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Enbridge Gas Distribution
500 Consumers Road
North York, Ontario M2J 1P8
Canada

VIA COURIER, EMAIL, and RESS

October 22, 2018

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

**Re: Enbridge Gas Distribution Inc. ("Enbridge")
Ontario Energy Board ("Board") File No.: EB-2018-0108
Don River 30" Pipeline Project – Interrogatory Responses of Enbridge**

In accordance with Procedural Order No. 1, enclosed please find Interrogatory responses of Enbridge in the above noted proceeding.

These IR responses have been filed through the Board's Regulatory Electronic Submission System and will be available on the Enbridge website at:

www.enbridgegas.com/DonRiver30

Sincerely,

(Original Signed)

Stephanie Allman
Regulatory Coordinator

BOARD STAFF INTERROGATORY # 1

INTERROGATORY

Ref: Exhibit B, Tab 1, Schedule 1, page 1

Preamble:

Enbridge Gas Distribution Inc. (Enbridge) requests leave to construct approximately 350 meters nominal pipe size 30-inch natural gas pipeline in the City of Toronto (Project).

Questions:

- a) Please provide a reference number for the applicable Municipal Franchise Agreement(s).
- b) Please provide a reference number for the applicable certificate(s) of public convenience and necessity.

RESPONSE

- a-b) Enbridge Gas Distribution Inc.'s predecessor company, the Consumers Gas Company of Toronto was incorporated by statute in 1848. The Act to Incorporate the Consumers' Gas Company of Toronto (included as Attachment 1 to this response) provides Consumers with the right to supply gas to the City of Toronto.

11 VICTORIA, CAP. XIV. (CANADA)

AN ACT TO INCORPORATE THE CONSUMERS' GAS COMPANY OF TORONTO

(Passed 23rd March, 1848)

Whereas the great and increasing extent of the City of Toronto and the great demand for a cheap and effective mode of lighting the streets and places in the said City, as well as houses, shops and other buildings therein, render it desirable that more than one company should be established for the purpose of furnishing a further supply of Gas for lighting the said City; and whereas the Mayor, Aldermen and citizens of the City of Toronto, have signified their assent to the establishment of the said Company, and to their having the necessary powers connected with the establishment and construction of the necessary works; and whereas a considerable proportion of the stock of the said Company has already been subscribed for, and the first instalment at the rate of five per centum paid; and whereas at a general meeting of the stockholders of the said Company held on the twenty-ninth day of October, in the year of our Lord one thousand eight hundred and forty-seven, pursuant to public notice, the following persons were duly elected Directors to manage the affairs of the said Company for one year from the date of such election, namely: Charles Berczy, Richard Kneeshaw, Ezekiel F. Whittmore, Hugh Scobie, Hugh Miller, James Beatty, Richard Yates, George C. Horwood, John T. Smith, Peter Paterson, Robert H. Brett and David Paterson; and whereas at a subsequent meeting of the said Directors they did elect the said Charles Berczy, President, and the said Richard Kneeshaw, Vice-President of the said Company; and whereas the said several persons hereinbefore named and others, have by their petition prayed that they may be incorporated under the style and title of The Consumers' Gas Company of Toronto, and that the above-named Directors, President and Vice-President may continue in office and be confirmed as such Directors, President and Vice-President, until others shall be elected in their stead under the provisions hereinafter made, and have also prayed that they may be invested with all the necessary powers and privileges usually granted to similar corporations, for the purpose of supplying the City of Toronto with Gas in greater quantity, of better quality and at cheaper rate than the same hath been heretofore supplied; and whereas it is expedient to grant the prayer of the said petition: Be it therefore enacted by the Queen's most excellent Majesty, by and with the advice and consent of the Legislative council and of the Legislative Assembly of the Province of Canada, constituted and assembled by virtue of and under the authority of an Act passed in the Parliament of the United Kingdom of Great Britain and Ireland, intituled, An Act to reunite the Provinces of Upper and Lower Canada, and for the Government of Canada, and it is hereby enacted by the authority of the same, That the said directors or such of them and such other persons as now are or shall hereafter become shareholders in the said Company, shall be and are hereby ordained and

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constituted a body politic and corporate by the name and style of The Consumers' Gas Company of Toronto, and by that name and style they and their successors being such shareholders shall and may have perpetual succession and a common seal, with full power to make, change, break or alter the same at pleasure, and shall and may by the same name sue and be sued, plead and be impleaded, answer and be answered unto, defend and be defended in all courts and places whatsoever, and shall and may have full power to purchase, take and hold personal property and lands, tenements and other real property for the purposes of the said Company, and for the erection and construction and convenient use of the Gas works hereinafter mentioned, and also to alienate such personal property, lands and other property, and others to purchase, take and hold in their stead for the purposes and uses aforesaid, and that any person or persons, body or bodies politic or corporate may give, grant, bargain, sell or convey to the said Company, any lands, tenements or hereditaments for the purposes aforesaid, and the same may repurchase from the said Company; provided always, that such lands, tenements and hereditaments to be holden by the said Company shall be so holden for the purposes and business of the said Company as set forth in this Act, and for constructing their necessary works for and about the same and for no other purposes whatsoever, and that it shall be lawful for the said Company, subject to the restrictions herein contained, from time to time to make, construct, lay down, maintain, alter or discontinue such retorts, gasometers, receivers and buildings, cisterns, engines, machines, and other apparatus, cuts, drains, sewers, water courses, reservoirs, machinery and other works, and also such houses and buildings upon the lands hereby authorized to be held and purchased by the said Company, and to do all other acts necessary and convenient as they shall think proper for supplying the inhabitants of the said City with Gas, and also to sell and dispose of coke and of all and every product or products, refuse or residuum arising or to be obtained from the materials used in or necessary for the manufacture of Gas in such manner as the said Company may think proper, and also to manufacture the refuse of any such Gas.

2. And be it enacted, That the said Company may raise and contribute among themselves such sum as shall not exceed the sum of twenty-five thousand pounds, currency, in shares of twelve pounds, ten shillings, currency, each, and the money so raised shall be appropriated to the purpose of constructing, completing and maintaining their said Gas Works, and to the purposes of this Act and to no other object or purpose whatsoever; provided always, that if the said sum of twenty-five thousand pounds, currency, should be insufficient for the purposes of this Act, it shall be lawful for the said Company to increase their capital stock by a further sum, not exceeding twenty-five thousand pounds, currency, either among themselves or by the admission of new shareholders, such new stock being divided into shares of twelve pounds, ten shillings, currency, each.

3. And be it enacted, That the President, Vice-President

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ent and Directors hereinbefore named, shall continue in office until the last Monday in October in the year of our Lord, one thousand eight hundred and forty-nine, or until the then next general election, if no election be had on that day, unless they shall sooner resign, be removed, or become disqualified under the provisions of this Act.

13. And be it enacted, That it shall and may be lawful for the said Company, after two days' notice in writing to the Mayor, aldermen and citizens of the City of Toronto to break up, dig and trench so much and so many of the streets, squares and public places of the said City of Toronto as may at any time be necessary for the laying down the mains and pipes to conduct the Gas from the works of the said Company to the consumers thereof, or for taking up, renewing, altering or repairing the same when the said Company shall deem it expedient, doing no unnecessary damage in the premises, and taking care as far as may be to preserve a free and uninterrupted passage through the said streets, squares and public places while the works are in progress, and making the said openings in such parts of the said streets, squares and public places, as the City Surveyor, under the direction of the Council of the said City, shall reasonably permit and point out; also placing guards and fences with lamps, and providing watchmen during the night, and taking all other necessary precaution for the prevention of accidents to passengers and others which may be occasioned by such openings; also finishing the work and replacing the said streets, squares and public places in as good condition as before the commencement of the work without any unnecessary delay; and in case of the neglect of any of the duties herein provided as aforesaid, the said Company shall be subject to pay a fine of one pound, currency, for every day such neglect shall continue after receiving a legal or written notice thereof, to be recovered by civil action in Her Majesty's Court of Queen's Bench at Toronto, at the suit of any person or persons or of the corporation of the Mayor, Aldermen, and citizens of the City of Toronto, to and for the use of the said corporations, over and above such damages as may be recovered against the said Company by any other party.

14. And be it enacted, That where there are buildings within the said City of Toronto, the different parts whereof shall belong to different proprietors, or shall be in possession of different tenants or lessees, the said Company shall have power to carry pipes to any part of any building so situate, passing over the property of one or more proprietors, or in possession of one or more tenants, to convey the Gas to that of another, or in the possession of another, the pipes being carried up, and attached to the outside of the building, and also to break up and uplift all passages, which may be in common to neighboring proprietors, and to dig or cut trenches therein for the purpose of laying down pipes or taking up or repairing the same, and to lay any pipes, branches or other necessary apparatus, from any main or branch pipes, into, through, or against any building, for the purpose of lighting the same, and to provide and set up any apparatus necessary for securing to any buildings a proper and complete supply of

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Gas, and for measuring and ascertaining the extent of such supply, the said Company doing as little damage as may be in the execution of the powers granted by this Act, and making satisfaction thereafter to the owners or proprietors of the buildings or other property, or to any other party, for all damages to be by them sustained in or by the execution of all or any of the said powers, subject to which provision this Act shall be sufficient to indemnify the Company or their servants, or those by them employed for what they or any of them shall do in pursuance of the powers granted by this Act.

16. And be it enacted, That the said Company shall so construct and locate their Gas Works and all apparatus and appurtenances thereto appertaining, or therewith connected, and wheresoever situated, as in nowise to endanger the public health or safety, and for the purpose of better ensuring the due execution of the provisions of this section, the said Company shall, with regard to the construction of such part of their said Gas Works as shall lie within the City of Toronto, be subject and bound by the existing By-laws of the Council of the said City for insuring the health, safety and convenience of the inhabitants thereof, and the said Gas Works, apparatus and appurtenances, or so much thereof as shall be within the said City, shall be moreover, at all reasonable times, subject to the visits and inspection of the municipal authorities thereof, or their officers, reasonable notice thereof being previously given to the said Company, and the said Company and their servants or workmen shall at all times obey all just and reasonable orders and directions they shall receive from the said municipal authorities in that respect, under a penalty of not more than five pounds, nor less than one pound currency for each offence, in refusing or neglecting to obey the same, to be recovered from the said Company, at the suit and for the use of the Mayor, Aldermen and citizens of the City of Toronto, in any court of competent civil jurisdiction.

17. And be it enacted, That in case the said Company shall open or break up any street, square or public place in the said City, and shall neglect to keep the passage of the said street, square or public place as far as may be free and uninterrupted, or to place guards or fences with lamps, or to place watchmen, or to take every necessary precaution for the prevention of accidents to passengers and others, or to close and replace the said streets, squares or public places without unnecessary delay as hereinbefore provided, the City Surveyor, under the direction of the said Council of the City, after notice in writing to the said Company, shall cause the duty so neglected to be forthwith performed, and the expense thereof shall be defrayed by the said Company, on its being demanded by the City Surveyor, at any time not less than one month after the work shall have been completed, in any case, from the Cashier or Treasurer, or any Director of the said Company, or in default of such payment, the amount of such claim shall and may be recovered from the said Company, at the suit of the Mayor, Aldermen and citizens of the City of Toronto, by a civil action in any court of competent jurisdiction.

19. And be it enacted, That if any person or persons shall wilfully or maliciously break up, pull down, or damage, injure, put out of order, or destroy any meter, main pipe, pipe, or other works, or apparatus, appurtenances or dependencies thereof, or any matter or thing already made or provided, or which shall be made or provided for the purposes aforesaid, or any of the materials used and provided for the same or ordered to be erected, laid down or belonging to the said Company, or shall in any wise wilfully do any other injury or damage for the purpose of obstructing, hindering or embarrassing the construction, completion, maintaining or repairing of the said works, or shall wilfully alter or impair any meter so that the same shall indicate less Gas than actually passes through the same, or shall cause or procure the same to be done, or shall increase the supply of Gas agreed for with the said Company by increasing the number or size of the holes in the Gas burners, or otherwise wrongfully, negligently or wastefully burning the same, or by wrongfully or improperly wasting the Gas, every such person or persons shall be guilty of a misdemeanor, and on conviction thereof the court before whom such person shall be tried and convicted, shall have power and authority to condemn such person to pay a penalty not exceeding ten pounds, currency, or be confined in the common gaol of the district for a space of time not exceeding three months as to such court may seem meet, and such person shall defray the expenses attending the repair or replacing of such meter.

20. And be it enacted, That nothing in this Act contained shall extend or be construed to extend to prevent any person or persons, body politic or corporate, from constructing any works for the supply of Gas to their own premises, or to prevent the Legislature of this Province at any time hereafter, from altering, modifying or repealing the powers, privileges or authorities hereinbefore granted to the said Company, or from incorporating any other Company for like purposes.

21. And be it enacted, That nothing herein contained shall affect or be construed to affect in any way or manner whatsoever the rights of Her Majesty, Her Heirs and Successors, or of any person or persons, or of any body or bodies corporate or collegiate, such only excepted as are herein mentioned.

22. And be it enacted, That the Gas Works hereinbefore mentioned shall be in operation within five years from the passing of this Act, and in default thereof the privileges and advantages granted by this Act to the said Company shall cease and be of no effect.

23. And be it enacted, That in all cases where it shall be lawful for the Company to cut off and take away the supply of any Gas from any house or building or premises under the provisions of this Act, it shall be lawful for the said Company, their agents and workmen, upon giving twenty-four hours' previous notice to the occupier, to enter into any such house, building or premises, between the hours of nine in the forenoon and four in the afternoon,

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and to remove, take and carry away any pipe, meter, cock, branch or apparatus, the property of and belonging to the said Company, and also for the purpose of repairing and making good any such house, building and premises where such pipes or apparatus shall have been so introduced.

24. And be it enacted, That if any person supplied with Gas by the said Company shall neglect to pay any rate or rent due to them at any of the times of payment thereof, it shall be lawful for the said Company or any person acting under their authority, to stop the Gas from entering the premises of such person, by cutting off the service or other pipe to such premises or by such means as the Company shall think fit; and that the said Company may recover the rate or rent due from such persons, together with the expenses of cutting off the Gas and costs of recovering the same in any court of competent jurisdiction in this Province.

25. And be it enacted, That neither the service nor connect-pipes of the said Company, nor any meter belonging to the said Company, shall be taken or seized for rent due to landlords, or for the debts of any person or persons to or for whose use or the use of whose house or building the same may be supplied by the Company; any law or practice to the contrary notwithstanding.

28. And be it enacted, That this Act be and it is hereby declared to be a Public Act, and that the same may be construed as such in all Her Majesty's Courts in this Province.

BOARD STAFF INTERROGATORY # 2

INTERROGATORY

Ref: Exhibit B, Tab 1, Schedule 1, page 13

Preamble:

Figure 3 identifies that the risk values under the safety dimensions Individual Risk (IR) and Societal Risk (SR) are both above the risk limit, placing them in the intolerable region, which necessitates a plan and timing for remediation actions for the infrastructure bridge (Bridge).

Question:

Please define the acronym LRROI and explain its significance in the context of this application.

RESPONSE

Lifetime Risk Return on Investment (LRROI) is a measure of the efficiency of a project at reducing risk over the lifetime of the asset. This measure is used to prioritize projects during the optimization process, and is defined as the Lifetime Risk Reduced by a capital investment, normalized by the net direct capital required. The Lifetime Risk Reduction represents the present value of the risk reduction over the useful life of the asset, including the Customer Satisfaction (CSAT) risks, Financial risks, and Safety risks.

BOARD STAFF INTERROGATORY # 3

INTERROGATORY

Ref: Exhibit B, Tab 1, Schedule 1, page 20

Preamble:

Enbridge states that the proposed pipeline will be mostly located on previously disturbed municipal right-of-way in Toronto. The balance of the route will require Enbridge to obtain land easements from existing owners.

Question:

For clarity, please confirm if the last sentence means that Enbridge will need to obtain new or revised easements from landowners with whom Enbridge has existing easement agreements. Or, if this sentence has a different meaning, please explain.

RESPONSE

The last sentence means new easements will need to be obtained from landowners that Enbridge currently does not have easement agreements with.

BOARD STAFF INTERROGATORY # 4

INTERROGATORY

Ref: Exhibit B, Tab 1, Schedule 1, Attachment 2, pages 10 and 23-30

Preamble:

The Stantec report characterizes the Bridge's structural deterioration as "minor". However, the Definition of Concrete Defects Severity uses the terms Light, Medium, Severe and Very Severe.

Question:

Please confirm that "minor" corresponds to "light". If not, please explain.

RESPONSE

Confirmed.

BOARD STAFF INTERROGATORY # 5

INTERROGATORY

Ref: Exhibit B, Tab 1, Schedule 1, Attachment 3, Appendix 2, page 10

Preamble:

Based on sparse historical information of 40 extreme winter events for the last 200 years, ice conditions with ice thickness of 0.3 m and ice jams were assumed to have an approximate probability of occurring in Don River in 1 in 5 winters.

Question:

- a) Please elaborate on the sources of information and the rationale behind the assumption of ice thickness of 0.3 m occurring in 1 in 5 winters.
- b) Please explain to what degree this is a conservative assumption. Has a safety factor been applied? If so, what is that factor?

RESPONSE

- a) Probability of occurrence of winter flood events was based on a review of recorded winter floods from 1801 to present time. Several sources of information were used:
 - A History of Flooding in the Metropolitan Toronto and Region Watersheds.
<https://drive.google.com/file/d/1-lfCxFRoOUwj2OLHhcCVtAKXB9lvdfY2/view>
In this report, the individual flood events in winter/early spring time are described.
 - Totally 15 winter/spring large flood events from 1804 to 1954 are discussed. Keating Channel Flood Inquiry Report (1981, 81 pages, prepared by Ivan Lorant), a list and description of 40 Don River flood events during ice-jam and ice-free conditions from spring 1801 to 1980 are presented.
 - Reclaiming the Don: An Environmental History of Toronto's Don River Valley (Jennifer Bonnell, 2014). A list of major floods in 20th century on the Don River are described.

Based on this review it was estimated that about 40 major winter flood events were observed on the Lower Don for the last 200 years. Therefore, an estimated probability of a winter flood is 1 in 5 years.

An ice thickness of 0.3 was assumed based on review of ice cover data from Toronto Harbour and historical photos of the ice jams on the Lower Don (photos from Toronto Archive). Also, Stantec took into account that the average water depth

of the Don River at the bridge is only 0.5 m and maximum depth is 1.1 m during normal conditions (bathymetry survey of November 28, 2016).

An ice-on period for Toronto Harbour starts in late December and ends in late March based on data from the early 1820s to the early 1990s.

(https://www.igsoc.org/annals/21/igs_annals_vol21_year1995_pg383-386.pdf) . Also, the ice cover of the Great Lakes and rivers in Toronto is constantly shrinking. The ice season was shortened by about 1 to 2 months during the last 100 to 150 years (Kling et al. 2003). Therefore, an assumption of a 0.3 m ice thickness is considered reasonable.

- b) An assumption that a 5-year flood in winter time will be accompanied by a 0.3m ice thickness is as conservative as probabilities of these two events simultaneously is relatively low. No additional safety factor was applied.

BOARD STAFF INTERROGATORY # 6

INTERROGATORY

Ref: Exhibit C, Tab 1, Schedule 1, Attachment 1

Preamble:

The New Preferred Route appears to have a sharp angle near Bayview Avenue.

Question:

Please confirm that the New Preferred Route is capable of being in-line inspected.

RESPONSE

Confirmed.

BOARD STAFF INTERROGATORY # 7

INTERROGATORY

Ref: Exhibit C, Tab 1, Schedule 2, page 1

Preamble:

At the time the application was filed, Enbridge's Environmental Protection Plan (EPP) was being developed.

Question:

Please file the EPP for this project. If that is not possible, please explain.

RESPONSE

Enbridge has developed a draft Environmental Protection Plan (EPP) which has been issued to the TRCA for review and comment and to assist with the permitting and approvals process. Once all permits and approvals are received Enbridge will incorporate the necessary conditions into the EPP and finalize the report. Enbridge will file the final EPP with the Board once the report is completed.

BOARD STAFF INTERROGATORY # 8

INTERROGATORY

Ref: Exhibit C, Tab 1, Schedule 3, page 1

Preamble:

Copies of the Environmental Reports were resubmitted to the Ontario Pipeline Coordination Committee (OPCC) on April 6, 2018. Enbridge received two comments from the Ministry of Natural Resources and Forestry.

Question:

Please file an update (in tabular format) of any additional comments that Enbridge has received from OPCC members as part of or subsequent to the OPCC review. Include the dates of communication, the issues and concerns identified by the parties, as well as Enbridge's responses and actions to address these issues and concerns.

RESPONSE

Please see Attachment 1 to this response for additional OPCC consultation.

Consultation that has occurred subsequent to the OPCC review and the filing of this Leave-to-construct application with the Board can be found in Attachment 2 to this response.

Attachment 2 contains reports that were submitted as part of the Toronto and Region Conservation Authority (TRCA) Permit Application. Due to the technical information contained in these reports, Enbridge is filing them in confidence with the Board. These reports represent the original reports that were discussed at the October 12th meeting with the TRCA. The reports are being updated to reflect feedback and requirements from the TRCA as outlined in line item #3 in Attachment 2 to this response. Enbridge will file the updated reports with the Board once complete. The updated reports will also be filed with the Board in confidence. Enbridge currently expects the updated reports to be completed the week of October 22nd.

Line Item	Date	Name	Method of Communication	Comment	Date of Response	Response and Issue Resolution (if Applicable)	Follow-up Required	Attachment
1	17-Sep-18	Ministry of Tourism Culture and Sport	Letter/email	The Ministry of Tourism Culture and Sport issued a letter of satisfaction with the submission of the Heritage Impact Assessment and the Cultural Heritage Assessment Report.	N/A	N/A	N/A	OPCC_1

**Ministry of Tourism,
Culture and Sport**

Heritage Program Unit
Programs and Services Branch
401 Bay Street, Suite 1700
Toronto ON M7A 0A7
Tel: 416 314 3108
Fax: 416 212 1802

**Ministère du Tourisme,
de la Culture et du Sport**

Unité des programmes patrimoine
Direction des programmes et des services
401, rue Bay, Bureau 1700
Toronto ON M7A 0A7
Tél: 416 314 3108
Téléc: 416 212 1802



September 9, 2018

Heidy Schopf, Cultural Heritage Specialist
Stantec
300W-675 Cochrane Drive
Markham ON L3R 0B8

Project	:	Proposed NPS 30" Don River Natural Gas Replacement Project
Report Title	:	Cultural Heritage Assessment Report (August 1, 2018) Heritage Impact Assessment (August 15, 2018)
Applicant	:	Enbridge Gas Distribution
Location	:	City of Toronto
MTCS File No.	:	0006957

Dear Ms. Schopf:

This office has reviewed the above-mentioned reports which were prepared to meet *Ontario Energy Board (OEB) Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario* and submitted to this ministry for review.

The Heritage Impact Assessment report recommends the following:

5.3.1 Site Plan Control

It is recommended that site plan controls be put in place prior to construction to prevent potential indirect impacts resulting from the proposed work. The site plan controls shall include fencing around the Enbridge Utility Bridge and the Old Eastern Avenue Bridge to indicate where Project activities are restricted and indicating the locations of the bridges on construction mapping. The purpose of mapping and physically demarcating heritage resources is to communicate the presence of these properties to construction crews. In addition, both the Enbridge Utility Bridge and Old Eastern Avenue Bridge are located within 50 metres of the proposed work. Accordingly, condition surveys and vibration monitoring are required to address potential impacts resulting from construction-related ground vibration. A strategy to address potential vibration related impacts is presented in Section 5.3.2.

5.3.2 Condition Surveys and Vibration Monitoring

The Enbridge Utility Bridge and the Old Eastern Avenue Bridge are at risk for indirect impacts resulting from construction-related ground vibration. To mitigate this risk, a strategy to carry out condition surveys and vibration monitoring should be developed by a licensed Geotechnical Engineer.

The pre-construction condition survey should include screening the heritage resources to review the type, age, and vulnerability of the structures and

abutments of the bridges. The screening should include photography of existing conditions. Establishment of the acceptable vibration limits for the at-risk structures should be carried out prior to commencement of construction based on existing conditions, founding soil conditions and type of construction vibration. Vibration monitoring should be carried out and consist of monitoring the ground-borne vibration levels, in peak particle velocity (PPV) while construction activities take place. The vibration monitoring program should include the installation of vibration monitoring equipment on the bridges.

Post-construction condition survey should be carried out as determined by the Geotechnical Engineer. Post-construction condition survey shall be conducted after completion of construction for comparison purposes.

Additionally, in an email dated May 18, 2018, Enbridge confirmed that, if in the future the bridge is considered for removal, Enbridge would reassess the potential impact to the bridge and develop a new Heritage Impact Assessment.

Based on the information provided, the Ministry is satisfied that this reporting is consistent with the applicable requirements established in s. Section 4.3.4 of the OEB Environmental Guidelines. Please note that the Ministry makes no representation or warranty as to the completeness, accuracy or quality of these reports (please see Note 1).

This letter does not waive any requirements under the *Ontario Heritage Act*.

This letter does not constitute approval of the project. Approvals or licences for the project may be required under other statutes and regulations. Please ensure that you obtain all required approvals and/or licences.

Please ensure that the proponent is aware that, if new information or substantive project changes arise after issuance of this letter, the applicant should discuss them with you to determine if any additional assessment or reporting is required. If additional reporting or revisions are required, they should be submitted to the Ministry for review. Upon completion of that review, the Ministry will determine if any revisions to the content of this letter are required.

Should you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Laura Hatcher
Heritage Planner
laura.e.hatcher@ontario.ca

cc. Kelsey Mills, Environmental Advisor, Enbridge Gas Distribution
Zora Crnojacki, OEB

Note 1: In no way will the Ministry be liable for any harm, damages, costs, expenses, losses, claims or actions that may result: (a) if the Report or its recommendations are discovered to be inaccurate, incomplete, misleading or fraudulent; or (b) from the issuance of this letter. Further measures may need to be taken in the event that additional heritage resources are identified or the Report is otherwise found to be inaccurate, incomplete, misleading or fraudulent.

From: [Hatcher, Laura \(MTCS\)](#)
To: [Schopf, Heidi](#)
Cc: Zora.Crnojacki@oeb.gov.on.ca; [Kelsey Mills](#)
Subject: [External] Proposed NPS 30" Don River Natural Gas Replacement Project - CHAR and HIA
Date: Monday, September 17, 2018 3:16:52 PM
Attachments: [2018-09-17 Enbridge NPS30 Don River CHAR HIA.pdf](#)

Good afternoon Heidi,

Please find attached a letter from the Ministry of Tourism, Culture and Sport on the Cultural Heritage Assessment Report and Heritage Impact Assessment Report for the above mentioned project.

Thank you,

Laura

Laura Hatcher, MCIP, RPP

Heritage Planner

Heritage Program | Programs and Services Branch | Ministry of Tourism, Culture and Sport

401 Bay Street Suite 1700 Toronto ON M7A 0A7

Tel. 416.314.3108 | email: laura.e.hatcher@ontario.ca

BOARD STAFF INTERROGATORY # 9

INTERROGATORY

Ref: Exhibit B, Tab 1, Schedule 1, page 1
Exhibit C, Tab 1, Schedule 2, pages 1-3
Exhibit C, Tab 1, Schedule 3, Appendix 5, page 12

Preamble:

The segment of pipeline to be replaced is located on the Bridge which is owned by Enbridge and spans the Don River. Enbridge has determined that the Bridge should be removed. Costs related to removal of the Bridge have not been included in the immediate application. Discussions with Bell and the City of Toronto have begun regarding the removal of their assets from the Bridge.

Enbridge has indicated to the Ministry of Tourism Culture and Sport (MTCS) that it has no immediate plans to demolish or modify the Bridge at this time. The City of Toronto appears to have made Enbridge's commitment to remove the Bridge a condition of its approval. The Toronto and Region Conservation Authority (TRCA) has indicated that its support for the Project is contingent on removal of the bridge. Enbridge has indicated to the TRCA that removal of the Bridge is in its asset plan.

Questions:

- a) Please provide an update on Enbridge's plans (actions and timing) for the removal of the Bridge.
- b) Please provide a cost estimate for the removal of the Bridge.
- a) How does Enbridge propose to finance the removal of the Bridge? Does Enbridge anticipate that the City of Toronto, Bell and/or anyone else would contribute to the cost of removing the Bridge? Please explain.
- c) Does Enbridge anticipate making an application to the OEB for cost recovery associated with removal of the Bridge? If so, please explain including comments on the means and timing of this request.
- d) Assuming the gas pipeline has been removed from the Bridge, does Enbridge believe that the Bridge itself would pose a safety risk(s) to people, property or the environment that would require removal of the Bridge? Please explain.

RESPONSE

- a) Enbridge hired Dillon Consulting Limited on August 31, 2018 to conduct an engineering assessment and study associated with the existing Enbridge Don River Utility Bridge. The scope of the engineering assessment and study will include:

- i. Recommendations for the full or partial demolition and removal of the Bridge along with a project execution plan and schedule. A Class 5 estimate for the identified recommendations to complete full or partial Bridge removal, including all associated costs for permits, construction/demolition and restoration of the project area.
 - ii. Identification of all modification/mitigation activities and work required to ensure the Bridge does not obstruct the flow of the river during a flood event greater than a 1 in 200 year occurrence. A Class 5 estimate along with an execution plan and schedule to complete modifications/mitigation work to the existing Bridge (if applicable).
 - iii. A list of the necessary permits/approvals and additional studies that may be required as part of the project.
 - iv. A final report scheduled to be received by November 30, 2018 (pending completion of hydraulic modeling by TRCA on identified options).
- b) The cost estimate for the full or partial removal of the Bridge will be available upon completion of the Dillon Bridge engineering assessment & study in November 2018.
- c) The abandonment and removal of Enbridge's assets (pipes and Bridge) will be charged to the cost of retirements. Enbridge will not be seeking any contributions from the City of Toronto, Bell and/or anyone else.
- d) Enbridge will not be applying to the OEB for cost recovery associated with the removal of the Bridge as the costs will be funded by the retirement reserve.
- e) Upon completion of the Dillon engineering assessment and study, Enbridge will have a better understanding of the condition of the Bridge and if, with specific modifications/mitigations of the structure and the pipe abandoned, the Bridge could be left in place without posing a safety risk(s) to people, property or the environment.

BOARD STAFF INTERROGATORY # 10

INTERROGATORY

Ref: Exhibit C, Tab 1, Schedule 4, page 1

Preamble:

The Stage 1 Archaeological Assessment (AA) was finalized on April 4, 2018 and was submitted to the MTCS. At the time Enbridge filed its application, the Stage 1 AA had yet to be reviewed by the MTCS and accepted into the Ontario Public Register of Archaeological Reports.

Question:

Please provide an update on any communication with the MTCS regarding the Stage 1 AA.

RESPONSE

Enbridge has not yet received a response from the MTCS regarding the Stage 1 Archaeological Assessment. Enbridge has requested that its Environmental Consultant follow up with the MTCS to determine the status of the submission. Once Enbridge receives a response from the MTCS Enbridge will provide a copy of the response to the Board for review.

BOARD STAFF INTERROGATORY # 11

INTERROGATORY

Ref: Exhibit D, Tab 2, page 1

Preamble:

The estimated total project cost is approximately \$25.6 million and includes a 30% contingency applied to all direct costs.

Questions:

- a) Please explain the need for a 30% contingency.
- b) If the need for a 30% contingency was the result of uncertainties associated with the stage of planning and design the project was in at the time of the application, please provide an updated estimate for the contingency based on the latest available information.
- c) If applicable, please provide an updated total capital cost that accounts for any change in the contingency.
- d) Please compare the total capital cost of the project to two or more comparable projects completed by Enbridge in the last 15 years. At a minimum, please provide the following information:
 - i. What was the forecast cost?
 - ii. What was the assumed contingency?
 - iii. What was the actual cost?

RESPONSE

- a) The Contingency applied to this project conforms to Enbridge's Guidelines for a project at this stage of scope development and risk profile. At the time the estimate was prepared the project maturity level was at the planning stage and drawings were preliminary. The contingency funding for the project is required to cover the costs of known risks that cannot be estimated at the time the estimate is prepared including underground issues (e.g., utility conflicts, subsurface conditions such as rock and soil quality), working space requirements (e.g. easement costs, temporary working easements, width of right of way and congestion of utilities) and the possibility of delays due to weather. Additional project specific risks include working in the vicinity of the Flood Protection Landform feature and permitting restrictions.
- b) Enbridge is still in the process of working with the City of Toronto and Toronto Regional Conservation Authority to determine the precise line location. At this time an updated cost estimate is not available.

c) Please see response b above.

d) A comparison of the total capital cost of this project to two comparable projects is shown in the table below. Costs have not been adjusted for inflation.

Project	City	Work Year	Pipe Size	Length	Estimated cost	Estimated cost per meter	Assumed Contingency	Actual Total Costs	Actual cost per meter
GTA Project - WC21 & Hydro Tower HDD	Markham	2015	36"	354 m	\$1,827,114	\$5,155	16% ** (Project)	\$3,860,982*	\$10,894
Keele & CNR	Vaughn	2016-2018	26" ST	327 m	\$5,614,030	\$17,168	30%	\$4,979,098	\$15,227
NPS 30 Don River Replacement	Toronto	2019	30" ST	325 m	\$25,597,539	\$78,762	30%	TBD	TBD

* Cost is for HDD crossing work only and does not include costs associated with construction pigging, hydrostatic testing, drying, tie-ins, pipe energization, backfilling and site restoration.

**Overall project contingency approximately 16%

The NPS 30 Don River Replacement project is not similar to any projects Enbridge has done in the past 15 years as it utilizes a different method of trenchless technology, micro-tunneling. The NPS 30 Don River Replacement Project is a deeper installation in a more environmentally sensitive area in close proximity to the Toronto Regional Conservation Authority flood protection landform feature.

The micro-tunneling involves the construction of a 9.8m diameter and 11m diameter deep shafts (approx. 15 m below existing grade) to perform the micro-tunnel cased crossing under the existing Don River. This crossing method also requires the installation of casing pipe in advance of the product pipe installation. Upon completion of the product pipe installation, the deep shafts also requiring decommissioning. The portion of work related to the construction of the deep shafts, installation of the casing pipe and decommissioning of the shafts make up approximately 44% of the cost estimate. In addition, the installation of the product pipe within the deep casing pipe and shafts is also unlike any other project Enbridge has built in the past.

The Keele & CNR project was done utilizing Horizontal Directional Drilling (HDD) a more common method of trenchless installation while the NPS 30 Don River

Replacement project will be completed using micro-tunneling. Micro-tunneling was selected based on the restricted working space and to avoid the encroachment on other utilities. The additional reports and studies completed for the micro-tunneling, shaft methodology added to the cost of the NPS 30 Don River Replacement.

The cost estimate for the NPS 30 Don River Replacement also includes easements along the pipeline route as it is not entirely in the right of way. The Keele & CNR project was designed to be in the right of way and therefore less cost was spent on land.

The NPS 30 Don River Replacement has a higher contingency than the Keele & CNR project as it is a new method of trenchless installation for Enbridge and therefore a higher level of risk related to overall project cost.

BOARD STAFF INTERROGATORY # 12

INTERROGATORY

Please provide commentary on the two or three next best alternatives to the proposed Project (excluding routing alternatives) including cost estimates, timelines, and environmental impacts (e.g., natural, built, cultural, social, economic).

RESPONSE

Excluding the routing alternatives Enbridge considered 3 other alternatives:

- Remediate the bridge to ensure structural stability
- Bridge rebuild & pipe replacement
- Utilizing an alternative method of trenchless technology, Direct Pipe, to cross the Don River.

Bridge Remediation

This option would not require the NPS 30 pipeline to be replaced. Rather, the Bridge itself would be remediated to ensure structural stability against future flood events. Preliminary discussions identified the need for the use of some kind of sheet pile structures as a permanent remediation for the erosion around the bridge abutments. Based on the sensitivity of the adjacent 1911 (107 year old) twin bell and spigot 30" cast iron sanitary sewer mains (on wood piles), this option was deemed not viable. Due to the associated risk with working in the vicinity of these twin sanitary sewers, the option to remediate the bridge was not considered to be an acceptable alternative and therefore an estimated cost and timeline were not completed.

Bridge Rebuild & Pipe Replacement

Through the consultation process, TRCA provided Enbridge with a February 14, 2018 letter identifying options to consider for the replacement of the NPS 30 Don River Bridge crossing. One of these options included the possibility of using another above ground crossing. In Enbridge's February 16, 2018 response, Enbridge explains how City of Toronto Bridges and Structures does not allow pipelines to be installed on bridges. The installation of structural supports to install the pipeline adjacent to existing bridges and create a new bridge to cross over the river would require very large supports. These supports would require footings in the river or on the river bank and there are already a number of structures in this area that would conflict with this approach. In addition, from an Enbridge construction and maintenance perspective, the installation of a pipeline on a bridge is deemed to be a last resort. As a result of all the above, this was not

considered a viable alternative and therefore, an estimated cost and timeline was not completed. The aforementioned correspondence between Enbridge and the TRCA can be found in the Environmental report for the Project at Exhibit C, Tab 1, Schedule 3, Attachment 1, Appendix B5-Project Correspondence: Provincial Agencies.

Direct Pipe Construction Method

Under this alternative, similar to the immediate application, the bridge would not be utilized and it would eventually be removed. The difference with this alternative relative to the proposed Project is the utilization of a different construction method for replacing the NPS 30 pipeline below ground under the river. During consultation the Direct Pipe method of construction and route considered for that methodology did not satisfy stakeholder concerns and conditions related to possible impacts to the TRCA's existing West Flood Protection Landform (FPL) and/or their proposed East FPL. As such a cost estimate, timelines and environmental impacts were not completed for this option as it was not a viable option. This alternative was also discussed and considered by Enbridge and the TRCA in the correspondence identified in the Bridge Rebuild & Pipe Replacement section above.

BOARD STAFF INTERROGATORY # 13

INTERROGATORY

Ref: Exhibit E, Tab 1, Schedule 3, page 1

Preamble:

A portion of the proposed route for the NPS 30 will be located within the public road allowance. The remainder of the proposed route will be located on municipal lands and easements will be required from the City of Toronto, TRCA and one private land owner.

Question:

Please provide an update on formal land use negotiations.

RESPONSE

Land Services commenced negotiations for the permanent easement requirements as well as the temporary space requirements with the City of Toronto, the TRCA and the one private land owner in July 2018.

The City of Toronto has completed its internal circulation process and has provided its comments to Land Services. The City of Toronto has advised that it requires the approval of the TRCA before it will grant to Enbridge Gas the permanent easement and temporary space requirement. Negotiations with the private land owner and the TRCA are still on-going.

BOARD STAFF INTERROGATORY # 14

INTERROGATORY

Ref: Exhibit E, Tab 1, Schedule 3, Attachments 1-3

Preamble:

The forms of land use agreement that Enbridge will offer to the landowners were included in the application.

Questions:

- a) If applicable, please provide the docket number(s) for the proceeding(s) in which these agreements were last approved by the OEB.
- b) If applicable, please comment on whether these agreements have been modified since the last time they were approved by the OEB?

RESPONSE

- a) and b) The forms included in the application are the same forms approved by the Board for the Liberty Village Project (EB-2018-0096).

BOARD STAFF INTERROGATORY # 15

INTERROGATORY

Ref: Exhibit F, Tab 1, Schedule 1, pages 1-7

Preamble:

The MOE has delegated to Enbridge the procedural aspects of the Crown's duty to consult for this project.

Question:

Please provide an update on communications with MOE regarding the sufficiency of Enbridge's activities with respect to the duty to consult.

RESPONSE

Enbridge has received a letter ("Sufficiency Letter") from the Ministry of Energy, Northern Development and Mines regarding the sufficiency of Enbridge's activities related to the duty to consult for the Project. This letter was provided to the Board, via an update to the evidence for the Project, on September 14, 2018. The Sufficiency Letter can be found at Exhibit F, Tab 1, Schedule 1, Attachment 7.

BOARD STAFF INTERROGATORY # 16

INTERROGATORY

Ref: Pre-filed Evidence, page 1

Enbridge applied for leave to construct facilities under section 90(1) of the OEB Act.

Question:

OEB staff has prepared the following draft Conditions of Approval. If Enbridge does not agree to any of the draft conditions of approval noted below, please identify the specific conditions that Enbridge disagrees with and explain why.

For conditions in respect of which Enbridge would like to recommend changes, please provide the proposed changes.

RESPONSE

Enbridge has reviewed the conditions of approval proposed by Board Staff. These conditions are provided at Attachment 1 to this response. Enbridge recommends that condition 5 be altered as set out below. The Project is a replacement project. Consequently there are no revenues associated with the Project. All conditions set out by the Ontario Energy Board will be adhered to by Enbridge.

5. Concurrent with the final monitoring report referred to in Condition 6(b), Enbridge shall file a Post Construction Financial Report, which shall indicate the actual capital costs of the project and shall provide an explanation for any significant variances from the cost estimates filed in this proceeding. Enbridge shall also file a copy of the Post Construction Financial Report in the proceeding where the actual capital costs of the project are proposed to be included in rate base. ~~or any proceeding where Enbridge proposes to start collecting revenues associated with the project, whichever is earlier.~~

OEB Staff Interrogatories
EB-2018-0108

Draft
Leave to Construct Conditions of Approval
Application under Section 90 of the OEB Act
Enbridge Gas Distribution Inc.
EB-2018-0108

1. Enbridge Gas Distribution Inc. (Enbridge) shall construct the facilities and restore the land in accordance with the OEB's Decision and Order in EB-2018-0108 and these Conditions of Approval.
2. (a) Authorization for leave to construct shall terminate 18 months after the decision is issued, unless construction has commenced prior to that date.

(b) Enbridge shall give the OEB notice in writing:
 - i. Of the commencement of construction, at least ten days prior to the date construction commences
 - ii. Of the planned in-service date, at least ten days prior to the date the facilities go into service
 - iii. Of the date on which construction was completed, no later than 10 days following the completion of construction
 - iv. of the in-service date, no later than 10 days after the facilities go into service
3. Enbridge shall implement all the recommendations of the Environmental Report filed in the proceeding, and all the recommendations and directives identified by the Ontario Pipeline Coordinating Committee review.
4. Enbridge shall advise the OEB of any proposed change to OEB-approved construction or restoration procedures. Except in an emergency, Enbridge shall not make any such change without prior notice to and written approval of the OEB. In the event of an emergency, the OEB shall be informed immediately after the fact.
5. Concurrent with the final monitoring report referred to in Condition 6(b), Enbridge shall file a Post Construction Financial Report, which shall indicate the actual capital costs of the project and shall provide an explanation for any significant variances from the cost estimates filed in this proceeding. Enbridge shall also file a copy of the Post Construction Financial Report in the proceeding where the actual capital costs of the project are proposed to be included in rate base or any proceeding where Enbridge proposes to start collecting revenues associated with the project, whichever is earlier.

OEB Staff Interrogatories
EB-2018-0108

6. Both during and after construction, Enbridge shall monitor the impacts of construction, and shall file with the OEB one paper copy and one electronic (searchable PDF) version of each of the following reports:
 - a) a post construction report, within three months of the in-service date, which shall:
 - i. Provide a certification, by a senior executive of the company, of Enbridge's adherence to Condition 1
 - ii. Describe any impacts and outstanding concerns identified during construction
 - iii. Describe the actions taken or planned to be taken to prevent or mitigate any identified impacts of construction
 - iv. Include a log of all complaints received by Enbridge, including the date/time the complaint was received, a description of the complaint, any actions taken to address the complaint, the rationale for taking such actions
 - v. Provide a certification, by a senior executive of the company, that the company has obtained all other approvals, permits, licences, and certificates required to construct, operate and maintain the proposed project
 - b) a final monitoring report, no later than fifteen months after the in-service date, or, where the deadline falls between December 1 and May 31, the following June 1, which shall:
 - i. Provide a certification, by a senior executive of the company, of Enbridge's adherence to Condition 3
 - ii. Describe the condition of any rehabilitated land
 - iii. Describe the effectiveness of any actions taken to prevent or mitigate any identified impacts of construction
 - iv. Include the results of analyses and monitoring programs and any recommendations arising therefrom
 - v. Include a log of all complaints received by Enbridge, including the date/time the complaint was received, a description of the complaint, any actions taken to address the complaint, the rationale for taking such actions