of Receipt and Delivery Points on its website and file a copy for information purposes with the Board.

4.1.6 Discretionary Service Pricing

The existing discretion in setting the IT, STFT and ST-SN bid floors implemented in accordance with the RH-003-2011 Decision will continue to apply during the term of the Settlement.

4.2 NEW SERVICES

4.2.1 Summer Storage Service (SSS)

SSS is a new biddable discretionary service designed to facilitate the flow of gas from Empress to storage locations in the Union SWDA and Enbridge SWDA in the summer period. Though many of the characteristics of SSS are similar to those of IT service, the bid floors for SSS can be set no greater than 100% of the daily equivalent FT toll for the applicable path. This service will be available during

[38] This modification will effectively make the Union Parkway Belt location a new domestic standalone receipt and delivery point, similar to Kirkwall.

uniongas
A Spectra Energy Company

Date: January 8, 2015

Attention: Contracts and Billing

Re: Election to Amend Union CDA to the Union Parkway Belt and/or the Union ECDA

Union Gas hereby elects to amend the FT Contracts by changing the Union CDA delivery point and allocation of the Contract Demand as set out below.

Contract Number	Service Type	Receipt Point	Current Delivery Point	Contract Demand* as of Nov. 1, 2016 (GJ/day)	Contract End Date	Union CDA	Union ECDA (GJ/day)	Union Parkway Belt
39928	FT	Empress	Union CDA	11,000	2017-Oct-31		11,000	
49492	FT	Union Dawn	Union CDA	8,000	2017-Oct-31		8,000	
2776**	FT	Empress	Union CDA	3,699	2017-Oct-31		3,699	
6673**	FT	Empress	Union CDA	1,979	2017-Oct-31		1,979	
12430**	FT	Empress	Union CDA	1,004	2017-Oct-31		1,004	
22754**	FT	Empress	Union CDA	40,000	2017-Oct-31		40,000	
44283**	FT	Empress	Union CDA	8,145	2017-Dec-31		8,145	
48912**	FT	Empress	Union CDA	1,500	2017-Dec-31		1,500	
20259**	FT	Union Dawn	Union CDA	60,000	2017-Oct-31		60,000	
42581**	FT	Union Parkway Belt	Union CDA	16,000	2017-Oct-31		16,000	

* the Contract Demand must remain the same
** special conditions exist

Dated this 8th day of January, 2015.

Union Gas Limited

Per: _____
Chris Shorts
Director, Gas Supply

TransCanada PipeLines Limited

2016 NEW CAPACITY OPEN SEASON BID FORM

System Segment: Kirkwall to Amended Union CDA

The Delivery Point: Amended Union CDA The Receipt Point: Kirkwall

Date of Commencement: November 1, 2016 or as soon as possible thereafter.

Service Termination Date: October 31, 2031 (Term must be a minimum term of fifteen (15) years and end on the last day of a month.)

Maximum Capacity: 135,000 GJ/Day

Minimum Capacity: 1,000 GJ/Day

Type of Service Requested: FT X FT-SN _____ SNB ____ EMB_____

Service Applicant Contact

Name: Union Gas Limited

Address: 50 Keil Drive North

Chatham, Ontario N7M 5M1

Telephone: 519-436-4606 Telecopy: 519-436-4643

Is this Bid Form conditional upon another bid form(s)?

Yes ___ **No** X If **Yes**, the Bid Form(s), upon which this Bid Form is conditional must be attached. Indicate number of bid forms attached: 0 .

The Bid Form shall be subject to the General Terms and Conditions, the applicable Toll Schedule and List of Tolls of TransCanada's Tariff.

Dated this 15th Day of January , 2014 .

UNION GAS LIMITED

Answer to Interrogatory from
Building Owners and Managers Association ("BOMA")

Reference: Exhibit A, Tab 5 (General)

a) Can Union provide, for each year from 2011 to 2015, inclusive, and forecast for 2016, the transportation portfolio which provides service for each TCPL delivery point from which gas is drawn, on peak design day, by the Union CDA, and from the date TCPL's amendment to its delivery area was approved by the NEB, by each of the three new areas. How would that portfolio change once the proposed Burlington line begins service?

b) Please show tolls for TCPL service (FT, renewable) for delivery from Parkway to each of the "old CDA", and since TCPL's decision to reorganize its delivery areas, the amended CDA, the ECDA, and the Dawn Parkway Belt. Provide the current tolls, and any known (forecast) future tolls to each delivery area.

Response:

a) Please see the table below for all transportation contracts serving design day demands in the Union CDA from 2011 to 2016. Union currently has four contracts to the Union CDA (one from Empress, one from Parkway and two from Dawn). Only the Empress contract to the current Union CDA will shift partially to serving the new Union ECDA. This table assumes the Project is in-service November 1, 2016.

Once the Project goes in-service, 11 TJ/d of existing Empress to Union CDA capacity will have its delivery point changed to the Union ECDA as outlined at Exhibit A, Tab 7, pg. 14. This Empress to Union CDA contract is not currently used to meet design day demands in the Union CDA as it is diverted on a design day as described at Exhibit A, Tab 5. All other existing TransCanada Dawn to Union CDA and Parkway to Union CDA contracts will terminate.

The new contract of 135 TJ/d of Kirkwall to Union CDA capacity will commence once the Project is placed in-service.

	Nov 1, 2011 (GJ/d)	Nov 1, 2012 (GJ/d)	Nov 1, 2013 (GJ/d)	Nov 1, 2014 (GJ/d)	Nov 1, 2015 (GJ/d)	Nov 1, 2016 (GJ/d)
Union Dawn to Union CDA	60,000	115,200	60,000	68,000	68,000	N/A
Union Parkway to Union CDA	80,000	24,800	69,000	76,000	76,000	N/A
Kirkwall to Amended Union CDA	N/A	N/A	N/A	N/A	N/A	135,000
Empress to Union ECDA	N/A	N/A	N/A	N/A	N/A	11,000

b) The currently approved TransCanada tolls with delivery points within the current Union CDA, amended Union CDA, Union ECDA, and Parkway Belt are as follows:

Receipt Point	Delivery Point	FT Toll ($/GJ/Month)	Abandonment Surcharge ($/GJ/Month)	Daily Equivalent FT Toll plus Abandonment Surcharge ($/GJ)
Union Parkway Belt	Union CDA	4.67322	0.08094	0.1563
Union Parkway Belt	Union CDA (Amended)	5.40869	0.12846	0.1820
Union Parkway Belt	Union ECDA	4.23552	0.05268	0.1410
Union Parkway Belt	Union Parkway Belt	3.96268	0.03504	0.1315

These tolls are the January 1, 2015 Settlement Tolls and include TransCanada's Abandonment surcharge. TransCanada will file Compliance Tolls before March 31, 2014 which, if approved, will take effect from the date of approval.

UNION GAS LIMITED

Answer to Interrogatory from
Building Owners and Managers Association ("BOMA")

Reference: Exhibit A, Tab 6, Page 3

a) For each year from 2011 to the present, please provide the volumes that Union supplies TCPL at Parkway for redelivery to Union at Bronte and Burlington Gas Stations.

b) What volume would be supplied if and when the proposed new NPS 20 line is built?

Response:

a)

Winter	Volume (GJ/d)
11/12	140,000
12/13	140,000
13/14	129,000
14/15	144,000

b) When the proposed NPS 20 pipeline is constructed Union will deliver 0 GJ/d to TCPL at Parkway for redelivery to Union at Burlington and/or Bronte Gate Stations. Union will deliver 11,000 GJ/d to TransCanada at Empress for redelivery to Union at Burlington and/or Bronte Gate Station.

UNION GAS LIMITED

Answer to Interrogatory from
Building Owners and Managers Association ("BOMA")

Reference: Exhibit A, Tab 6, Page 12

a) Please provide the details supporting the conclusion stated at line 10, et seq.

Response:

The following are the details to support the referenced statement, that the capacity of the existing Union pipelines and the current contracts will not meet design day demand on the Burlington Oakville System in 2016/2017:

Burlington Oakville System	**Capacity (TJ/d)**
Design Day Demand in 2016/2017	205
Capacity of Union Milton Line and Parkway Line	-54
Subtotal	151
Capacity of Firm Transportation Services	-148
Total Shortfall	**3**

Therefore, the combined capacity of the existing Union pipelines and the current contracts with Union CDA delivery points falls short of the 2016/2017 design day demand on the Burlington Oakville System by 3 TJ/d. This shortfall requires incremental capacity to be available effective November 1, 2016. Please also see the response to Exhibit B.APPrO.2 which addresses TransCanada's available capacity.

UNION GAS LIMITED

Answer to Interrogatory from
Canadian Manufacturers & Exporters ("CME")

Need and Alternatives

Reference: Exhibit A, Tab 3, pages 1 and 2
Exhibit A, Tab 4, pages 7 to 9
Exhibit A, Tab 5, pages 1 to 8

The evidence indicates that prior to the Settlement Agreement between TransCanada PipeLines Limited ("TCPL") and the Eastern Ontario distributors, including Union, the excess physical capacity on TCPL's Mainline available either from TCPL, the secondary market and/or other services was sufficient to enable Union to satisfy its requirements for Oakville and Burlington. We wish to better understand the extent to which the foregoing excess Mainline capacity and/or other services remain sufficient to meet the needs of Oakville and Burlington. In that connection please provide the following information:

a) Please list and provide the dates, quantities and prices of the transactions in which Union engaged in each of the years 2012, 2013 and 2014 whereby Union acquired excess Mainline capacity under the auspices of discretionary services from TCPL, secondary market capacity transactions and/or from other services in order to satisfy its requirements for Oakville and Burlington;

b) Please quantify the amount of excess capacity on the TCPL Mainline and/or other services capable of serving the needs of Oakville and Burlington which existed for each of the years 2012, 2013 and 2014;

c) Regardless of the identity of those responsible for currently paying for excess TCPL Mainline capacity[1], what are the amounts and approximate costs of such excess capacity in the secondary market and/or other services which are capable of satisfying the requirements of Oakville and Burlington in 2015, 2016 and beyond compared to the amounts and costs of those services which Union incurred in years prior to 2015?

d) Please list and describe each of the specific factors which operate to prevent Union from acquiring enough capacity in the secondary markets and/or other alternative services to

[1] As a consequence of TCPL's unlimited pricing discretion for its discretion services, such as IT, which has been perpetuated by the Settlement Agreement between TCPL and eastern Ontario distributors, some and perhaps all of the Eastern Ontario distributors have acquired FT services from TCPL to replace some of their prior purchases of IT and other discretionary services. These actions have shifted cost responsibility for excess TCPL capacity from TCPL to such distributors. For example, Enbridge Gas Distribution Inc. ("EGD") is forecasting $160 M of TCPL FT Unabsorbed Demand Charges ("UDC") for 2015 up from about $105 M in 2014. This evidence indicates that excess Mainline capacity continues to exist, although the responsibility for paying for such excess capacity has shifted from TCPL to others.

maintain reliable services to Oakville and Burlington beyond 2016 without constructing the proposed Burlington to Oakville Pipeline.

Response:

a) Please see Attachment 1.

b) TransCanada has offered firm long haul transportation to the Union CDA in its open seasons held between 2012 and 2014. As provided at Exhibit A, Tab 7, Union has demonstrated that the TransCanada Empress to Union CDA long haul option is not economic. There has not been any firm short haul capacity offered to the Union CDA over that time period.

c) Please see the response at Exhibit B.LPMA.4.

d) Please see the response at Exhibit B.LPMA.4.

UNION GAS LIMITED
Capacity Details For Burlington Oakville

2012	**Start Date**	**End Date**	**Quantity (GJ/d)**	**Price ($/GJ/d)**
TransCanada Firm Services				
Dawn to Union CDA	2003-11-01	2013-10-31	60,000	0.2073
Parkway to Union CDA	2011-11-01	2013-10-31	16,000	0.0681
Secondary Market				
Exchange Dawn to Union CDA- winter only	2012-11-01	2013-03-01	55,200	0.7000
Exchange Parkway to Union CDA - winter only	2012-11-01	2013-03-01	8,800	0.6750
TransCanada Discretionary Services				
None				

2013	**Start Date**	**End Date**	**Quantity (GJ/d)**	**Price ($/GJ/d)**
TransCanada Firm Services				
Dawn to Union CDA	2003-11-01	2014-10-31	60,000	0.2042
Parkway to Union CDA	2011-11-01	2014-10-31	16,000	0.1008
Secondary Market				
Exchange Parkway to Union CDA - winter only	2013-11-01	2014-03-31	45,000	0.7800
Exchange Parkway to Union CDA - winter only	2013-11-01	2014-03-31	8,000	0.7800
TransCanada Discretionary Services				
None				

2014	**Start Date**	**End Date**	**Quantity (GJ/d)**	**Price ($/GJ/d)**
TransCanada Firm Services				
Dawn to Union CDA	2003-11-01	2016-10-31	60,000	0.2085
Dawn to Union CDA	2014-11-01	2016-10-31	8,000	0.2085
Parkway to Union CDA	2011-11-01	2016-10-31	16,000	0.1008
Secondary Market				
Exchange Parkway to Union CDA - winter only	2014-11-01	31/03/2015	60,000	0.9600
TransCanada Discretionary Services				
Parkway to Union CDA IT	2014-01-02	2014-01-02	38,663	0.8951
Parkway to Union CDA IT	2014-01-07	2014-01-07	34,492	1.2439
Parkway to Union CDA IT	2014-01-21	2014-01-21	37,827	2.2680
Parkway to Union CDA IT	2014-01-28	2014-01-28	49,427	1.5120

UNION GAS LIMITED

Answer to Interrogatory from
Canadian Manufacturers & Exporters ("CME")

Costs

Reference: Exhibit A, Tab 3, page 3
Exhibit A, Tab 9, page 1
Exhibit A, Tab 9, Schedule 1

Attached are the following documents related to changes in the estimated costs for the Project:

i) A document taken from Union's 2013 capital plan and provided in Exhibit A, Tab 2, Volume I in the EB-2013-0202 proceedings entitled "Distribution Capital Expenditures". This document lists Union's Distribution Capital Expenditure forecasts for 2013 to 2015. It shows Capital Expenditures for the Burlington to Oakville Pipeline in a total amount of $37.1 M;

ii) In Volume II of the same Exhibit referenced in item (i) above, Union's initial Burlington to Oakville revenue requirement calculation provided to stakeholders at the outset of the negotiations of the EB-2013-0202 Settlement Agreement which estimated capital expenses at $57.5 M and annual revenue requirement in the initial years of operation of the project between $3.8 M and $4.250 M;

iii) From the same Exhibit referenced in item (ii) above, the revision to the foregoing calculation provided towards the end of the negotiations of the EB-2013-0202 Settlement Agreement which reflects estimated capital costs of $75 M and annual revenue requirement estimates in the initial years of operation ranging between $5.5 M and $5.8 M;

iv) Exhibit A, Tab 9, Schedule 4 in this proceeding showing capital costs of $119.5 M and the annual revenue requirement in the initial years of the project's operation ranging between $8.2 M and $8.6 M. These amounts are more than double the amounts initially presented to stakeholders. The breakdown of the current capital costs of $119.5 M is shown at Exhibit A, Tab 9, Schedule 1.

In connection with the foregoing information, please provide the following:

a) Please reconcile the $37.1 M Capital Expenditure Forecast amount shown in item i) above with the $57.5 M capital expenses amount contained in item ii) above;

b) Using the format of Exhibit A, Tab 9, Schedule 1, please add columns to show the line items which produce the EB-2013-0202 initial and updated capital budgets of $57.5 M and $75 M respectively as shown in items ii) and iii) above;

c) Thereafter, present the outcomes of each of the foregoing capital budget scenarios in the format of Exhibit A, Tab 9, Schedule 4 in this proceeding;

d) Please list all of the factors which caused the capital budgets for this project to initially increase from $57.5 M to $75 M, and thereafter to increase further from $75 M to $119.5 M.

Response:

a) Attachment 1 is a copy of Exhibit I.A3.UGL.CCC.14 that was filed in EB-2012-0451/EB-2012-0433/EB-2013-0074. It details the process used at Union to develop cost estimates. Union's estimate for the Project evolved as the scope of the Project became more defined.

Although referred to in EB-2013-0202, Exhibit A, Tab 2, Appendix B (response to CME question #2 b)) as the Burlington-Oakville Pipeline, the $37.1 million capital expenditure forecast was, at the time, a very high level preliminary cost estimate for a project that differed entirely in pipeline routing, size and capacity from the proposed Project. At the time this estimate was prepared, key project scope parameters such as the pipeline route and capacity requirements had not yet been fully developed. At the time of this estimate, the in-service date for the Burlington-Oakville Pipeline was November 2014.

Both the $57.5 million and $75.0 million estimates reflect a "Magnitude level of estimate" based on conceptual scopes and routes, targeting a 2015 in-service date. Both of these estimates were prepared at the time of Union's 2014-2018 incentive regulation mechanism (EB-2013-0202) settlement negotiations.

The estimate of $119.5 million for proposed facilities in this proceeding reflects a "Feasibility level estimate" with a defined scope and route, including contractor-provided pricing where available, targeting 2016 in-service.

b) This information does not exist. The $57.5 million and $75.0 million capital budgets were not prepared using the same level of detail included at Exhibit A, Tab 9, Schedule 1.

c) Please see Attachment 2.

d) Please see response to a) above.

UNION GAS LIMITED

Answer to Interrogatory from
Consumers Council of Canada ("CCC")

Ref: Section 11, p. 100/121 and Schedule 11.1

The evidence sets out the estimated capital cost for all of the facilities related to the Parkway West project. Please explain the process used to develop the budget. Will Union be providing an update to the budget as it was filed in January 2013? For each of the components set out in Schedule 11.1 please explain how were the contingency amounts developed?

Response:

Union Gas' Estimate/Budget development typically follows the stages below. Each revision expands, details, and refines the previous level of estimate to obtain a higher degree of accuracy and ultimately the final budget.

1. **Magnitude Estimate**
   High-level estimate - Completed solely by Cost Estimators, with limited Subject Matter Expert input. Scope at conceptual level, with limited project parameters defined. Contingency set at 20%.

2. **Feasibility Estimate**
   Refined magnitude estimate - Completed by Cost Estimators with Subject Matter Expert input. Scope more defined, with limited project parameters defined by in-house Design and Construction Team. Contingency set at 20%.

3. **Pre-Budget Estimate**
   Detailed project estimate/budget - Completed by Cost Estimators with full Subject Matter Expert input. Scope fully defined, with detailed Bill of Materials available, site visits conducted and contractor/vendor quotes received. Contingency set at 15%.

4. **Budget Estimate**
   Final project estimate/budget - Completed by Cost Estimators with full Subject Matter Expert input. Scope finalized, detailed construction Bill of Materials, final site and routes selected and final quotes/target pricing for construction and materials contractor/vendor quotes received. Contingency set at 10%.

Union is not planning to file an update to the cost estimate provided in January. However, if there are material changes to the budget or scope, Union will file an update.

The components set out in schedule 11.1 are based on a Pre-Budget level estimate, and as such were assigned a 15% contingency. The exception was the land costs with no contingency, as options had been exercised and prices are fixed.

UNION GAS LIMITED
Burlington to Oakville Project Revenue Requirement
Based on Capital Expenditures of $37.1 Million

Line No.	Particulars ($000's)	2014	2015	2016	2017	2018
		(a)	(b)	(c)	(d)	(e)
	Rate Base Investment					
1	Capital Expenditures	35,100	2,000	0	0	0
2	Average Investment	5,666	35,349	35,575	34,789	34,004
	Revenue Requirement Calculation:					
	Operating Expenses:					
3	Operating and Maintenance Expenses (1)	4	25	26	26	27
4	Depreciation Expense (2)	371	764	786	786	786
5	Property Taxes (3)	15	89	91	93	95
6	Total Operating Expenses	390	878	902	905	907
7	Required Return (5.68% x line 2) (4)	322	2,008	2,021	1,976	1,931
	Income Taxes:					
8	Income Taxes - Equity Return (5)	74	464	467	457	446
9	Income Taxes - Utility Timing Differences (6)	(828)	(1,024)	(887)	(734)	(605)
10	Total Income Taxes	(754)	(560)	(420)	(277)	(158)
11	Total Revenue Requirement (line 6 + line 7 + line 10)	(42)	2,326	2,503	2,604	2,680
12	Incremental Project Revenue	-	-	-	-	-
13	Net Revenue Requirement (line 11 - line 12)	(42)	2,326	2,503	2,604	2,680

Notes:

(1) O&M expenses are projected for incremental pipeline-related operating and maintenance expenses.

(2) Depreciation expense at 2013 Board-approved depreciation rates.

(3) Includes pipeline and station property taxes.

(4) The required return of 5.68% assumes a capital structure of 60% long-term debt at 3.4% and 40% common equity at a return of 9.1% (0.60 * 0.034 + 0.40 * 0.091).

The 2018 required return calculation is as follows:

$34.004 million * 60% * 3.4% = $0.694 million plus
$34.004 million * 40% * 9.1% = $1.238 million for a total of $1.931 million.

(5) Taxes related to the equity component of the return at a tax rate of 26.5.%.

(6) Taxes related to utility timing differences are negative as the capital cost allowance deduction in arriving at taxable income exceeds the provision of book depreciation in the year.

UNION GAS LIMITED
Burlington to Oakville Project Revenue Requirement
Based on Capital Expenditures of $57.5 Million

Line No.	Particulars ($000's)	2015	2016	2017	2018
		(a)	(b)	(c)	(d)
	Rate Base Investment				
1	Capital Expenditures	57,500	0	0	0
2	Average Investment	9,270	56,244	54,987	53,731
	Revenue Requirement Calculation:				
	Operating Expenses:				
3	Operating and Maintenance Expenses (1)	4	25	26	26
4	Depreciation Expense (2)	628	1,257	1,257	1,257
5	Property Taxes (3)	72	433	441	450
6	Total Operating Expenses	705	1,715	1,724	1,733
7	Required Return (5.77% x line 2) (4)	535	3,248	3,175	3,103
	Income Taxes:				
8	Income Taxes - Equity Return (5)	107	651	636	622
9	Income Taxes - Utility Timing Differences (6)	(1,389)	(1,806)	(1,479)	(1,208)
10	Total Income Taxes	(1,282)	(1,155)	(843)	(586)
11	Total Revenue Requirement (line 6 + line 7 + line 10)	(42)	3,807	4,056	4,250
12	Incremental Project Revenue	-	-	-	-
13	Net Revenue Requirement (line 11 - line 12)	(42)	3,807	4,056	4,250

Notes:

(1) O&M expenses are projected for incremental pipeline-related operating and maintenance expenses.

(2) Depreciation expense at 2013 Board-approved depreciation rates.

(3) Includes pipeline and station property taxes.

(4) The required return of 5.77% assumes a capital structure of 64% long-term debt at 4% and 36% common equity at the 2013 Board-approved return of 8.93% (0.64 * 0.04 + 0.36 * 0.0893).

The 2018 required return calculation is as follows:

$53.731 million * 64% * 4.0% = $1.376 million plus

$53.731 million * 36% * 8.93% = $1.727 million for a total of $3.103 million.

(5) Taxes related to the equity component of the return at a tax rate of 26.5.%.

(6) Taxes related to utility timing differences are negative as the capital cost allowance deduction in arriving at taxable income exceeds the provision of book depreciation in the year.

UNION GAS LIMITED
Burlington to Oakville Project Revenue Requirement
Based on Capital Expenditures of $75.0 Million

Line No.	Particulars ($000's)	2015	2016	2017	2018
		(a)	(b)	(c)	(d)
	Rate Base Investment				
1	Capital Expenditures	74,450	550	0	0
2	Average Investment	12,044	73,263	72,068	70,596
	Revenue Requirement Calculation:				
	Operating Expenses:				
3	Operating and Maintenance Expenses (1)	4	26	27	27
4	Depreciation Expense (2)	730	1,467	1,472	1,472
5	Property Taxes (3)	93	564	576	587
6	Total Operating Expenses	828	2,057	2,074	2,086
7	Required Return (5.77% x line 2) (4)	696	4,227	4,158	4,077
	Income Taxes:				
8	Income Taxes - Equity Return (5)	139	848	834	817
9	Income Taxes - Utility Timing Differences (6)	(1,416)	(1,685)	(1,430)	(1,205)
10	Total Income Taxes	(1,276)	(837)	(595)	(388)
11	Total Revenue Requirement (line 6 + line 7 + line 10)	247	5,447	5,637	5,775
12	Incremental Project Revenue	-	-	-	-
13	Net Revenue Requirement (line 11 - line 12)	247	5,447	5,637	5,775

Notes:

(1) O&M expenses are projected for incremental pipeline-related operating and maintenance expenses.

(2) Depreciation expense at 2013 Board-approved depreciation rates.

(3) Includes pipeline and station property taxes.

(4) The required return of 5.77% assumes a capital structure of 64% long-term debt at 4% and 36% common equity at the 2013 Board-approved return of 8.93% (0.64 * 0.04 + 0.36 * 0.0893).

The 2018 required return calculation is as follows:

$70.596 million * 64% * 4.0% = $1.807 million plus

$70.596 million * 36% * 8.93% = $2.270 million for a total of $4.077 million.

(5) Taxes related to the equity component of the return at a tax rate of 26.5.%.

(6) Taxes related to utility timing differences are negative as the capital cost allowance deduction in arriving at taxable income exceeds the provision of book depreciation in the year.

UNION GAS LIMITED

Answer to Interrogatory from
London Property Management Association ("LPMA")

Reference: Exhibit A, Tab 3, page 2

a) Is the cost of transportation services to supply the Burlington Oakville system today recovered through distribution rates or through the gas supply charge?

b) If the response to part (a) is through the gas supply charge, does this mean that only system gas customers are paying for these transportation services to the Burlington Oakville system?

c) Please confirm that if the proposed pipeline system is approved, the associated costs would be recovered from all distribution customers in Union South.

d) Does Union have any other similar situations in which the cost of transportation services to supply a specific area are recovered through the gas supply charge? If yes, please provide details.

Response:

a) to b) The costs of third party transportation services to move gas from Parkway to the Union CDA to ensure supply to the Burlington Oakville system are recovered through gas supply charges currently. As indicated at Exhibit A, Tab 5, pg. 5 of 8, lines 15-21:

"*The transportation costs of serving the Burlington Oakville System were recovered from Union South sales service customers and Union North sales service and bundled direct purchase customers. This allocation of costs between Union South and Union North was based on each area's usage of firm Dawn to Union CDA capacity and firm Empress to Union CDA capacity on TransCanada. Direct Purchase customers in Union South, including those served by the Burlington Oakville System do not pay any of these transportation costs. This method of cost recovery continues to be the case today*".

These contracts simply facilitate the movement of volumes from one point in Union South to another point in Union South, something Union has always done.

The response to Undertaking**,** Exhibit J2.5 in EB-2013-0109 states:

"*The costs associated with the Parkway to Union CDA capacity are allocated primarily (approximately 83%) to Union North customers. The volumes transported from Parkway to*

the Union CDA replace Union South supply on the TCPL Empress to Union CDA contract, which is required in Union North to meet design day requirements.

The costs allocated to Union North customers are recorded as one component of the costs in the North Tolls & Fuel Deferral Account (179-100). These costs are recovered from sales service and bundled direct purchase customers.

The remaining costs associated with the Parkway to Union CDA capacity are allocated to Union South customers. They are one component of the costs recorded in the South Purchased Gas Variance Account (179-106). These costs are recovered from sales service customers only."

Once Union has restructured the North portfolio in 2015/16, the TransCanada Empress to Union CDA contract will no longer be used to meet the design day needs of Union North and the North will have its own firm TransCanada short haul capacity. Please see Exhibit A, Tab 8, pgs. 4-5, for additional detail.

c) Confirmed.

d) The transportation services used to move gas from Parkway to the TransCanada Union CDA are no different than any other upstream transportation services that Union acquires to serve Union South annual demand requirements.

The contracts were acquired in response to a new requirement from TransCanada to hold Parkway to TransCanada Union CDA transportation capacity. In early 2011, TransCanada indicated that Union would need to contract and pay specifically to transport volumes from Parkway to the TransCanada Union CDA in order to meet consumption requirements. Historically, TransCanada had not charged for this service and Union had not had to contract for the service.

These contracts ensure that volumes transported to Parkway (in Union South) can be further transported on TransCanada on a firm basis to the TransCanada Union CDA to meet customers' firm needs, also in Union South. Again, these contracts simply facilitate the movement of volumes from one point in Union South to another point in Union South, something Union has always done.

UNION GAS LIMITED

Answer to Interrogatory from
London Property Management Association ("LPMA")

Reference: Exhibit A, Tab 3, page 4

a) Please show how the calculation of the net annual savings to ratepayers of $6.5 million noted on lines 12 and 13 has been calculated.

b) Please show the net annual savings broken down into Union South, Union North and ex-franchise rate classes, similar to the revenue requirement of $8.5 million associated with the project.

Response:

a) Please see the response at Exhibit B.SEC.1.

b) Please see Attachment 1.

Please note, as per Exhibit A, Tab 8, pg. 4, the benefit associated with the avoided gas transportation costs resulting from the implementation of the Project will accrue to Union South sales service customers. This is because the majority of the cost of the Union CDA transportation capacity that is now streamed to Union North customers will be replaced by the cost of TransCanada Parkway Belt to Union NDA capacity costs effective November 1, 2016.

UNION GAS LIMITED
2018 Burlington to Oakville Project Annual Rate Adjustment by Rate Class
Including 2014/2015 Burlington to Oakville Gas Transportation Costs of $15 Million

Line No.	Particulars ($000's)	Project Costs 2018 (1) (a)	Burlington-Oakville Transportation Costs 2014/2015 (2) (b)	Net Impact (c) = (a - b)
1	Rate M1	3,528	5,293	(1,764)
2	Rate M2	1,486	881	605
3	Rate M4	495	39	456
4	Rate M5	(40)	33	(73)
5	Rate M7	181	0	181
6	Rate M9	61	0	61
7	Rate M10	2	0	2
8	Rate T1	431	0	431
9	Rate T2	3,291	0	3,291
10	Rate T3	423	0	423
11	Subtotal - Union South	9,858	6,246	3,611
12	Excess Utility Space	(22)	0	(22)
13	Rate C1	(3)	0	(3)
14	Rate M12	(361)	0	(361)
15	Rate M13	2	0	2
16	Rate M16	(0)	0	(0)
17	Subtotal - Ex-franchise	(384)	0	(384)
18	Rate 01	(694)	5,889	(6,583)
19	Rate 10	(100)	2,182	(2,283)
20	Rate 20	(71)	775	(846)
21	Rate 100	(56)	0	(56)
22	Rate 25	(20)	0	(20)
23	Subtotal - Union North	(943)	8,846	(9,788)
24	In-franchise (line 11 + line 23)	8,915	15,092	(6,177)
25	Ex-franchise (line 17)	(384)	0	(384)
26	Total (line 24 + line 25)	8,531	15,092	(6,561)

Notes:
(1) As per Exhibit A, Tab 9, Schedule 9, column (e).
(2) Cost of commercial arrangements to serve the Burlington Oakville System for 2014/2015. Union South costs allocated to Union South rate classes in proportion to the 2013 Board-approved sales service volumes. Union North costs allocated to Union North rate classes in proportion to bundled direct purchase and sales service customers, as per EB-2014-0271, Working Papers, Schedule 4.

UNION GAS LIMITED

Answer to Interrogatory from
London Property Management Association ("LPMA")

Reference: Exhibit A, Tab 4, page 6

a) Has Union had any discussions with TransCanada as to whether or not they could increase the capacity on the Domestic line? If not, why not. If yes, please provide a summary of the discussions.

b) Has Union had any discussions with Enbridge Gas Distribution about the possibility of Enbridge seeking a delivery point off of the proposed pipeline?

Response:

a) Transportation dynamics have changed in the Union CDA since 2011 as described in Exhibit A, Tab 5. As discussed at page 3 of Exhibit A, Tab 5, TransCanada had approached Union and requested that Union contract for incremental transportation capacity into the Union CDA to deliver gas from Parkway. TransCanada was able to offer 80 TJ/d of firm short haul transportation capacity from Parkway to the Union CDA effective November 1, 2011 – however only 16 TJ/d was traditional firm transportation service (FT) with renewal rights. The remaining 64 TJ/d was not available beyond October 31, 2012 and was offered by TransCanada as firm non-renewable transportation capacity (FT-NR). Union has been short FT capacity since 2012 given this situation.

Union has been monitoring every TransCanada new capacity open season and existing capacity open season since 2012 seeking additional firm short haul transportation capacity with a delivery point in the Union CDA. No capacity has been made available (with or without renewal rights). The cost and availability of secondary market capacity and the need to serve future growth on the Burlington Oakville System resulted in Union evaluating supply alternatives.

During the Settlement Agreement negotiations in the summer of 2013 between TransCanada, Union, Gaz Métro and Enbridge, the Burlington Oakville Project was again discussed. The OEB in its EB-2011-0210 Decision encouraged Union to engage Enbridge and TransCanada to jointly consider facilities that would maximize beenfits to Ontario ratepayers[1]. The strategic importance of the need for additional capacity for the Burlington Oakville System was included in those discussions in relation to increasing security of supply (eliminating reliance on firm transportation capacity through third party providers) and providing a high

[1] EB-2011-0211, Decision and Order dated October 24, 2012, p. 126.

pressure, larger diameter pipeline from which the rapidly growing Oakville, Burlington and southern Milton areas could be served, including future arterial distribution pipelines to new development areas. Throughout these discussions, Parkway to Union CDA transportation capacity was not available in TransCanada's new capacity open seasons. As a result, the Settlement Agreement specifically addressed the need for and construction of the proposed Project.

Please also refer to Exhibit B.BOMA.4 b).

b) Throughout 2013 and 2014, the Burlington Oakville Pipeline was discussed with TransCanada and Enbridge. Enbridge did not express an interest in connecting its Mississauga South Line to the Proposed Pipeline.

UNION GAS LIMITED

Answer to Interrogatory from
London Property Management Association ("LPMA")

Reference: Exhibit A, Tab 5, page 1

What is the basis for the statement that Union does not expect that the secondary market capacity held by Union will be available after October 31, 2016.

Response:

As outlined at Exhibit A, Tab 5, pg. 7, there is only one other party beside Union that holds short haul firm transportation capacity with a Union CDA delivery point. Union has been told by this party that it will be amending its delivery point with TransCanada to Union Parkway Belt when TransCanada offers shippers holding firm transportation service with deliveries in the Union CDA the one-time election in accordance with the Settlement Agreement (as described at Exhibit A, Tab 4). This will take place for an effective change date of November 1, 2016.

Amending the delivery point to the Union Parkway Belt gives the third party far more flexibility and market opportunities. The Union Parkway Belt is a more liquid point that other shippers have transportation capacity originating from. There is no liquid market for gas or services if the third party were to change its delivery point to the amended Union CDA or Union ECDA.

UNION GAS LIMITED

Answer to Interrogatory from
London Property Management Association ("LPMA")

Reference: Exhibit A, Tab 6, page 5

a) Please explain why the design day demand includes interruptible contract demand served from the Burlington Oakville system.

b) Please provide the design day demand for each of the last three years and the forecast for each of the next three years, broken down into the three categories noted: general service demand, firm contract demand and interruptible contract demand.

Response:

a) The statement outlined within Exhibit A, Tab 6, pg. 5 ("The design day demand is defined as the amount of general service demand plus firm and interruptible contract demand served from the Burlington Oakville System") was a misstatement. The BurlingtonOakville System was designed with interruptible customers off.

b)

Demand Type	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018
Design General Service Demand (GJ/d)	168,264	171,961	175,658	179,356	183,059	186,762
Design Firm Contract Demand (GJ/d)	22,363	22,363	22,363	22,363	22,363	22,363
Interruptible Contract Demand (GJ/d)	5,566	5,566	5,566	5,566	5,566	5,566

UNION GAS LIMITED

Answer to Interrogatory from
London Property Management Association ("LPMA")

Reference: Exhibit A, Tab 6, page 8

Please explain how continued natural gas usage efficiency affects the forecast of attachments (lines 14-16).

Response:

Natural gas usage efficiency does not affect the forecasted number of customer attachments, it does however impact the daily volume per customer.

UNION GAS LIMITED

Answer to Interrogatory from
London Property Management Association ("LPMA")

Reference: Exhibit A, Tab 6

a) Please confirm that the forecast growth shown in Table 1 is the sum of the total column shown in Exhibit A, Tab 6, Schedule 3.

b) Please show how the figures in Exhibit A, Tab 6, Schedule 3 are calculated based on the customer growth figures shown in Exhibit A, Tab 6, Schedule 4.

Response:

a) Confirmed. The sum of the Forecasted Growth for 2016-2030 is 60.5 TJ/d, and the sum of the Forecasted Growth for 2031-2035 is 13.5 TJ/d, which equated to 74 TJ/d found in Table 6-1.

b) Please see the response at Exhibit B.SEC.2.

UNION GAS LIMITED

Answer to Interrogatory from
London Property Management Association ("LPMA")

Reference: Exhibit A, Tab 7, page 8

a) What is the incremental capacity provided by the proposed NPS 20 pipeline?

b) What is the incremental capacity provided by the NPS 16 pipeline?

Response:

a) The total capacity of the NPS 20 pipeline is 317 TJ/d. This provides an incremental capacity of 165 TJ/d to accommodate future growth.

b) The total capacity of the NPS 16 pipeline is 168 TJ/d. This provides an incremental capacity of 16 TJ/d to accommodate future growth. Please note this NPS 16 pipeline uses a different route (length) and starting pressure than the NPS 16 described at Exhibit B.OGVG.5.

UNION GAS LIMITED

Answer to Interrogatory from
London Property Management Association ("LPMA")

Reference: Exhibit A, Tab 7, Figure 7-1

a) Did Union consider any other routes other than the proposed route and the Trafalgar Road route? For example, did Union consider a route that followed the existing NPS 8 line from the Milton Gate Station to the Third Line & NPS Station, or a route that went from the Dawn/Parkway System to the Burlington Gate Station?

b) If not, why not? If yes, please explain fully why these routes were rejected.

Response:

a) Yes. Union did consider other routes as outlined at Exhibit A, Tab 11, Schedule 1, Section 2.3, Pgs. 2.3 to 2.5 of the Environmental Report.

A route was considered that followed the existing NPS 8 line from the Milton Gate Station (Environmental Report, Appendix A, Figure 1, Pipeline Route Option 1). As outlined in Section 2.3, Pg. 2.4 of the Environmental Report, the majority of the easement occupied by the existing NPS 8 line was dropped from consideration as a potential route because the cross-country route would constrain future land development. Other challenges that resulted in the existing NPS8 line dropping from consideration include routing through the Glenorchy Conservation Area, routing around the new Oakville Hospital on Dundas Street, routing through an existing residential area and securing land for the development of necessary stations. Pipeline Route Option 1 therefore begins at the Milton Gate Station and utilizes a portion of the NPS 8 easement but then turns west to connect with Regional Road 25.

A route that connected into the Burlington Gate Station was not considered. As outlined in Section 2.2.1, Pg. 2.2 of the Environmental Report, Union's Distribution Planning determined the western and eastern boundaries for the study area based on anticipated existing and future demand. The Burlington Gate Station is outside of this study area.

b) Please see the response to a) above.

UNION GAS LIMITED

Answer to Interrogatory from
London Property Management Association ("LPMA")

Reference: Exhibit A, Tab 8

Please provide the gas transportation costs paid to TransCanada and third party suppliers for each of the last two years where the transportation was used to meet the peak day requirements of the Burlington Oakville system.

Response:

All short haul transportation capacity contracted to the Union CDA is ultimately used to meet peak day requirements in the Burlington Oakville System.

As outlined at Exhibit A, Tab 5, pg. 3, any Empress to Union CDA long haul transportation is planned to be diverted to Union North on a design day, and therefore has not been included in the costs below to meet peak day cost in the Union CDA.

The total transportation costs for each year were as follows:

2013 - $11,580,941
2014 - $11,309,761

UNION GAS LIMITED

Answer to Interrogatory from
London Property Management Association ("LPMA")

Reference: Exhibit A, Tab 9, Schedule 3 & 4

Schedule 3 shows that the income tax rate used is 26.5%. However footnote 5 on Schedule 4 shows a tax rate of 25.5%. Please reconcile.

Response:

Exhibit A, Tab 9, Schedule 4 shows the revenue requirement calculation for the Project. This calculation uses a tax rate of 25.5% as required by the EB-2013-0202 IRM settlement agreement. Refer to the excerpt below:

Section 6.6 (i) - page 20 of the IRM settlement agreement:

> *"Income and other taxes related to the equity component will be calculated using the 2013 Board –approved tax rate of 25.5%"*

A tax rate of 25.5% is used for purposes of determining the amount of the revenue requirement found at lines 11 and 13 of Exhibit A, Tab 9, Schedule 4. This revenue requirement becomes the figure that is included in rates through the capital cost recovery mechanism.

The current actual tax rate is 26.5 % which is used to evaluate the NPV of the proposed pipeline and the alternatives found at Exhibit A, Tab 9, Schedule 2.

A tax rate of 26.5% is the appropriate rate to use to compare alternatives as that is the actual rate at which Union will incur taxes for the proposed pipeline or its alternatives.

UNION GAS LIMITED

Answer to Interrogatory from
London Property Management Association ("LPMA")

Reference: Exhibit A, Tab 9, Schedules 6 & 8

a) Please explain why Schedule 6 does not show a reduction to supply charges for the M1 rate class whereas Schedule 8 does.

b) Please provide a version of Schedule 8 that shows the impact on a system gas customer and a direct purchase customer of an average sized M2 customer and a small M4 customer.

Response:

a) Exhibit A, Tab 9, Schedule 6 shows the bill impacts for the average residential customer associated with the proposed Project facilities only based on a forecasted 2018 revenue requirement of $8.5 million.

Exhibit A, Tab 9, Schedule 8 shows the overall bill impacts for the average residential customer associated with the Project based on a forecasted 2018 revenue requirement of $8.5 million and estimated avoided gas transportation costs of $11.4 million.

b) Please see Attachment 1 for an average sized M2 customer and Attachment 2 for a small M4 customer.

UNION GAS LIMITED
General Service Bill Impacts
Includes Burlington to Oakville Project and Gas Transportation Cost Savings
Rate M2 Customer with Annual Consumption of 73,000 m³

Line No.	Rate M2 Average - Particulars ($)	EB-2013-0365 Approved 01-Jan-14 Total Bill (1) ($) (a)	EB-2014-0182 Proposed 01-Jan-18 Total Bill ($) (b)	Bill Impact ($) (c) = (b - a)	Bill Impact (%)
	Delivery Charges				
1	Monthly Charge	840.00	840.00	-	
2	Delivery Commodity Charge	2,600.56	2,703.80	103.23	
3	Storage Services	483.55	480.27	(3.28)	
4	Total Delivery Charge	3,924.11	4,024.06	99.95	2.5%
	Supply Charges				
5	Transportation to Union	2,518.43	2,211.71	(306.71)	
6	Commodity & Fuel	13,081.23	13,081.23	-	
7	Total Gas Supply Charge	15,599.66	15,292.95	(306.71)	
8	Total Bill (line 4 + line 7)	19,523.77	19,317.01	(206.76)	-1.1%
9	Impacts for Customer Notices - Sales (line 8)			(206.76)	
10	Impacts for Customer Notices - Direct Purchase (line 4)			99.95	

UNION GAS LIMITED
General Service Bill Impacts
Includes Burlington to Oakville Project and Gas Transportation Cost Savings
Rate M4 Customer with Annual Consumption of 875,000 m³ and Firm Contract Demand of 4,800 m³/day

Line No.	Rate M4 Small - Particulars ($)	EB-2013-0365 Approved 01-Jan-14 Total Bill (1) ($) (a)	EB-2014-0182 Proposed 01-Jan-18 Total Bill ($) (b)	Bill Impact ($) (c) = (b - a)	Bill Impact (%)
	Delivery Charges				
1	Monthly Demand Charge	26,973.79	27,917.63	943.83	
2	Delivery Commodity Charge	9,039.11	9,487.11	448.00	
3	Total Delivery Charge	36,012.90	37,404.73	1,391.83	3.9%
	Supply Charges				
4	Transportation to Union	30,186.63	26,510.26	(3,676.36)	
5	Commodity & Fuel	156,795.60	156,795.60	-	
6	Total Gas Supply Charge	186,982.23	183,305.86	(3,676.36)	
7	Total Bill (line 4 + line 7)	222,995.13	220,710.60	(2,284.53)	-1.0%
8	Impacts for Customer Notices - Sales (line 8)			(2,284.53)	
9	Impacts for Customer Notices - Direct Purchase (line 4)			1,391.83	

UNION GAS LIMITED

Answer to Interrogatory from
Ontario Greenhouse Vegetable Growers ("OGVG")

Reference: Exhibit A, Tab 4 & Tab 6

Please combine figures 4-2 and 4-3 on an enlarged figure preferably in colour to show the respective facilities of Union Gas, TCPL and any Enbridge take-offs in the area bounded by Kirkwall, Parkway (including Parkway West), Bronte Gate and Hamilton Gate 3 (for clarity of facilities, the street infrastructure is unnecessary detail i.e., new figure similar to Figure 4-3).

a) Please add the existing and proposed pipe sizes

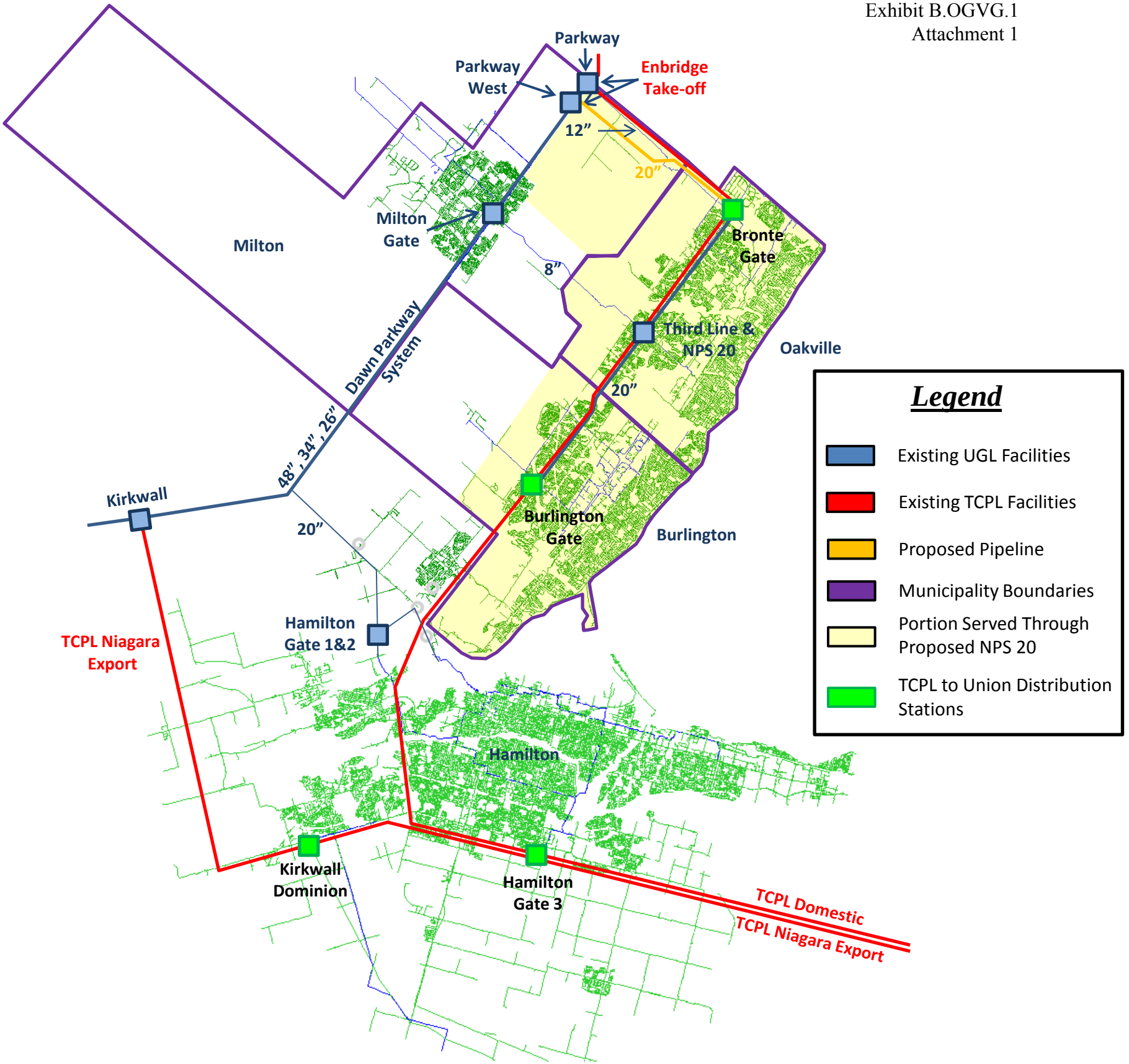
b) Please show the current inter-connections between Union, TCPL and Enbridge at the respective locations with unique labels.

c) Please ensure labelling of the TCPL delivery area (prior to the Settlement Agreement and subsequent to its implementation)

Response:

a) and b) Please see Attachment 1.

c) Please see the response at Exhibit B.BOMA.4 a).


Parkway
Parkway West
Enbridge Take-off
12”
20”
Milton Gate
Milton
8”
Bronte Gate
Third Line & NPS 20
Oakville
Dawn Parkway System
48”, 34”, 26”
20”
Kirkwall
20”
Burlington Gate
Burlington
Hamilton Gate 1&2
TCPL Niagara Export
Hamilton
Kirkwall Dominion
Hamilton Gate 3
TCPL Domestic
TCPL Niagara Export
Legend
Existing UGL Facilities
Existing TCPL Facilities
Proposed Pipeline
Municipality Boundaries
Portion Served Through Proposed NPS 20
TCPL to Union Distribution Stations

UNION GAS LIMITED

Answer to Interrogatory from
Ontario Greenhouse Vegetable Growers ("OGVG")

Reference: Exhibit A, Tab 4 & Tab 6

For the winter of 2014/15, referencing labelled locations from the above figure, please provide the design day:

a) Pressures and flows at each of the points of interconnection between Union and either TCPL or Enbridge

b) Pressures and flows at points of interconnection between Union's Dawn-Parkway system and Union take-offs (i.e. Milton Gate station to Milton Line)

c) For the three Burlington-Oakville stations, please provide:

   i) the inlet and outlet pressures and flows are provided

   ii) the rated capacity of the respective stations at the above inlet and outlet pressures

   iii) any significant restrictions to those stations being able to provide their rated capacity to the distribution system

---

Response:

a) and b)

From	To	Location	Design Day Demand (GJ/d)	Contracted Delivery Pressure (kPag)
Union	TCPL	Parkway/ Parkway West	2,840,684	6450
Union	Enbridge	Parkway Consumers/ Lisgar	1,638,085	3450
Union	TCPL	Kirkwall	710,552	4480
Union	Union	Hamilton 1 & 2	253,096	3790
Union	Union	Milton Gate	73,221	3520
Union	Union	Halton Hills	144,228	3515
Union	Union	Parkway Transmission	42,642	3450
TCPL	Union	Bronte Gate	105,295	4000
TCPL	Union	Burlington Gate	38,950	4000
TCPL	Union	Kirkwall / Dominion	94,304	4000
TCPL	Union	Hamilton # 3	66,793	4000

c) i) to ii)

Station	Inlet Pressure (kPa)	Outlet Pressure (kPa)	Flow (GJ/d)	Rated Capacity (GJ/d)
Burlington Gate	4,000	1,500	38,950	45,680
Third Line & NPS 20	1,835	1,560	24,000	24,000
Bronte Gate	4,000	1,650	105,295	147,260

iii) There are no restrictions.

UNION GAS LIMITED

Answer to Interrogatory from
Ontario Greenhouse Vegetable Growers ("OGVG")

Reference: Exhibit A, Tab 4 & Tab 6

Using the proposed new Burlington-Oakville Pipeline and updating necessary factors for the winter of 2016/17, using the same referenced points in the Figure for IR#1, please provide the design day:

a) Pressures and flows at each of the points of interconnection both between Union and either TCPL or Enbridge

b) Pressures and flows at points of interconnection between Union's Dawn-Parkway system and Union take-offs (i.e. Milton Gate station to Milton Line and the new Burlington Line take-off)

c) For the three Burlington-Oakville stations, please provide:

   i) the inlet and outlet pressures and flows are provided

   ii) the rated capacity of the respective stations at the above inlet and outlet pressures

   iii) any significant restrictions to those stations being able to provide their rated capacity to the distribution system

---

Response:

a) and b)

From	To	Location	Design Day Demand (GJ/d)	Contracted Delivery Pressure (kPag)
Union	TCPL	Parkway/ Parkway West	3,934,647	6450
Union	Enbridge	Parkway Consumers/ Lisgar	1,238,085	3450
Union	Enbridge	Parkway West	800,000	6450
Union	TCPL	Kirkwall	282,421	4480
Union	Union	Hamilton 1 & 2	266,213	3790
Union	Union	Milton Gate	74,184	3520
Union	Union	Halton Hills	144,373	3515
Union	Union	Parkway	43,203	3450

		Transmission		
TCPL	Union	Burlington Gate	11,000	4000
Union	Union	Bronte Gate	140,645	3190
TCPL	Union	Kirkwall / Dominion	94,738	4000
TCPL	Union	Hamilton # 3	70,254	4000

c) i) to ii)

Station	Inlet Pressure (kPa)	Outlet Pressure (kPa)	Flow (GJ/d)	Rated Capacity (GJ/d)
Burlington Gate	4,000	1,355	11,000	45,684
Third Line & NPS 20	1,835	1,495	24,000	24,000
Bronte Gate	3,190	1,690	140,645	228,420

iii) There are no restrictions.

UNION GAS LIMITED

Answer to Interrogatory from
Ontario Greenhouse Vegetable Growers ("OGVG")

Reference: Exhibit A, Tab 4 & Tab 6

Using Union's 2016 cost of incremental capacity per unit of capacity added, what is the cost of 220 TJ of Dawn Parkway capacity on an annualized basis.

Response:

Union does not understand the relevance of the question as the Burlington Oakville Pipeline Project ("the Project") does not require 220 TJ of incremental Dawn to Parkway capacity.

Based on Union's 2016 cost of incremental capacity, the cost of 220 TJ/d of incremental Dawn to Parkway capacity is $14.2 million/year. As stated at Exhibit A, Tab 5, pg. 8, the long-term design day requirement for the Burlington Oakville System is 276 TJ/d, of which 54 TJ/d is supplied through the NPS 8 Milton Line and the NPS 12 Parkway Line. The long term requirement Union must deliver from sources other than the NPS 8 Milton Line and the NPS 12 Parkway Line is 222 TJ/d.

The 2015/2016 design day requirement for the Burlington Oakville System is 202 TJ/d. Union models all supply for the Burlington Oakville System being transported on the Dawn Parkway System, including 54 TJ/d delivered through the NPS 8 Milton Line and NPS 12 Parkway Line and 148 TJ/d delivered via the TransCanada Mainline at the Bronte Gate Station and Burlington Gate Station. Given that all supply for the Burlington Oakville System is transported on the Dawn Parkway System, the cost of 220 TJ/d of incremental Dawn to Parkway capacity is not relevant.

With the construction of the Project, Union expects that an additional 74 TJ/d of Dawn Parkway System capacity will be required to supply the design day growth from 2016 to 2035 on the Burlington Oakville System. Union has not reserved any Dawn Parkway System capacity for the design day growth and will determine the appropriate means of providing supply to the Burlington Oakville Pipeline, and the Burlington Oakville System, at that time. Dawn Parkway System capacity for design day growth on the Burlington Oakville System will be required for the Project as well as for any of the short haul commercial alternatives.

Please see the response at Exhibit B.APPrO.3 for additional detail.

UNION GAS LIMITED

Answer to Interrogatory from
Ontario Greenhouse Vegetable Growers ("OGVG")

Reference: Exhibit A, Tab 7 Alternatives

Please provide the New Pipeline capacity that would be available from a pipe that tied in at the Milton Gate and paralleled the Milton Line to the Third Line station sized as:

a) NPS 12
b) NPS 16

Response:

a) The capacity provided by the NPS 12 pipeline is 89 TJ/d.

b) The capacity provided by the NPS 16 pipeline is 163 TJ/d. Please note this NPS 16 pipeline uses a different route (length) and starting pressure than the NPS 16 described at Exhibit B.LPMA.8.

UNION GAS LIMITED

Answer to Interrogatory from
Ontario Greenhouse Vegetable Growers ("OGVG")

Reference: Exhibit A, Tab 7 Alternatives

Using capital budget estimating (high level), what would be the estimated cost of the above pipelines.

Response:

The pipeline scenarios identified at Exhibit B.OGVG.5 would not meet the operational requirements for an alternative as described at Exhibit A, Tab 7. As such, estimates were not prepared.

UNION GAS LIMITED

Answer to Interrogatory from
Ontario Greenhouse Vegetable Growers ("OGVG")

Reference: Exhibit A, Tab 7 Alternatives

If the above take-off provided at least 138 TJ to the Burlington-Oakville system, what would the equivalent increase in Dawn-Parkway capacity for the amount capacity exiting the pipe at Milton instead of Parkway.

Response:

The movement of 138 TJ/d of volume from the proposed Parkway tie-in location, 11 km east to the Milton Gate Station would provide 6.5 TJ/d in capacity to the Dawn to Parkway system.

UNION GAS LIMITED

Answer to Interrogatory from
Ontario Greenhouse Vegetable Growers ("OGVG")

Reference: Exhibit A, Tab 7, pages 12 and 13 and Tab 4, pages 8 and 9

Preamble: The evidence states:

> *"The Settlement Agreement included a TransCanada transportation service for Enbridge for 200 TJ/d from Niagara to a new point, called Parkway Enbridge CDA. TransCanada will be completing work on the Domestic Line in order to provide this service to Enbridge. Union has discussed a firm, long term transportation exchange service with Enbridge that would provide Union natural gas in the Union ECDA and would provide Enbridge natural gas at Parkway."*

We would like to understand more about this potential arrangement.

Please provide the drivers for the Settlement Agreement changes to the delivery areas noted.

a) What infrastructure limitations did these changes overcome? What benefits were created?

b) Do Union's Burlington/Oakville DP customers deliver their gas at Parkway or at ECDA?

Response:

a) The changes were made to help facilitate the proposed Project and to allow TransCanada the ability to schedule and operate their system more effectively within the existing Union CDA. The volume of gas flowing through Parkway is significantly greater than either the Union ECDA or the amended Union CDA. In addition, any volumes that flow to Union's gate stations within the new Union ECDA are served off a different part of the TransCanada system (the Domestic Line) than the volumes that flow to Union's gate stations within the amended Union CDA (the Niagara Export Line). On the TransCanada System, Union understands that the operating pressure on the Domestic Line between Parkway and the Burlington Gate Station is higher than the operating pressure west of the Burlington Gate Station on the Domestic Line.

b) All Direct Purchase customers in Union South are obligated to deliver at either Dawn or Parkway.

UNION GAS LIMITED

Answer to Interrogatory from
Ontario Greenhouse Vegetable Growers ("OGVG")

Reference: Exhibit A, Tab 7, pages 12 and 13 and Tab 4, pages 8 and 9

Preamble: The evidence states:

> *"The Settlement Agreement included a TransCanada transportation service for Enbridge for 200 TJ/d from Niagara to a new point, called Parkway Enbridge CDA. TransCanada will be completing work on the Domestic Line in order to provide this service to Enbridge. Union has discussed a firm, long term transportation exchange service with Enbridge that would provide Union natural gas in the Union ECDA and would provide Enbridge natural gas at Parkway."*

We would like to understand more about this potential arrangement.

Please describe at high level the TCPL's Storage Transportation Service ("STS") in terms of:

a) Union's application of the service in load balancing

b) The additional nomination windows provided

c) The corresponding Load Balancing Agreement ("LBA") and the tolerances and costs of variances for Union

---

Response:

a) to c) TransCanada's Storage Transportation Service ("STS") is not relevant to the proposed Project, as it cannot be used to serve demands in the Union CDA. TransCanada does not offer Union CDA as an STS contracting location. STS is only used for a subset of Union's Northern Delivery Areas (Union WDA, Union SSMDA, Union NDA, Union NCDA, and the Union EDA).

The STS service that Union uses in Union North is intended to help Union balance the Delivery Area by providing a service that links the Delivery Area to Parkway/Dawn for access to storage. The service has both an injection and withdrawal parameter between the Delivery Area and Parkway/Dawn. On a cold winter day, Union supplements the Firm Transportation Contract deliveries to a Delivery Area with additional supply from storage to meet the cold winter demands using the STS service (which links storage withdrawals to the Delivery Area). The opposite happens in the summer. On a warm summer day the Firm Contract deliveries provide more gas to the Delivery Area than the market needs and the excess is transported to storage (Dawn/Parkway on the TransCanada system) using the STS

injection portion of the STS contract. The STS service is priced at the equivalent TransCanada short haul firm transportation rate and requires an accompanying long haul firm transportation contract. As discussed at Exhibit A, Tab 7, page 13, Union has demonstrated long haul service to the Union CDA is not economic compared to the Project.

Load Balancing Agreement ("LBA") arrangements are in place for each of Union's Northern Delivery Areas. However, there is no LBA for Union South, including the Union CDA. A LBA is not linked to any specific service. Rather, it covers an entire Delivery Area on the TransCanada system. It is designed to manage small daily differences between what was nominated and scheduled in the Delivery Area and what was actually consumed in the Delivery Area. There is a small tolerance allowed daily at no cost (2% difference between scheduled market demand and actual) and any variance above that is subject to an escalating cost of 20% to 100% of the long haul rate to that particular Delivery Area (depending on the absolute amount of the variance). Once the day has ended, any variance is carried into a cumulative balance account and is subject to further costs until cleared (an additional 15% to 25% of the same long haul toll).

UNION GAS LIMITED

Answer to Interrogatory from
Ontario Greenhouse Vegetable Growers ("OGVG")

Reference: Exhibit A, Tab 7, pages 12 and 13 and Tab 4, pages 8 and 9

Preamble: The evidence states:

> *"The Settlement Agreement included a TransCanada transportation service for Enbridge for 200 TJ/d from Niagara to a new point, called Parkway Enbridge CDA. TransCanada will be completing work on the Domestic Line in order to provide this service to Enbridge. Union has discussed a firm, long term transportation exchange service with Enbridge that would provide Union natural gas in the Union ECDA and would provide Enbridge natural gas at Parkway."*

We would like to understand more about this potential arrangement.

Please provide all meeting minutes and correspondence (including letters, memos, emails or other electronic communication) that documents discussions held between Union and either TCPL or Enbridge or joint discussions to assess the feasibility of a firm exchange service between Union and Enbridge facilitated by TCPL.

Response:

Union has discussed the potential of a firm exchange service on numerous occasions. During the April/May 2014 timeframe, Union met with Enbridge to review the viability of a long-term firm exchange service. At this time, Union also provided Enbridge a draft of the evidence it was preparing for the Burlington Oakville Pipeline project. This evidence addressed a long-term firm exchange service that was developed based on the outcome of the discussions between Union and Enbridge. The correspondence is provided as Attachment 1.

Union also discussed a long-term firm exchange service with Enbridge recently. Enbridge provided the following reasons as to why a long-term firm exchange service would not be acceptable to Enbridge:

- Enbridge contracted the Niagara to Parkway Enbridge CDA path along the TransCanada Domestic Line to provide diversity of supply in terms of its portfolio and delivery points to serve the Toronto market. Parkway Enbridge CDA is a new delivery point at Parkway at an interconnection between TransCanada and Enbridge. TransCanada plans facility modifications to be able to deliver the 200 TJ/d contracted by Enbridge from Niagara to Parkway Enbridge CDA (including repurposing a NPS 30 pipeline currently utilized to provide high pressure gas to Maple and the Union CDA). An exchange where Union provided natural gas at Parkway from Dawn would not provide any delivery point

diversity being sought by Enbridge as Enbridge already ship significant quantities of gas on the Dawn Parkway System.

- Enbridge would lose flexibility in its supply portfolio as it would be required to provide the amount of supply "called" by Union on each day. For instance, supply could not be purchased from other points than Niagara when economically prudent if Union "called" upon the firm exchange service.

In addition to the Enbridge concerns noted above, there are a number of additional reasons from Union's perspective, as to why a long-term firm exchange service with Enbridge is not a workable option.

- One of the fundamental reasons for building the Burlington Oakville Project is to support growth in the fastest growing area in Union's franchise. The contracted firm exchange quantity would need the flexibility to increase over time, at Union's discretion, with the growth of Burlington, Oakville and the southern portion of Milton. The capacity of the existing Union pipelines (54 TJ/d) and the capacity of the exchange (200 TJ/d) will not meet the Burlington Oakville System 2035/2036 design day demand of 276 TJ/d. With the significant customer growth forecast for the Burlington Oakville area, transmission reinforcement can be completed now while there is still a workable pipeline location that is supported by the municipalities.

- Enbridge would be required to divert gas to the Union ECDA using its Niagara to Parkway Enbridge CDA contract. The diversion would not be firm. Under the existing TransCanada tariffs, TransCanada would view this as an interruptible service since the delivery point (Union ECDA) is not the same primary delivery point in the Niagara to Parkway Enbridge CDA transportation contract. In order to ensure reliable (firm) delivery of natural gas to the Burlington Oakville System, Enbridge would be required to secure a firm transportation service from its Parkway Enbridge CDA delivery point to the Union ECDA. This transportation service has not been available in any TransCanada new capacity and existing capacity open seasons since 2011. The exchange would also need to be priced, at a minimum, at the Parkway to Union ECDA transportation cost (including fuel). Parkway to Union CDA transportation on TransCanada was one of the alternatives considered by Union and is reflected in Exhibit A, Tab 7, Table 7-5. Therefore the cost of a firm long-term exchange service, at a minimum, would require a toll similar to Parkway to Union ECDA short haul firm transportation[1] which is a more costly option for Union's ratepayers compared to the Project.

- Union's experience is that relying on third parties for an exchange service results in the third parties pricing the firm exchange service based on alternatives available in the market or based on other opportunities in the available market (including to other delivery points). Currently third party firm exchanges to the Union CDA are priced

[1] Exhibit A, Tab 7, Table 7-5, page 11 of 17.

based on Empress to Union CDA firm transportation costs. Depending upon the terms of the firm exchange service, the exchange would create uncertainty and pricing risk.

- Even if a firm exchange service was available under reasonable terms and pricing, Union would require a 3-year renewal period in order to provide the flexibility to build facilities if the firm exchange service was no longer available or appropriate for serving the Burlington Oakville System. In the future, this flexibility may not be available and may not match with the new TransCanada Term Up Provision if facilities were required to be constructed along the Niagara to Parkway path.

- Any exchange provides incremental risk that the counterparty (either party) cannot meet its obligations on a given day.

From: Joel Denomy [mailto:Joel.Denomy@enbridge.com]
Sent: May-06-14 10:30 AM
To: Shorts, Chris; Jamie LeBlanc
Subject: RE: Burlington Oakville pipeline alternative

Chris,

We did review and had a few thoughts (all of which assume Niagara to Enbridge Parkway CDA capacity is utilized to facilitate this exchange). This is not exhaustive but a few initial thoughts:

1) Pricing: I would not be pricing this service Parkway or Kirkwall to Union CDA. The suggestion is utilization of Niagara to EGD PKWY CDA to facilitate the exchange. I would be seeking to recover the cost of that path not the shorter paths suggested;
2) It is assumed the Niagara capacity will be utilized for seasonal service (as contemplated in the GTA Project LTC). We may not be able to provide the gas to Union on the days the supply is "called" if the capacity is not filled;
3) EGD has contracted for the benefit of EGD's customers. Gas Control may not be able to release this capacity if required to meet utility demand (we would likely view this as a TS type deal). Coincident near-peak or peak day conditions across franchises will likely be an issue; and
4) Diversions would likely be an issue for Union (as already identified).

Joel

From: Shorts, Chris [mailto:CShorts@uniongas.com]
Sent: Monday, May 05, 2014 5:45 PM
To: Jamie LeBlanc
Cc: Joel Denomy
Subject: Burlington Oakville pipeline alternative

Wonder if you guys had any chance to review this wording to see if it described things correctly from your perspective. We assume you would likely want to charge us a rate that is at least similar to the TCPL rate to move gas from Parkway to Union CDA (a feasible market rate?) at least. Please let me know…

thanks

From: Shorts, Chris
Sent: April-24-14 3:28 PM
To: 'Jamie LeBlanc'
Subject: RE: NEXUS EGD PA (4-23-2014 draft)

Jamie, her is a cut of what our Enbridge exchange option wording for the Burlington to Oakville project looks like….does this make sense and any other feedback including also making sure how we describe your status is correct….

Thanks

Chris

Renewal of TransCanada contracts Plus a Firm Exchange purchased from Enbridge Gas Distribution.

This option assumes the existing 95 TJ/d of firm and renewable TransCanada contracts are renewed. In addition, it assumes Union will acquire a firm exchange from Enbridge Gas Distribution ("Enbridge") from Parkway to the Union CDA for the remaining requirement of 128 TJ/d. Union would deliver a quantity of natural gas to Enbridge at Parkway on the days Union nominates the firm exchange service and Enbridge on that same day delivers the like quantity of natural gas to the Union CDA. Currently, Enbridge contracts for 200 TJ/d of TransCanada transportation from Niagara to Parkway as described in the Settlement Agreement[1]. First, this firm exchange service would have to be available to Union on a firm basis each and every day, specifically during the winter. Union will not require the service each and every day, but it must be reserved and available on a year round basis. Second, Union would have to ensure that Enbridge's exchange service is reliable and not supported by diversions which would make this service subject to curtailment. It is also important to note that Union will require a service with renewal rights for a period of at least three years. This is to ensure that if the service is no longer available, then Union has sufficient time to build the required facilities. Finally, this service has not

[1] Add reference.

been priced with Enbridge, but it's assumed that Enbridge would charge a market based rate for this firm exchange service to the Union CDA. A market rate for this service would be estimated at a price that closely resembles TransCanada's Parkway or Kirkwall to Union CDA demand charge. In Table 1, Parkway to Union CDA (CS1) and Kirkwall to Union CDA (CS2) results in an estimated NPV in excess of ($139) million and ($151) million, or $49 million and $60 million in excess of Union's lowest cost facility option (FA1A).

UNION GAS LIMITED

Answer to Interrogatory from
Ontario Greenhouse Vegetable Growers ("OGVG")

Reference: Exhibit A, Tab 7, pages 12 and 13 and Tab 4, pages 8 and 9

Preamble: The evidence states:

> *"The Settlement Agreement included a TransCanada transportation service for Enbridge for 200 TJ/d from Niagara to a new point, called Parkway Enbridge CDA. TransCanada will be completing work on the Domestic Line in order to provide this service to Enbridge. Union has discussed a firm, long term transportation exchange service with Enbridge that would provide Union natural gas in the Union ECDA and would provide Enbridge natural gas at Parkway."*

We would like to understand more about this potential arrangement.

If those discussions did not include a discussion of a firm exchange service in combination with the use of STS and LBA, please provide Union's assessment of the viability.

Response:

As discussed in the response at Exhibit B.OGVG.9 a), the STS service, and the corresponding LBA, is not relevant to deliveries into the current Union CDA and to the newly created Union ECDA and the amended Union CDA in the future. Also as discussed in the response at Exhibit B.OGVG.10, an exchange service with Enbridge is not feasible for Union or for Enbridge in order to ensure reliable gas supply to its customers.

UNION GAS LIMITED

Answer to Interrogatory from
Ontario Greenhouse Vegetable Growers ("OGVG")

Reference: Exhibit A, Tab 11, page 2

What was the estimated cost of the Trafalgar Rd. running line?

Response:

The estimated cost of the Project using the Trafalgar Road route was approximately $119.0 million.

UNION GAS LIMITED

Answer to Interrogatory from
Ontario Greenhouse Vegetable Growers ("OGVG")

Reference: Exhibit A, Tab 11, page 2

Was there any estimation of the costs to perform appropriate mitigation to allay EA concerns expressed on that running line?

a) If so, what were the costs?
b) If not, why not?

Response:

a) and b) The estimated cost of the Project using the Trafalgar Road route included construction methods such as extensive use of horizontal directional drilling to mitigate what Union understood to be the concerns of stakeholders based on discussions held prior to the initial Ontario Pipeline Coordinating Committee (OPCC) review. However, it became evident in later correspondence from developers, Halton Region and the Town of Oakville that their position was that the pipeline would be incompatible with the Trafalgar Road development and that relocation was the only feasible mitigation. Therefore, Stantec did not consider mitigation costs for concerns associated with the Trafalgar Road alternative. To understand how the revised preferred route was determined please see the Environmental Report at Exhibit A, Tab 11, Schedule 1, Section 2.7 Focused Study Area.

UNION GAS LIMITED

Answer to Interrogatory from
School Energy Coalition ("SEC")

Reference: Exhibit A, Tab 3, page 4

Please provide a detailed breakdown of the forecasted $6.5M net annual savings calculation.

Response:

The forecasted $6.5 million net annual savings (Exhibit A, Tab 3, pg. 4) is calculated by subtracting the Project's highest annual revenue requirement of $8.5 million in 2018 (Exhibit A, Tab 3, pg. 4) from $15.0 million, which is the cost of the commercial arrangements to serve the Burlington Oakville System for 2014/2015 (Exhibit A, Tab 5, pg. 8).

UNION GAS LIMITED

Answer to Interrogatory from
School Energy Coalition ("SEC")

Reference: Exhibit A, Tab 6

Please provide the basis, including all assumptions made, for the forecasted:

a) growth of 7TJ/d by 2016/2717. (p.6)

b) average annual design da growth of the Burlington Oakville System of 4 TJ/d from 2016 to 2030, and 2.8 TJ/d from 2031 to 2035. (p.11 at footnote 10, Schedule 3)

c) impact of DSM for in-franchise customers embedded in the design day requirements.(p.6)

Response:

a) and b) The following is a list of assumptions used to determine the growth potential within the Burlington, Oakville, and southern Milton Regions:

- The Region of Halton's projected growth included within "Best Planning Estimates of Population, Occupied Dwelling Units and Employment, 2007-2021" was used as a basis to determine a percentage of Low, Medium and High residential densities per year within each region, which was defined by the following:

  - Low Density Units = single detached and semi-detached housing units
  - Medium Density Units = townhouses and duplexes
  - High Density Units = apartment units

- The Region of Halton's updated document entitled "Best Planning Estimates of Population, Occupied Dwelling Units and Employment, 2011-2031" was used as a basis to determine the overall attachment rate, timing and location within each community

- Historical growth and customer usage experience was used to develop the forecasted growth analysis (Exhibit A, Tab 6, Schedule 3 and 4)

The 7 TJ/d of identified growth by 2016/2017 is based on 3.7 TJ/d of growth per year over a 2 year period (outlined at Exhibit A, Tab 6, Schedule 3), totalling 7.4 TJ/d rounded to 7 TJ/d. The average annual design day growth of 4 TJ/d (2016-2030) and 2.8 TJ/d (2030-2035) was calculated based on the above documents and assumptions.

c) The design day demands for Union South and Union North take into account existing DSM program volume reductions since the design day demands are based on the previous winter's actual daily measured volumes. Any impact of in place DSM programs will be reflected in the actual daily measured volumes. Company forecasts which include, for example, reduction of contract rate customers' volumes due to known energy efficiency changes, are also included in the calculation of forecast design day demand.

Union does not currently have a method to measure the impact on design day demands attributable to DSM programs.

UNION GAS LIMITED

Answer to Interrogatory from
School Energy Coalition ("SEC")

Reference: Exhibit A, Tab 7, page 5

Please explain why Union used the design day delivery requirement in 2035, as opposed to another year, for the purpose of comparing physical or commercial alternatives. Please explain how the calculations would be different for 2020, 2025, and 2030.

Response:

A design day delivery requirement in 2035 was used since Union uses a 20-year growth forecast for distribution planning, which in this case ranged from 2016 to 2035. The required capacities to be served by this pipeline for the years of 2020, 2025, 2030, and 2035 are 167 TJ/d, 188 TJ/d, 208 TJ/d, and 222 TJ/d respectively.

UNION GAS LIMITED

Answer to Interrogatory from
School Energy Coalition ("SEC")

Reference: Exhibit A, Tab 7

Please provide details of discussions, if any, that Union has had with TransCanada regarding potential non-facilities alternatives to the proposed project.

Response:

Please see the response at Exhibit B.Staff.4-1.

UNION GAS LIMITED

Answer to Interrogatory from
School Energy Coalition ("SEC")

Reference: Exhibit A, Tab 9

Please revise Schedules 5 and 9 to show the impact of both the Burlington to Oakville Project and the recently approved EB-2014-0261 project.

Response:

Please see Attachment 1 and Attachment 2.

UNION GAS LIMITED
2018 Cost Allocation Impacts of the Combined
Hamilton-Milton Pipeline and Lobo C Compressor Project and Burlington to Oakville Project

Line No.	Particulars	Hamilton-Milton Pipeline and Lobo C Compressor Project (1) ($000's)	Burlington to Oakville Project (2) ($000's)	Total Combined Projects ($000's)
		(a)	(b)	(c) = (a + b)
1	Rate M1	(2,168)	3,528	1,360
2	Rate M2	304	1,486	1,790
3	Rate M4	113	495	608
4	Rate M5	(159)	(40)	(199)
5	Rate M7	75	181	255
6	Rate M9	38	61	98
7	Rate M10	1	2	3
8	Rate T1	17	431	447
9	Rate T2	403	3,291	3,694
10	Rate T3	275	423	697
11	Subtotal - Union South	(1,104)	9,858	8,754
12	Excess Utility Space	(74)	(22)	(97)
13	Rate C1	(29)	(3)	(32)
14	Rate M12	30,535	(361)	30,174
15	Rate M13	(1)	2	1
16	Rate M16	(3)	(0)	(3)
17	Subtotal - Ex-franchise	30,427	(384)	30,043
18	Rate 01	(57)	(694)	(751)
19	Rate 10	265	(100)	164
20	Rate 20	963	(71)	891
21	Rate 100	(174)	(56)	(230)
22	Rate 25	(68)	(20)	(89)
23	Subtotal - Union North	928	(943)	(15)
		-		
24	In-franchise (line 11 + line 23)	(177)	8,915	8,739
25	Ex-franchise (line 17)	30,427	(384)	30,043
26	Total	30,251	8,531	38,782

Notes:
(1) As per EB-2014-0261 Settlement Agreement Appendix 3, Schedule 2, Column (a)
(2) As per EB-2014-0182, Exhibit A, Tab 9, Schedule 5, Column (a)

UNION GAS LIMITED
2018 Cost Allocation Impacts of Hamilton-Milton Pipeline and Lobo C Compressor Project

Line No.	Particulars	Total Cost Allocation Impacts ($000's)	Cost Allocation Change in Demands (1) ($000's)	Dawn-Parkway Easterly Transmission (2) Project Costs (3) ($000's)	Indirect Costs ($000's)	Total ($000's)	(%)	Other Functional Classifications Project Costs (3) ($000's)	Indirect Costs ($000's)	Total ($000's)
		(a) = (b + e + i)	(b)	(c)	(d)	(e) = (c + d)	(f)	(g)	(h)	(i) = (g + h)
1	Rate M1	(2,168)	472	1,938	512	2,450	6%	(863)	(4,227)	(5,089)
2	Rate M2	304	158	651	172	823	2%	(113)	(565)	(678)
3	Rate M4	113	46	189	50	239	1%	(25)	(147)	(173)
4	Rate M5	(159)	0	2	0	2	0%	(25)	(137)	(162)
5	Rate M7	75	21	87	23	110	0%	(9)	(48)	(57)
6	Rate M9	38	8	31	8	39	0%	(2)	(8)	(9)
7	Rate M10	1	0	1	0	1	0%	(0)	(1)	(1)
8	Rate T1	17	23	94	25	118	0%	(17)	(107)	(124)
9	Rate T2	403	148	607	160	767	2%	(79)	(433)	(512)
10	Rate T3	275	53	220	58	278	1%	(8)	(49)	(57)
11	Subtotal - Union South	(1,104)	929	3,820	1,008	4,828	12%	(1,140)	(5,722)	(6,862)
12	Excess Utility Space	(74)	-	-	-	-	0%	(18)	(57)	(74)
13	Rate C1	(29)	-	-	-	-	0%	(6)	(23)	(29)
14	Rate M12	30,535	(2,488)	26,326	6,950	33,276	82%	(124)	(128)	(253)
15	Rate M13	(1)	-	-	-	-	0%	(0)	(1)	(1)
16	Rate M16	(3)	-	-	-	-	0%	(1)	(2)	(3)
17	Subtotal - Ex-franchise	30,427	(2,488)	26,326	6,950	33,276	82%	(150)	(211)	(360)
18	Rate 01	(57)	542	1,310	346	1,655	4%	(403)	(1,851)	(2,254)
19	Rate 10	265	142	343	91	433	1%	(57)	(254)	(311)
20	Rate 20 (4)	963	873	256	68	324	1%	(18)	(216)	(234)
21	Rate 100	(174)	3	6	2	8	0%	(32)	(153)	(185)
22	Rate 25	(68)	-	-	-	-	0%	(12)	(57)	(68)
23	Subtotal - Union North	928	1,559	1,915	506	2,421	6%	(521)	(2,531)	(3,052)
24	In-franchise (line 11 + line 23)	(177)	2,488	5,735	1,514	7,249	18%	(1,661)	(8,253)	(9,914)
25	Ex-franchise (line 17)	30,427	(2,488)	26,326	6,950	33,276	82%	(150)	(211)	(360)
26	Total	30,251	(0)	32,061	8,463	40,525	100%	(1,811)	(8,463)	(10,274)

Notes:
(1) Allocation of the 2013 Board-approved costs updated to include the incremental Dawn-Parkway Project demands of 474,949 GJ/d.
(2) The Project costs of $32.061 million and the indirect costs of $8.463 million are allocated in proportion to the Dawn to Parkway demand allocation provided at EB-2011-0210, Exhibit G3, Tab 5, Schedule 23, Updated, pages 7-8, line 5, updated to include the incremental demands of 474,949 GJ/d.
(3) The total 2018 Project costs of $30.251 million include $32.061 million directly allocated to the Dawn-Parkway Easterly functional classification and ($1.811) million of property and income taxes allocated to distribution, storage and other transmission-related functional classifications.
(4) Of the total $0.963 million in costs allocated to Rate 20, $1.039 million is associated with a new Dawn-based storage service for North T-service customers.

UNION GAS LIMITED
2018 Cost Allocation Impacts of Burlington to Oakville Project

Line No.	Particulars	Total Cost Allocation Impacts ($000's)	Other Transmission Demand (1) Project Costs (2) ($000's)	Indirect Costs ($000's)	Total ($000's)	(%)	Other Functional Classifications Project Costs (3) ($000's)	Indirect Costs ($000's)	Total ($000's)
		(a) = (d + h)	(b)	(c)	(d) = (b + c)	(e)	(f)	(g)	(h) = (f + g)
1	Rate M1	3,528	3,936	1,028	4,964	42%	(291)	(1,144)	(1,435)
2	Rate M2	1,486	1,322	345	1,668	14%	(40)	(142)	(181)
3	Rate M4	495	427	111	538	5%	(9)	(34)	(43)
4	Rate M5	(40)	7	2	9	0%	(9)	(39)	(49)
5	Rate M7	181	155	40	195	2%	(3)	(11)	(14)
6	Rate M9	61	50	13	63	1%	(1)	(1)	(2)
7	Rate M10	2	2	0	2	0%	(0)	(0)	(0)
8	Rate T1	431	364	95	459	4%	(6)	(22)	(28)
9	Rate T2	3,291	2,677	699	3,377	29%	(22)	(63)	(85)
10	Rate T3	423	344	90	434	4%	(3)	(8)	(11)
11	Subtotal - Union South	9,858	9,282	2,425	11,707	100%	(384)	(1,464)	(1,849)
12	Excess Utility Space	(22)	0	0	0	0%	(5)	(17)	(22)
13	Rate C1	(3)	0	0	0	0%	(2)	(1)	(3)
14	Rate M12	(361)	0	0	0	0%	(164)	(197)	(361)
15	Rate M13	2	1	0	1	0%	(0)	0	(0)
16	Rate M16	(0)	0	0	0	0%	(0)	0	(0)
17	Subtotal - Ex-franchise	(384)	1	0	1	0%	(171)	(215)	(386)
18	Rate 01	(694)	0	0	0	0%	(148)	(546)	(694)
19	Rate 10	(100)	0	0	0	0%	(22)	(78)	(100)
20	Rate 20	(71)	0	0	0	0%	(13)	(58)	(71)
21	Rate 100	(56)	0	0	0	0%	(10)	(46)	(56)
22	Rate 25	(20)	0	0	0	0%	(4)	(17)	(20)
23	Subtotal - Union North	(943)	0	0	0	0%	(197)	(746)	(943)
24	In-franchise (line 11 + line 23)	8,915	9,282	2,425	11,707	100%	(581)	(2,210)	(2,791)
25	Ex-franchise (line 17)	(384)	1	0	1	0%	(171)	(215)	(386)
26	Total (line 24 + line 25)	8,531	9,283	2,425	11,708	100%	(752)	(2,425)	(3,177)

Notes:
(1) The Other Tranmission Demand allocation is provided at EB-2011-2010, Exhibit G3, Tab 5, Schedule 23, Updated, page 9 and page 10, line 1.
(2) The Project costs of $9.283 million include $9.341 million in Project costs directly allocated to Other Transmission Demand and an allocation of ($0.058) million of property and income tax associated with the Project.
(3) The Project costs include ($0.752) million of property and income tax allocated to distribution, storage and other transmission-related functional classifications.

UNION GAS LIMITED

Combined Hamilton-Milton Pipeline and Lobo C Compressor Project and Burlington to Oakville Project - Annual Rate Adjustment by Rate Class

Line No.	Particulars ($000's)	2016	Variance	2017	Variance	2018
		(a)	(b) = (c - a)	(c)	(d) = (e - c)	(e)
1	Rate M1	(2,078)	2,876	798	562	1,360
2	Rate M2	56	1,658	1,715	75	1,790
3	Rate M4	51	540	590	17	608
4	Rate M5	(125)	(94)	(219)	20	(199)
5	Rate M7	30	219	249	6	255
6	Rate M9	18	79	98	1	98
7	Rate M10	0	2	3	0	3
8	Rate T1	32	404	436	11	447
9	Rate T2	507	3,151	3,659	36	3,694
10	Rate T3	136	557	693	5	697
11	Subtotal - Union South	(1,372)	9,393	8,021	733	8,754
12	Excess Utility Space	(59)	(47)	(106)	9	(97)
13	Rate C1	(15)	(19)	(34)	2	(32)
14	Rate M12	2,664	27,267	29,931	243	30,174
15	Rate M13	1	(3)	(2)	2	1
16	Rate M16	(2)	(1)	(4)	0	(3)
17	Subtotal - Ex-franchise	2,588	27,198	29,786	257	30,043
18	Rate 01	(952)	(79)	(1,031)	280	(751)
19	Rate 10	(46)	167	121	43	164
20	Rate 20	739	121	860	32	891
21	Rate 100	(144)	(110)	(254)	24	(230)
22	Rate 25	(53)	(44)	(97)	8	(89)
23	Subtotal - Union North	(456)	54	(402)	387	(15)
24	In-franchise	(1,828)	9,447	7,619	1,119	8,739
25	Ex-franchise	2,588	27,198	29,786	257	30,043
26	Total	760	36,645	37,405	1,376	38,782

UNION GAS LIMITED
Hamilton-Milton Pipeline and Lobo C Compressor Project Revenue Requirement by Rate Class

Line No.	Particulars ($000's)	2016	Variance	2017	Variance	2018
		(a)	(b) = (c - a)	(c)	(d) = (e - c)	(e)
1	Rate M1	(2,162)	(475)	(2,637)	469	(2,168)
2	Rate M2	(135)	369	234	70	304
3	Rate M4	(21)	116	96	17	113
4	Rate M5	(99)	(76)	(175)	15	(159)
5	Rate M7	4	65	69	6	75
6	Rate M9	8	28	37	1	38
7	Rate M10	0	1	1	0	1
8	Rate T1	(34)	39	5	12	17
9	Rate T2	(49)	401	352	51	403
10	Rate T3	65	203	268	6	275
11	Subtotal - Union South	(2,423)	672	(1,750)	646	(1,104)
12	Excess Utility Space	(46)	(35)	(81)	7	(74)
13	Rate C1	(14)	(17)	(31)	2	(29)
14	Rate M12	3,078	27,282	30,360	175	30,535
15	Rate M13	(1)	(0)	(1)	0	(1)
16	Rate M16	(2)	(1)	(3)	0	(3)
17	Subtotal - Ex-franchise	3,014	27,229	30,243	184	30,427
18	Rate 01	(549)	276	(273)	216	(57)
19	Rate 10	15	216	231	33	265
20	Rate 20	780	158	938	25	963
21	Rate 100	(113)	(80)	(193)	18	(174)
22	Rate 25	(42)	(33)	(75)	7	(68)
23	Subtotal - Union North	92	537	628	299	928
24	In-franchise	(2,331)	1,209	(1,122)	946	(177)
25	Ex-franchise	3,014	27,229	30,243	184	30,427
26	Total	683	28,438	29,121	1,130	30,251

UNION GAS LIMITED
Burlington to Oakville Project - Annual Rate Adjustment by Rate Class

Line No.	Particulars ($000's)	2016	Variance	2017	Variance	2018
		(a)	(b) = (c - a)	(c)	(d) = (e - c)	(e)
1	Rate M1	84	3,351	3,435	94	3,528
2	Rate M2	192	1,289	1,480	6	1,486
3	Rate M4	71	423	495	0	495
4	Rate M5	(26)	(18)	(44)	4	(40)
5	Rate M7	26	154	181	0	181
6	Rate M9	10	51	61	(0)	61
7	Rate M10	0	2	2	(0)	2
8	Rate T1	66	365	431	(1)	431
9	Rate T2	557	2,750	3,306	(15)	3,291
10	Rate T3	71	354	425	(2)	423
11	Subtotal - Union South	1,051	8,720	9,771	86	9,858
12	Excess Utility Space	(13)	(12)	(24)	2	(22)
13	Rate C1	(1)	(2)	(3)	1	(3)
14	Rate M12	(414)	(15)	(429)	68	(361)
15	Rate M13	2	(2)	(1)	2	2
16	Rate M16	(0)	(0)	(0)	0	(0)
17	Subtotal - Ex-franchise	(426)	(31)	(457)	73	(384)
18	Rate 01	(403)	(355)	(758)	63	(694)
19	Rate 10	(61)	(49)	(110)	10	(100)
20	Rate 20	(41)	(37)	(78)	7	(71)
21	Rate 100	(31)	(30)	(61)	5	(56)
22	Rate 25	(11)	(11)	(22)	2	(20)
23	Subtotal - Union North	(548)	(482)	(1,030)	87	(943)
24	In-franchise (line 11 + line 23)	503	8,238	8,741	174	8,915
25	Ex-franchise (line 17)	(426)	(31)	(457)	73	(384)
26	Total (line 24 + line 25)	77	8,208	8,284	247	8,531

UNION GAS LIMITED

Answer to Interrogatory from
Vulnerable Energy Consumers Coalition ("VECC")

Reference: Exhibit A, Tab 4, page 4

a) Please explain what investigation was made of the option of building a new gate station on the Dawn Parkway System to the Burlington Gate Station.

b) Please explain if such an alternative would provide for greater long-term supply security in the Burlington-Oakville corridor than the proposed route.

Response:

a) Please see the response at Exhibit B.LPMA.9.

b) That alternative would not provide for greater long-term supply security in the Burlington Oakville corridor than the proposed route.

UNION GAS LIMITED

Answer to Interrogatory from
Vulnerable Energy Consumers Coalition ("VECC")

Reference: Exhibit A, Tab 4, page 4

a) Please provide a map showing the major highways/arteries, the existing NPS 8 and larger Union Gas pipelines and the proposed pipeline as bounded by the Parkway-Bronte-Burlington-Parkway System area.

b) Please provide a detailed road map showing the proposed pipeline path and identifying any required easements and any large commercial/institutional buildings.

Response:

a) Please see the Environmental Report at Exhibit A, Tab 11, Schedule 1, Appendix A, Figure 12 Infrastructure and Appendix B, Figure 8 Revised Preferred Route.

b) Aerial photos showing the proposed pipeline route and adjacent roadways can be found in the Revised Environmental Report at Tab B, figure 8, and Tab F, figures 1-7. Detailed drawings showing the easements required for the Burlington Oakville Pipeline Project ("the Project") can be found at Exhibit A, Tab 12, Schedule 1 and 2.

UNION GAS LIMITED

Answer to Interrogatory from
Vulnerable Energy Consumers Coalition ("VECC")

Reference: Exhibit A, Tab 5, pages 7-9

Preamble: In EB-2012-0451/EB-2012-0433/EB-2013-0074 TransCanada in its submission of August 16, 2013 made the following statements:

The major impact that the approval of the Union and Enbridge applications (the "Applications") will have on TransCanada is in the loss of revenue from long-haul firm transportation (FT) service from Empress. **If these applications are approved, the three LDCs have all stated that they will dramatically reduce their currently contracted FT volumes for service from Empress to their franchise areas. These reductions will be replaced with a roughly commensurate amount of short haul service**. The loss of revenue from the reduced long-haul service is roughly eight times the revenue from the replacement short-haul service.

Another impact on Ontario consumers is that some pipeline company, TransCanada or another, must incur the costs required to build the facilities necessary to provide the increased replacement short-haul service on which the Applications are premised.

(Emphasis added) TCPL Supplementary Evidence (August 16, 2013)

At Exhibit A, Tab 5, pages 7-9 Union makes the following comment:

For winter 2014/2015, as was the case noted above, TransCanada was again not able to provide firm short haul transportation capacity to the Union CDA beyond what was already contracted. TransCanada's annual open season held in the spring of 2014 did not offer firm short haul capacity to the Union CDA. Therefore, Union again acquired firm, winter only (November 1, 2014 to March 31, 2015 term), non-renewable Parkway to Union CDA service through the secondary market.

In the future, Union will evaluate its gas supply portfolio and determine whether to continue to hold this 11 TJ/d of firm transportation capacity on the TransCanada Mainline.

Upon completion of the Project, Union plans to turn back the remainder of its TransCanada firm short haul transportation capacity to the Union CDA (new

Union ECDA) and will no longer require secondary market transportation services.

a) From these statements it would appear that TransCanada was anticipating a greater demand for firm short haul transportation as result of the "Parkway D-Albion Line" projects. When did TransCanada advise Union that it was unlikely to be able to contract for firm short haul?

b) Please comment on whether the proposed projects is, as anticipated by TransCanada, a consequence of the "Parkway-Albion" projects.

c) Does Union Gas have any reason to believe that available transportation arrangements are being unfairly withheld?

Response:

a) The first passage cited in the preamble is from TransCanada's August 16, 2013 submission in Union's Parkway West Project and Parkway D Compressor/Brantford to Kirkwall Pipeline Project. This submission preceeded the Settlement Agreement which was executed October 31, 2013. The passage details a significant issue for TransCanada with respect to the changing North American supply and transportation dynamics: the recovery of costs as shippers move from long haul based portfolios to more short haul based portfolios.

The Settlement Agreement negotiations brought TransCanada and the Eastern LDCs (Union, Enbridge and Gaz Metro) together to develop a structured transition for the Mainline that provides shippers access to incremental short haul transportation, *inter alia*, while providing TransCanada with a reasonable opportunity to recover its costs. The tolls resulting from the Settlement Agreement (implemented January 1, 2015) include the impacts of the conversion of long haul capacity on TransCanada to short haul capacity. The Settlement Agreement tolls also incorporate any impacts of the proposed Project and the corresponding increase in contracting Union is doing between Kirkwall and the amended Union CDA (see the response at Exhibit B.BOMA.4 c)).

The Board in its Decision dated January 30, 2014 regarding Union's Parkway West Project and Parkway D Compressor/Brantford to Kirkwall Pipeline Project (EB-2012-0433, EB-2013-0074, EB-2012-0451) commended the Eastern LDCs and TransCanada for their efforts:

> *To the extent that this Settlement Agreement is responsive to the Board's previously expressed sentiments, the parties to the agreement are to be commended for their ability to seek solutions that enhance the prospects for optimal commercial outcomes consistent with the public interest. (pg. 4)*

With respect to Parkway to Union CDA capacity (as referenced in the second passage of the preamble), in May 2011 TransCanada informed Union that it could only provide renewable firm transportation service for 16,000 GJ/d of the 80,000 GJ/d Union requested for service starting on November 1, 2011. The remaining 64,000 GJ/d of Parkway to Union CDA capacity was provided by TransCanada as a non-renewable firm transportation ("FT-NR") service. Union has held a standard firm transportation contract with TransCanada for only 16,000 GJ/d of capacity since November 1, 2011. Once the FT-NR contract with TransCanada for 64,000 GJ/d expired on October 31, 2012, Union replaced this capacity with third party transportation services. Firm Parkway to the Union CDA capacity has not been available in any TransCanada open seasons since the capacity was awarded to Union effective November 1, 2011.

b) The proposed Project is not a consequence of the "Parkway-Albion" projects.

c) No. Please see the response at Exhibit B.LPMA.3 a).

UNION GAS LIMITED

Answer to Interrogatory from
Vulnerable Energy Consumers Coalition ("VECC")

Reference: Exhibit A, Tab 12, page 3

a) How many affected individual landowners have been identified from whom (a) easements are/may be required; (b) temporary use/construction access is/may be required?

b) Has Union contacted all these individuals? If so how many have indicated they would not agree to easement/access.

c) Please explain what traffic (pedestrian, cycle or motorized) disruptions are expected along the construction route and how these will be addressed.

d) Please indicate if any commercial or residential building access will be impaired during construction. Please explain the mitigation measures in these cases.

Response:

a) Please see Exhibit A, Tab 12, Schedule 3. This Schedule identifies a total of 28 properties along the pipeline route. Nine of these properties are owned by private individuals.

b) Please see the response at Exhibit B.Staff.6-1.

c) Union anticipates limited disruptions to traffic; however, a traffic management plan will be developed and implemented as part of this Project. Please see Exhibit A, Tab 11, pg. 5-6, Social-Economic Environment and Traffic Management. Further details are also provided in the Environmental Report found at Exhibit A, Tab 11, Schedule 1, Section 4.4 Socio-Economic Features.

d) Union's intent is to ensure access to homes and businesses remains open. This is achieved by using trenchless technology, steel plates to gain access across the trench, using alternative accesses where available and working closely with the landowner. Also, please see the response to c) above.

UNION GAS LIMITED

Answer to Interrogatory from
Vulnerable Energy Consumers Coalition ("VECC")

Reference: Exhibit A, Tab 6, Schedule 3 and 4

a) Please provide the real provincial GDP, forecast housing starts, unemployment rates and any other assumptions which underpin the customer load forecasts and forecast customer attachments for the years 2016-2026.

b) Please provide/explain the sensitivity analysis that was undertaken based the low/medium and high forecast customer load attachments. If no such sensitivity analysis was undertaken please explain why not.

Response:

a) Please see the response at Exhibit B.SEC.2.

b) There was no sensitivity analysis conducted on low, medium and high forecast customer load attachments. In order for an NPS 16 pipeline to be considered over the 20 year planning horizon, the customer attachment rate would need to be approximately 20% of the current forecast.

UNION GAS LIMITED

Answer to Interrogatory from
Vulnerable Energy Consumers Coalition ("VECC")

Reference: Exhibit A, Tab 9, Schedule 1

a) Please explain how the contingencies costs ($16,374,000 and $3,213,000) were estimated.

b) Are the construction/labour cost estimates based on current tendered contracts or estimate of future contracts.

c) Have the materials for this project been purchased? If not please provide the date by which orders for the NPS 20 pipe must be made in order to meet the proposed schedule.

d) Please amend the Total Estimated Capital Costs table to show land costs separately.

Response:

a) The contingency costs for the Project are calculated at 20% of the material, labour and land cost estimates. The contingency level is aligned with Union's standards for a Feasibility estimate and is intended to cover unknown risks to the project, such as minor scope changes and delays due to weather and other factors. Please see the response at Exhibit B.CME.2 a) for additional details.

b) Construction/labour cost estimates were based on an awarded mainline contract pending final pricing negotiations subject to final scope details, geotechnical investigations and the completion of construction drawings.

c) Materials have not been purchased for this Project. The planned order date for the NPS 20 pipe is June 2015.

d) The estimated land cost for the Project is $29.2 million.

UNION GAS LIMITED

Answer to Interrogatory from
Vulnerable Energy Consumers Coalition ("VECC")

Reference: Exhibit A, Tab 3, page 3
Exhibit A, Tab 9, Schedule 10

Preamble: Union Gas is seeking a Deferral account to "*track any variance between the costs approved in rates for the Project and the actual annual revenue requirement of the Project*" (A/T3/pg.3).

a) Please explain what "cost" is being referenced. That is, is Union Gas suggesting the estimated costs of $119,477,000, the actual cost upon completion or something else be used?

b) Please explain what mechanisms/incentives (regulatory or management) are in place or will be in place to ensure the project is completed at the minimum cost possible?

Response:

a) The costs referenced in the preamble, "*track any variance between the costs approved in rates for the Project ...*", represent the annual revenue requirement associated with the Project. Effective January 1, 2016, revenue requirement will be included in in-franchise and ex-franchise rates. During its current 2014-2018 incentive regulation mechanism ("IRM") term, Union proposes to adjust its rates on an annual basis from 2017 to 2018 to recover the estimated annual costs associated with the Project.

b) Union does not have nor will it be proposing a specific mechanism or incentive to ensure the Project is completed at the minimum cost possible. Rather, consistent with its other facility expansion projects, Union's final capital cost estimates are based on preliminary designs as well as contractor/vendor quotes. Union has a high level of confidence in the capital cost estimate for the Project.

In addition Union is proposing a deferral account to track variances between the revenue requirement built in rates for the Project and the actual revenue requirement of the Project. The balance in this deferral account will be subject to a full prudence review during Union's annual non-commodity deferral account disposition process. There is no other incentive or mechanism required.