



**DILLON**  
CONSULTING

**ENBRIDGE GAS INC.**  
**Stakeholder and Public Consultation  
Program Update for the Low-Carbon  
Energy Project**

# Stakeholder and Public Consultation Program Update

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Enbridge is committed to ongoing communication with agencies, stakeholders, Indigenous communities, and the public. Following the completion of the Environmental Report for the Low-Carbon Energy Project (the Project) and submission of the report to the Ontario Pipeline Coordinating Committee, Enbridge undertook additional consultation efforts as part of the Project. These consultation efforts are summarized below.

## Public Information Session

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A public invitation to a second public information session was placed in local newspapers that circulate to the Project Study Area on the following dates:

Markham Economist & Sun

- Thursday, June 27, 2019; and,
- Thursday, July 4, 2019.

Ming Pao (in simplified Chinese)

- Saturday, June 29, 2019; and,
- Saturday, July 6, 2019.

The invitation was also mailed to over 33,135 residences and businesses in the Study Area and hydrogen blending areas during the week of June 22, 2019 via Canada Post. A copy of the invitation is provided in **Appendix A**. Copies of the newspaper tear sheets have been included in **Appendix B**.

The public information session was held on Tuesday, July 9, 2019 at the Enbridge Technology and Operations Centre (101 Honda Boulevard, Markham). Chinese translators were present at the information session.

The purpose of the information session was to provide the public with an update on the status of the Project, and allow an additional opportunity for the public to ask questions about the Project and discuss with the Enbridge Project team.

At the information session, a number of panels were prepared to provide Project details, including additional information on hydrogen blending based on feedback Enbridge received to date from previous consultation efforts. Panels were presented in English, and a Chinese translated copy was available as a handout at the sign-in desk. The panels discussed the following:



- Purpose of the open house (introduction to Enbridge)
- Enbridge's commitment to consultation
- Enbridge's Indigenous Peoples Policy
- Project introduction
- Hydrogen gas blending
- Hydrogen compared to natural gas
- Hydrogen blending safety
- How will my bill be affected?
- Where does hydrogen come from?
- How will up to 2% hydrogen blending affect my appliances?
- Prudence to verify safety
- Project location – Phase 1
- Project location – Phase 2
- Pipeline design and safety
- Permits and approvals
- Continuous stakeholder engagement
- Project schedule
- Project contact information

A copy of the panels in English and Chinese are provided in **Appendix C**. A top ten frequently asked questions and answers document was available as a handout at the information session (see **Appendix D**).

### Results from the Public Information Session

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The public information session was attended by approximately twenty (20) people. Enbridge and Dillon staff were present to answer questions and listen to comments from interested agencies and members of the community. The majority of the attendees were local residents in the Study Areas.

Participants were asked to complete a questionnaire once they had a chance to see the panels and speak to the Project team. A total of 12 questionnaires were completed. On the questionnaires, 67% of respondents (8 individuals) identified themselves as property owners and/or residents in the Preliminary Preferred Route (PPR) or Alternate Route (AR) Study Area.

Of those completing the questionnaire, 67% of respondents (8 individuals) indicated they were supportive of the Project, while 25% percent (3 individuals) indicated they had no opinion at the time, and 8% (1 individual) were not supportive of the Project.

Concerns with the Project were received related to:

- Proximity to schools
- Changes to natural gas costs
- Impact on insurance rates and property tax
- Safety
- Traffic and noise
- Driveway access during construction

A number of questionnaire respondents expressed their support of the Project while others had questions regarding various concerns. Several questionnaires required follow-up by Enbridge and this consultation is documented in **Appendix E**.

### Ongoing Public Consultation

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In addition to the public information session, Enbridge has been actively receiving and responding to questions and concerns from the public through the Project email address ([lowcarbonenergyea@dillon.ca](mailto:lowcarbonenergyea@dillon.ca)). A summary of consultation up to September 30, 2019, since the completion of the ER, is included in **Appendix E**. An update on consultation with Indigenous communities is provided under separate cover.

Although the ER is filed with the Ontario Energy Board, Enbridge is committed to ongoing communication with agencies, stakeholders, Indigenous communities, and the public.

Enbridge will continue to actively engage all identified Indigenous groups in meaningful dialogue concerning the Project and endeavour to meet with each Indigenous community for the purposes of exchanging information regarding the Project, responding to inquiries, discussing issues and concerns regarding the Project; and will respond to communities in a timely manner.

# Appendix A

## *Public Information Session Invitation*



# You're Invited to an Information Session

## Please join us for another information session about the proposed Low-Carbon Energy Project in Markham.

Learn about hydrogen blending, why Enbridge Gas supports this technology, why it's good for our customers, and good for the environment.

Enbridge Gas is proposing a project to blend a small amount of hydrogen gas into our existing natural gas network, to reduce greenhouse gas emissions. Enbridge Gas operates a facility which converts electrical energy to hydrogen gas, which would be injected into the existing natural gas network if the project is approved.

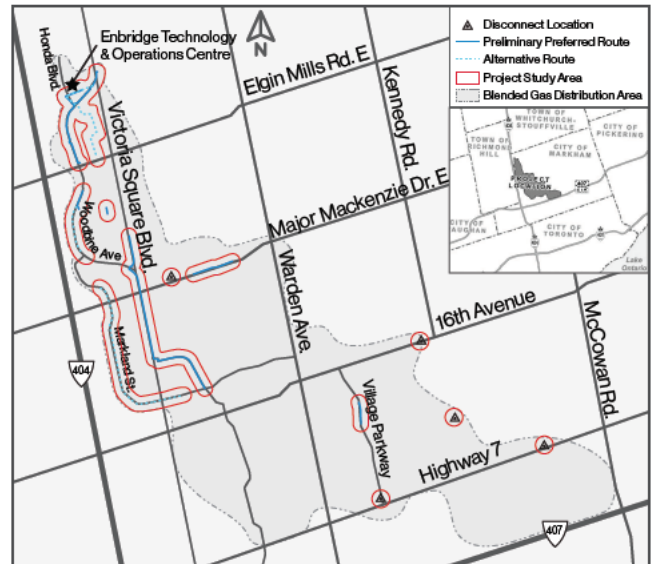
The blended gas would be distributed within the shaded area outlined on the map. As part of the project, Enbridge Gas would be installing approximately 1.3 km of pipe in phase one and approximately 5.5 km of pipe in phase two.

### Hydrogen Blending Information Session

Date: Tuesday, July 9, 2019  
Time: Drop in from 5-7 p.m.  
Location: Enbridge Technology and Operations Centre  
101 Honda Blvd, Markham, Ontario


For more information about the proposed project and hydrogen blending, please visit:  
[enbridgegas.com/LowCarbonEnergyProject](http://enbridgegas.com/LowCarbonEnergyProject).

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Please visit us online:

 [enbridgegas.com](http://enbridgegas.com)  [@enbridgegas](https://twitter.com/enbridgegas)

 If you have a natural gas emergency, please call:  
**1-866-763-5427**



# 邀请您参加 宣讲会

关于提案的万锦市低碳能源项目，我们将再次举办宣讲会，敬请参加。了解氢气混合技术、为什么 Enbridge Gas 支持这种技术、为什么它对我们的顾客有好处、以及为什么它对环境有好处。

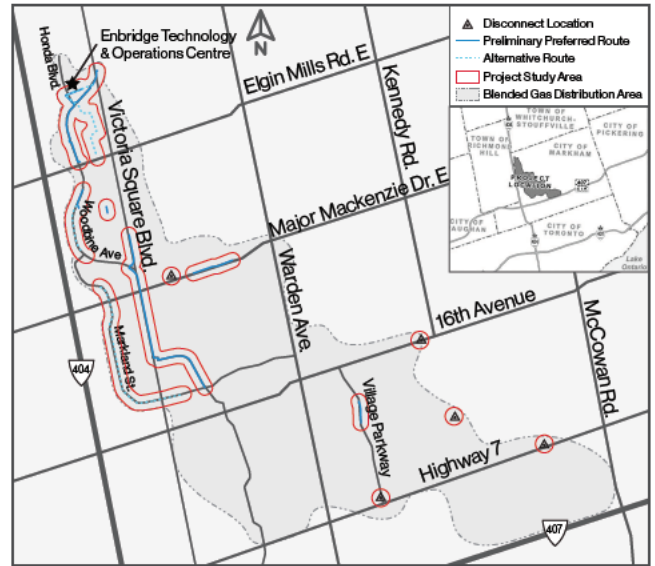
Enbridge Gas 提案了一个项目，将少量氢气混入我们的现有天然气管网，以减少温室气体排放。如果该项目得到批准，Enbridge Gas 有设施将电力转换为氢气，再将氢气注入现有天然气管网。

混合气体将在地图上所示区域内输配。作为该项目的一部分，Enbridge Gas 将在项目一期铺设约1.3公里的管道，项目二期铺设约5.5公里的管道。

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日期： 2019 年7月9日星期二  
时间： 下午5点至7点间欢迎光临  
地点： Enbridge Technology and Operations Centre  
101 Honda Blvd, Markham, Ontario

请浏览 [enbridgegas.com/LowCarbonEnergyProject](http://enbridgegas.com/LowCarbonEnergyProject)，了解提案项目和氢气混合的更多信息。如果您有任何疑问，请将您的疑问提交至 [LowCarbonEnergyEA@dillon.ca](mailto:LowCarbonEnergyEA@dillon.ca)。



请访问我们的社交媒体：

 [enbridgegas.com](http://enbridgegas.com)  [@enbridgegas](https://twitter.com/enbridgegas)

 如果您有天然气紧急情况，请致电 **1-866-763-5427**



# Appendix B

## *Public Information Session Newspaper Advertisements*





# service update

Beginning Sunday, June 30, various **York Region Transit** routes and schedules are being modified. Fares will be adjusted on Monday, July 1.

Visit [yrt.ca](http://yrt.ca) for complete details.



1-866-MOVE-YRT (668-3978) | [yrt.ca](http://yrt.ca)



A division of Transportation Services for the Regional Municipality of York



Dixon-Garland Funeral Home  
[dixongarland.com](http://dixongarland.com) | 905-294-2030

And when great souls die, after a period peace blooms... They existed. We can be. Be and be better. For they existed.

*Maya Angelou*

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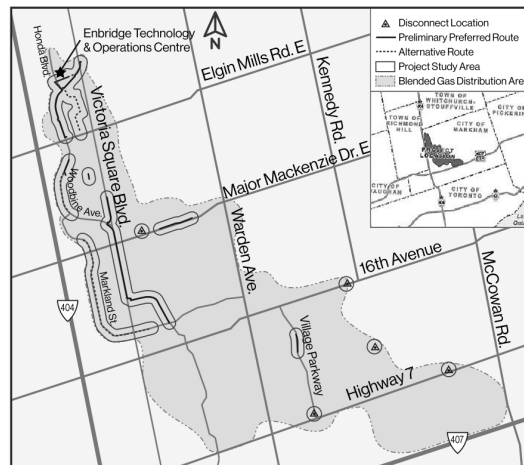
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[enbridgegas.com](http://enbridgegas.com) @enbridgegas

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10am - 5pm

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[rwhite@metroland.com](mailto:rwhite@metroland.com) or **416-774-2247**

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VALUED AT OVER  
**\$25,000**

2<sup>ND</sup> PRIZE **\$1,500**

3<sup>RD</sup> PRIZE **\$1,000**

**APPLY ONLINE**

by

**JULY 19<sup>TH</sup>**

at

**hoedown.ca/showdown**

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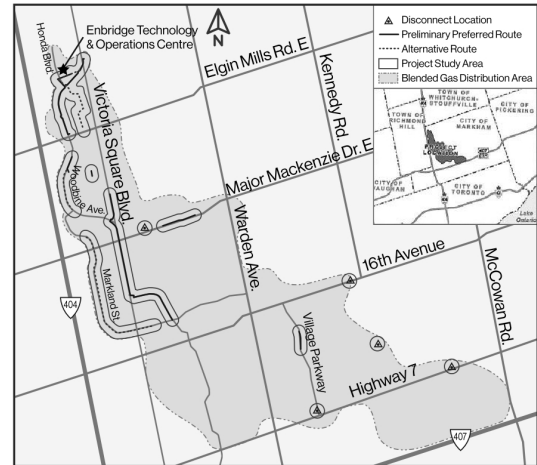
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# 騎單車者漠視紅燈險被撞 司機下車理論 遭襲擊倒地



掃描二維碼可以觀看相關視頻。  
(明報記者攝)

## 警方調查 籲知情者提供消息

【明報專訊】1名多倫多司機在市中心遇上騎單車者無視不准過路的紅燈，當他按號提醒這名不顧交通規則的男子，並下車與他理論時，騎單車者先用腳踢他的汽車，然後用單車鎖襲擊他，並把他拉倒在地上，之後施然離去。

前天下午4時45分，肇事1名騎單車者在市中心約克街夾 Bremner Boulevard 交界，與該名司機爭執。當時騎單車者沿約克街南行，受害人紐 (Brett New) 則準備右轉，騎單車者駛過行人過路線，無視紅燈，若紐不停車，便會把他撞傷。受害人被揪着衣領，拉倒在地上，騎單車者之後就離開現場。

多倫多警方發言人 Allyson Douglas-Cook 稱，警方現已介入調查，暫時仍未清楚該名騎單車者的身分。案件被列為持武器傷人案處理。有路人錄下這事件的視頻，並把之上載到社交網站 Reddit，引發廣泛討論。市民如有此案消息，可電 416-808-5204 與 52 分局聯絡。



該名多市騎單車者無視紅燈，襲擊落車司機。

# 荷頓區校巴將外置攝錄鏡頭 攝錄駛過伸停牌校巴違規車

【明報專訊】為了捉拿更多無視校巴伸出停車紅牌，繼續開車的違規司機，荷頓區警方推行一項試驗計劃，今年9月開始，在校巴外裝置攝錄鏡頭。荷頓區警方這項試驗計劃，是防止校巴伸出停車紅牌時，有司機不理停車紅牌，繼續開車駛過校巴。這項試驗計劃，是回應荷頓區內有不少市民投訴，司機無視校巴的停車紅牌。有市民指稱，不少司機無視交通條例，把落車的過馬路的學童處於危險之中。荷頓區公校教育局主席安德烈·格雷

本克 (Andrea Greben) 說：「我見過直接莽撞開過的車輛。」作為家長，格雷本克表示必須加強執法，這項試驗計劃可以對違規超駕司機，起到阻嚇作用。她又說：「這些上下車孩子其中有一些年僅四歲。」根據荷頓區區域政府相關的報告內指出，攝錄這些視頻可用於量化違規車輛的數目，教育居民並最終見到執法效果。安省獨立校巴協會主席羅布·墨菲表示，他支持這新方案。「不幸的是，我們看到每天至少發生1或2次違規行為。」



今年9月荷頓區校巴外裝攝錄機，捉拿不理停車牌違例司機。

且校巴停下來，紅頂燈閃爍時，校巴伸出停車紅牌，兩個行車方向的車輛必須停下來。」今年4月，省府表示將進行監管改革，不要求證人出庭，允許攝錄機鏡頭拍下的視頻，作為起訴違規司機的證據。

# 龐巴迪宣布年底交全部新街車 TTC 憂為增生產速度質素下降

【明報專訊】對於多倫多的許多公車乘客來說，龐巴迪公司按時保質地向多市公車局交付新型街車這件事，就是天方夜譚。但現在龐巴迪公司卻突然宣布，會在今年年底的期限之前，全部交付新街車。

根據該公司與多倫多市府簽署的10億元合約，到今年年底之前，公司要交付總共204輛車。而截至7月份，公司已經生產了166輛街車。今年第二季度，龐巴迪生產了23輛街車。如果保持這一速度，它將能夠在今年的最後六個月內完成剩餘的38輛街車。但根據2012年制訂的計劃，龐巴迪本應該在去年年底交付總共184輛車，但實際上TTC僅接收到120輛。

龐巴迪公司在履約的早期階段就陷入困境，因為製造問題導致其未能達到生產承諾，迫使公司不斷下調生產目標。早在2009年，多市公車局就已經下了這個訂單，但從簽約之日到2015年，龐巴迪公司千辛萬苦之下居然只生產了14輛街車，而原計劃是要生產73輛。這給TTC造成了大麻煩，因為原有的舊街車已經按期退役，新街車卻接不上來，導致車輛短缺嚴重。TTC不得不在有軌電車路線上使用巴士服務來替代，造成運營成本激增。

TTC委員會於2015年決定要

對龐巴迪的交貨延誤採取法律行動。今年1月份，雙方達成了未公開金額的和解協議。在這樣的壓力之下，龐巴迪直到今年第二季度，生產能力才達到頂峰，生產了23輛街車。據TTC稱，截至周四(4日)，該機構已收到162輛街車。龐巴迪說還有4輛街車正送來多倫多。龐巴迪發言人 Kaven Delarosbil 迴避了多倫多方面的不滿，強調「由安省人為安省人製造。我們很自豪它們將成為未來30年城市景觀的一部分。」

公司的生產速度上來了，生產質量似乎卻開始出現問題。去年TTC官員曾私下表示，他們擔心龐巴迪公司為了提高生產速度，在質量控制上就偷工減料。事實上截止至今年年初，新交付使用的街車已需要進行數千次修改或修理。

新街車的製動系統、車門、通信設備和其他部件的問題不斷，迫使車輛停止服務的次數遠遠超過計劃，新車的可靠性極差。去年7月，龐巴迪公司不得不召回其首批交付的67輛新街車以修復焊接缺陷。據TTC稱，到目前為止，已有7輛汽車送去接受焊接維修。

龐巴迪和公車局均表示，維修計劃將以最大限度減少對TTC乘客影響的方式進行，龐巴迪計劃在2022年底之前完成所有維修工作。



龐巴迪稱年底前可以交運TTC全部新款街車。(明報圖片)



# 體感40°C 氣象局發酷熱警告 冷鋒今晚到南安省 高溫消退

【明報專訊】加拿大環境部氣象局昨日向多倫多發出酷熱警告，在濕度效應下，市民外出感到40度以上高溫。

氣象局指出，今天周六仍然炎熱，但隨着一度冷鋒進入南安省，今晚至周日，濕熱高溫將會消退。周六最高29度有6成機會有驟雨，周日最高25度。氣象局提醒市民，在炎熱天氣下，孕婦、兒童和長者都容易受到傷害，長期患者，必須做好避暑措施。

# 邀請您參加 宣讲会

关于提案的万锦市低碳能源项目，我们将再次举办宣讲会，敬請參加。了解氢气混合技术、为什么 Enbridge Gas 支持这种技术、为什么它对我们的顾客有好处、以及为什么它对环境有好处。

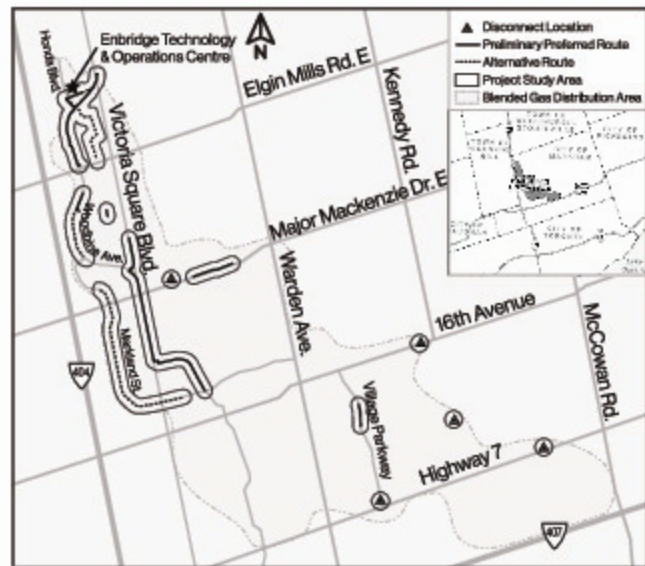
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参加我们的  
宣讲会，抽奖  
赢取 Ecobee  
(价值 \$300)



# 賓頓市接連發生爆竊案 警追查踩越野單車男子

【明報專訊】皮爾區賓頓市接連發生爆竊案，警方相信涉案歹徒犯案後，踩越野單車逃離現場。

警方稱，今年6月涉案歹徒接連爆竊便利店和牙醫診所。犯案地點在 Dufay Road 近 Sandalwood Parkway，以及 Mississauga Road 夾 Sidford Road (近 Creditview Road 夾 Bovaird Drive)。警方表示，歹徒踩越野單車逃離現場。

首名疑犯是1名白人，中等身材，犯案時蒙面，身穿1件黑色連帽棉衣。次名疑犯是1名白人女子，身材瘦削，穿緊身衣服。



圖為保安錄像拍下2名歹徒圖片。

市民如有此案消息，可電 (905) 453-2121，內線 2233。



# 雙方是否同意性交口供出現羅生門

## 23歲女赴男脫衣舞廳飲酒尋歡 「牛郎」被控強暴判囚上訴重審

【明報專訊】一位年輕女性到男性脫衣舞廳尋歡。和男脫衣舞者發生關係後，告訴男友自己被人強暴。法官一審認為女性所述可信度高，將男舞者判入獄2年。舞者上訴得直，此案發回重審。

事情發生於2016年3月。該名23歲女性(案中化名Q1)，和7名女友一起來到多倫多一間男性脫衣舞廳，慶祝生日。這是Q1首次造訪這類舞廳。  
晚會期間，Q1先付了10元錢給29歲的塞皮克(Damir Cepic)，要他跳一場脫衣舞。塞皮克時稱，是Q1首先將手伸入他的褲子內摸及到他的私處。但Q1則否認。  
之後，她又支付了40元，要給她私人跳舞。這一次，她為他進行了口交，而他則簡短地進入了她的體內。  
塞在法庭上說，他已經和該女性發

生性交，就要射精時，對方突然說，「不行，我有男朋友了。」但女人則否認，她說，她只說了不行，並試圖把他從自己的身上推下來。  
之後，Q1給一位朋友發了一條短信，商量怎麼向自己的男友交代。此外，她說，她也擔心自己的父親知道了怎麼辦。他是一名警官，肯定會大發雷霆。  
當她當時的男友來接她的時候，她告訴他，她遭人強暴了。幾個小時之後，她報警。警方指控塞皮克性騷擾。  
在原审中，唯一需要搞清的問題是女方是否同意。Q1說，她是被迫

口交和性交的。但是塞則表示，她是心甘情願的。  
法官比較相信Q1的說法。她認為，Q1的證詞可信、可靠，而S的說話則圍繞對自己有利。  
比如，塞說，是女人首先觸摸他的。但法官認為，對於一個初次來到脫衣舞廳的女孩來說，這樣做不大可能。  
另外，塞說，就在他高潮來臨之際，女孩告訴了他她的男友。法官也認為這不靠譜。  
法官判處他的罪名成立，判他入獄2年減1天。  
塞皮克對此上訴。他認為，法官

在做判決時，太過依賴一個女性的慣常反應。而Q1則認為，法官依靠常理判斷人的行為是應該的。  
但是，安省上訴庭則認為，依靠常理判斷，來評估人們證詞的可靠性，是相當危險的。「原審法官首先有一個年輕女性在一間男性脫衣舞廳中應該如何反應的假設，然後將這個假設貫穿於全部的案情分析中。」  
上訴庭稱，現場環境、氛圍很重要。本案的境遇是，「一個女性，唯一一次在性氛圍濃重的環境中參加派對，周圍都是男性舞者，她自己則喝了酒。」



圖為安省上訴庭。(明報圖片)

## 猛龍祝捷大遊行洋溢溫馨故事 人群挺身圍繞為幼童擋子彈 遺失證件獲「美好人性觸摸」

【明報專訊】為慶祝多倫多猛龍隊奪得NBA總冠軍的祝捷大遊行已曲終人散，儘管期間發生了槍擊案和嬰兒死亡的悲劇，但也發生了不少閃耀着人性光輝的溫馨故事，充分展現了加拿大人的善良和仁慈。

在多達200萬名參與猛龍祝捷大遊行的多倫多球迷中，Anshoo Kamal是其中的一人，她在遊行期間並未意識到自己遺失了證件和信用卡。

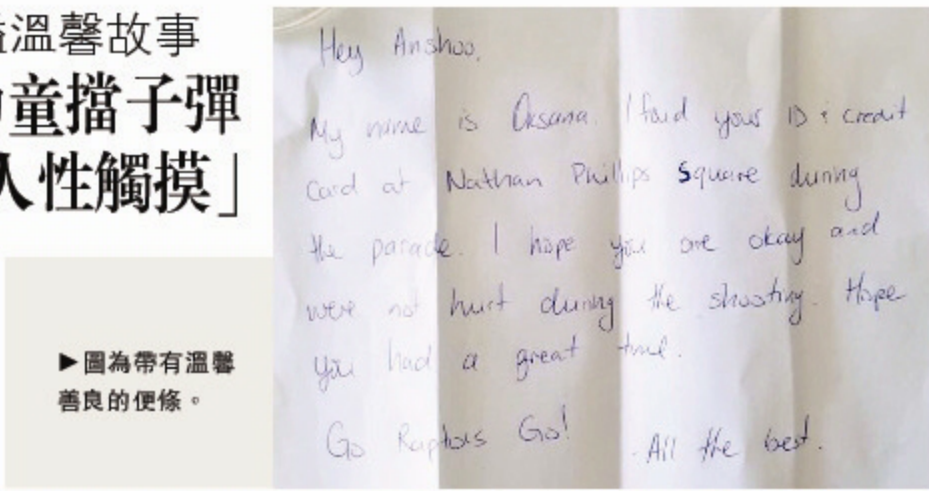
等到她發現時，感覺自己找到遺失物品的可能性微乎其微。

不過，Anshoo Kamal的嫂子 Sarbjit Kaur 在社交媒體維持上分享的一張便條，引發了熱烈的反響。

Sarbjit Kaur 日前發出的推文中說：「哇，我的小姑娘在信件中發現了這張便條，還有她的證件和信用卡，真好。」

該張便條寫道：「親愛的 Anshoo，我的名字叫 Oksana，我在遊行期間，在彌頓菲臘廣場上發現了你的證件和信用卡，我希望你一切安好，並未在槍擊案中受傷。我希望你度過了美好的時光，猛龍加油！祝一切順利。」

Anshoo Kamal 在接受傳媒採訪時說，



圖為帶有溫馨善良的便條。

當她在收到上述便條時真的非常感動，她稱之為「美好的人性觸摸」。

Anshoo Kamal 的嫂子 Sarbjit Kaur 在接受採訪時說，她將上述故事在網上公開，就是因為她認為 Oksana 附上的便條是如此甜蜜。

Sarbjit Kaur 的推文贏得了超過1.32萬個點讚和1,700次轉發，並且激發了人們分享自己親身經歷的愛心故事。

一個名叫 Kazim Habib 的男子在推文中說，他以為自己在遊行當天發生槍擊案時遺失了自己的背囊，但人們將他人遺失的背囊都帶到洗手間附近，從而使遺失背囊的人士毋需再返回擁擠的人群中尋找失物。

另一則在推特上分享的故事是：在槍擊案發生後，一群人自動圍繞一名幼童圍成半個圈，挺身為幼童擋子彈。

針對 Sarbjit Kaur 發出的推文，一個名叫 Ash Patel 的女士回應說：「這是加拿大為我做的。一年前，當我在班美國家公園徒步健行時，遺失了我珍貴的結婚戒指。兩天後，我在失物招領處找到了戒指，有人在撿到後歸還了它。」

對此，Anshoo Kamal 說，看到人們相互照應，真的非常美好。Sarbjit Kaur 則鼓勵人們分享更多來自陌生人的愛心故事。

多倫多警隊的警員 Caroline de Kloet 表示，聽到的故事，真的非常棒。她說：「幸運的是，當事人拿回了自己證件，否則，要重新申請所有的證件。」

她還指出，儘管社交媒體令陌生人之間更容易產生聯繫和歸還失物，但多倫多警方的網站也供人們報失和尋找遺失物品。

## 駕照及車輛登記費 安省押後1年加價 納稅人聯盟及汽車協會贊同

【明報專訊】在大部分省民表示不滿下，道格福特政府押後今年7月調升個人安省駕照和車輛登記費加費2% 1年，但到明年就會如計劃調升2%，但交通廳其他如商業車輛的收費則會於7月12日起調升2%。



交通廳將個人駕照和車牌費用加費押後1年。

上台後凍結安省駕照和車輛登記費用不到1年，前交通廳長楊里克早前表示，省府考慮今年7月調升交通廳轄下各類服務收費2%，以彌補開支。

新任安省交通廳長卡羅琳·梅龍尼昨日表示，省府會盡量實現最低和持續的加幅，確保商業可以承受負擔，把更多的錢留在納稅人口袋內。

加拿大納稅人聯盟和加拿大汽車協會都認同省府這次做法。

早前一份發布到監管登記處徵求公眾意見的提案中，政府表示正在策劃為「各種駕照、車輛和運營商產品和服務等全面的引入2%的年費增長。」這個帖子僅發了5天，並於本月17日刪除。

交通廳只肯表示，只收到2條評論。若增加費用獲准，包含交通廳各類收費項目多達77項。

該帖子稱：「這些適度的費用增加將使政府能夠繼續提供服務，在不增加所有安大略人稅收的情況下，實現全額成本回收。通過實施這2%的定期增長，交通廳正在以一種可靠的政策去實現財政平衡，因此也給安大略省居民預算年內經濟增長，這與通脹帶來的壓力是直接相連的。」

根據該提案，費用增加將從7月開始，並持續5年。

去年8月省府凍結了駕照的費用，取消了原定於9月的增加費用，例如新駕駛執照的費用定為90元相比之前的97元。

## 邀請您參加 宣讲会

关于提案的万锦市低碳能源项目，我们将再次举办宣讲会，敬請參加。了解氢气混合技术、为什么 Enbridge Gas 支持这种技术、为什么它对我们的顾客有好处、以及为什么它对环境有好处。

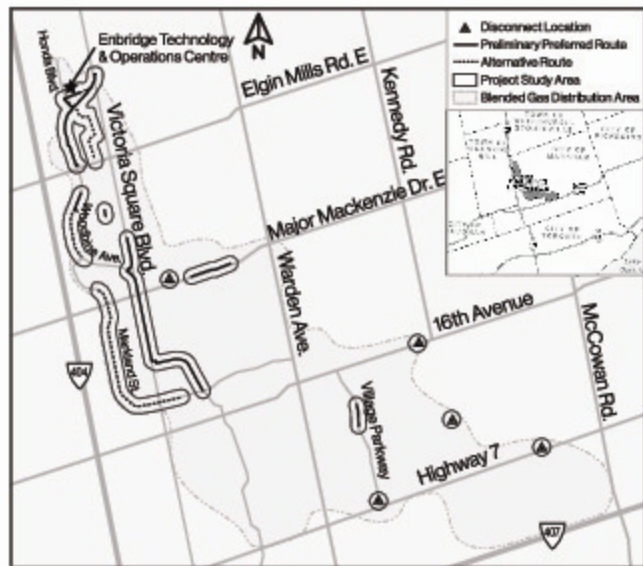
Enbridge Gas 提案了一个项目，将少量氢气混入我们的现有天然气管网，以减少温室气体排放。如果该项目得到批准，Enbridge Gas 有设施将电力转换为氢气，再将氢气注入现有天然气管网。

混合气体将在地图上所示区域内输配。作为该项目的一部分，Enbridge Gas 将在项目一期铺设约1.3公里的管道，项目二期铺设约5.5公里的管道。

### 氢气混合宣讲会

日期：2019年7月9日星期二  
时间：下午5点至7点间欢迎光临  
地点：Enbridge Technology and Operations Centre  
101 Honda Blvd, Markham, Ontario

请浏览 [enbridgegas.com/LowCarbonEnergyProject](http://enbridgegas.com/LowCarbonEnergyProject)，了解提案项目和氢气混合的更多信息。如果您有任何疑问，请将您的疑问提交至 [LowCarbonEnergyEA@dillon.ca](mailto:LowCarbonEnergyEA@dillon.ca)。



请访问我们的社交媒体：

[enbridgegas.com](http://enbridgegas.com) @enbridgegas

如果您有天然气紧急情况，请致电 1-866-763-5427

参加我们的  
宣讲会，抽奖  
赢取 Ecobee  
(价值 \$300)



## 加航機使用10個月漏油 揭波音職員偽造工程紀錄

【明報專訊】加拿大航空公司(Air Canada，簡稱加航)的一架波音787客機曾在投入使用10個月後，在2015年發生了燃油洩漏的事件，原因歸咎於美國波音公司的職員為加航訂購的該架波音787客機偽造了紀錄。

美國波音公司在發表的一份聲明中說，就在加航通知該公司發生了燃油洩漏問題後，該公司已自動向美國聯邦航空管理局披露了上述問題。

波音公司的紀錄顯示，該架波音787客機的製造工程已經完成，但實際上並未完成。

波音公司還指出，審計結果顯示，這是一宗孤立的事件，波音的機械師和監督員已經立即採取了糾正措施。

針對上述事件，以蒙克頓為基地的Doiron航空顧問公司的Mike Doiron說：「任何偽造文件來掩蓋安全議題，是一個嚴重的問題。」

他指出，在航空業，這些文件對於確保飛機和機上乘客的安全是至關重要的。

他還指出，即使是輕微的燃油洩漏也是危險的，因為飛機的渦輪引擎的內部溫度可以高達攝氏700度，在如此高的溫度下，如



波音涉向加航偽造紀錄。(明報圖片)

果引擎周圍出現洩漏，像燃油這樣的易燃液體毋需花費多久就可被點燃。

加拿大航空公司指出，該公司已對所有剩下的波音787客機進行了檢查，沒有發現任何燃油洩漏問題。

加航發言人 Peter Fitzpatrick 在向傳媒發出的電郵中說：「我們所有的客機都接受定期和全面的檢查，我們完全遵守製造商和規章條例的指引來對飛機進行維修保養。」

加航在5年前引入了波音787夢幻客機，根據加航的網站發表的數據，加航現有35架波音787客機。西捷航空(WestJet)則在今年2月引入了兩架不同型號的波音夢幻客機。西捷航空表示，該公司對這些飛機的安全性充滿了信心。



## **Appendix C**

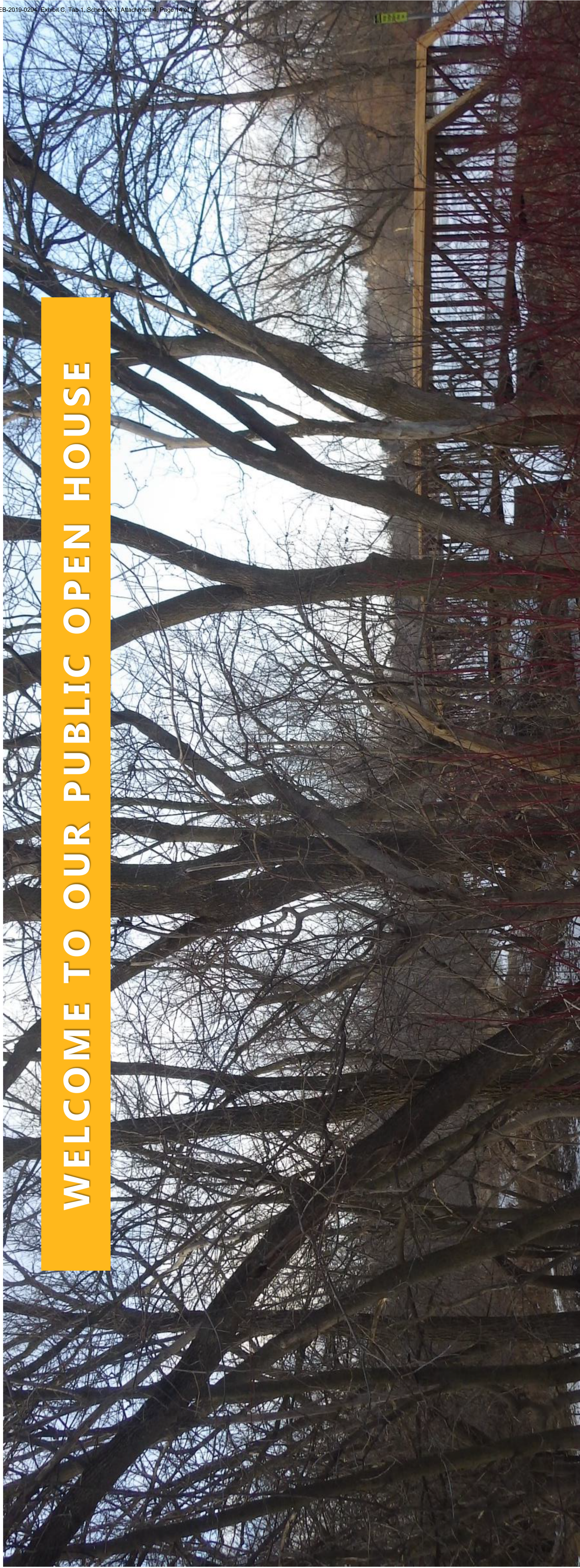
### ***Public Information Session Display Panels***





# Low-Carbon Energy Project

WELCOME TO OUR PUBLIC OPEN HOUSE





# Purpose

## Who we are

Enbridge provides safe and reliable delivery of natural gas to more than 3.7 million residential, commercial, and industrial customers across Ontario. Enbridge is committed to minimizing our impacts to the environment in a responsible manner.

### Why are we here?

- To provide information about the Low-Carbon Energy Project, the objective of which is to blend up to 2% of hydrogen into your natural gas supply.
- To involve the community, stakeholders and Indigenous groups and receive and consider your input.
- To present information about how hydrogen blending will affect our customers.
- To provide an additional information session based on your requests.



Please sign in at the front desk and provide your input on the project by completing a questionnaire.



# Commitment to Consultation

We are committed to a comprehensive consultation process and want to hear from you about this project.

## Our consultation approach is:

**Inclusive** – reaching out to all who may be interested or affected and providing opportunities to become informed and get involved.

**Transparent** – providing access to information and clear explanations for decisions.

**Accountable** – explaining how your input will be used in the decision-making process.



As an important part of the consultation process, we will work with all stakeholders to identify and resolve project issues.



# Enbridge's Indigenous Peoples Policy

Enbridge recognizes the diversity of Indigenous Peoples who live where we work and operate. We understand that the history of Indigenous Peoples in both Canada and the United States has had destructive impacts on the social and economic wellbeing of Indigenous Peoples. Enbridge recognizes the importance of reconciliation between Indigenous communities and broader society. Positive relationships with Indigenous Peoples, based on mutual respect and focused on achieving common goals, will create constructive outcomes for Indigenous communities and for Enbridge.

Enbridge commits to pursuing sustainable relationships with Indigenous Nations and groups in proximity to where Enbridge conducts business. To achieve this, Enbridge will govern itself by the following principles:

- We recognize the legal and constitutional rights possessed by Indigenous Peoples in Canada and in the U.S., and the importance of the relationship between Indigenous Peoples and their traditional lands and resources. We commit to working with Indigenous communities in a manner that recognizes and respects those legal and constitutional rights and the traditional lands and resources to which they apply, and we commit to ensuring that our projects and operations are carried out in an environmentally responsible manner.
- We recognize the importance of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) within the context of existing Canadian and U.S. law and the commitments that governments in both countries have made to protecting the rights of Indigenous Peoples.
- We engage in forthright and sincere consultation with Indigenous Peoples about Enbridge's projects and operations through processes that seek to achieve early and meaningful engagement so their input can help define our projects that may occur on lands traditionally used by Indigenous Peoples.
- We commit to working with Indigenous Peoples to achieve benefits for them resulting from Enbridge's projects and operations, including opportunities in training and education, employment, procurement, business development, and community development.
- We foster understanding of the history and culture of Indigenous Peoples among Enbridge's employees and contractors, in order to create better relationships between Enbridge and Indigenous communities.

This commitment is a shared responsibility involving Enbridge and its affiliates, employees and contractors, and we will conduct business in a manner that reflects the above principles. Enbridge will provide ongoing leadership and resources to ensure the effective implementation of the above principles, including the development of implementation strategies and specific action plans.

Enbridge commits to periodically reviewing this policy to ensure it remains relevant and meets changing expectations.

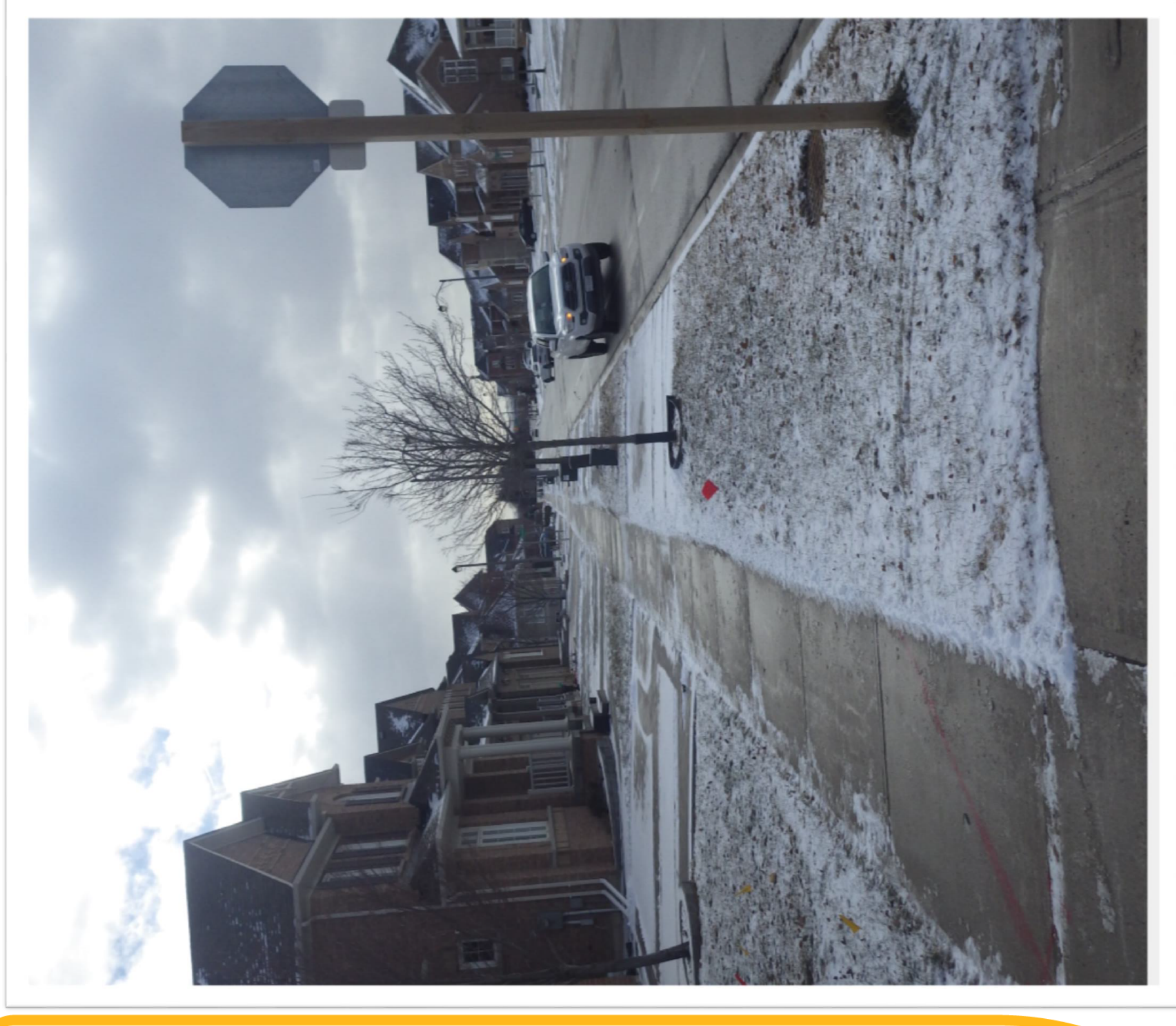


# Project Introduction

## What is being proposed?

Enbridge is proposing to blend a low concentration of hydrogen into an isolated area of the gas distribution network in an effort to reduce greenhouse gas emissions.

This would require the installation of 6.8 km of pipeline and associated infrastructure.





# Hydrogen Blending



Hydrogen blending is when small amounts of hydrogen are injected into the natural gas grid.



The benefit for the environment will be a more “green” gas mixture with fewer carbon emissions.



Up to 2% of the blended gas will be hydrogen (by volume). The blended gas would remain within pipeline specifications. There would be no changes to the reliability of the service in the blended gas areas.



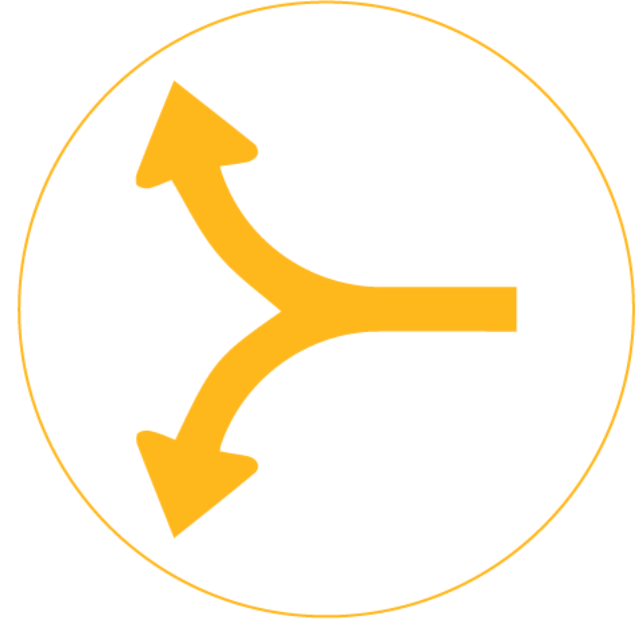
With such a small amount of hydrogen being introduced, customers should see no impact to their existing service compared to pure natural gas.

# Hydrogen Compared to Natural Gas



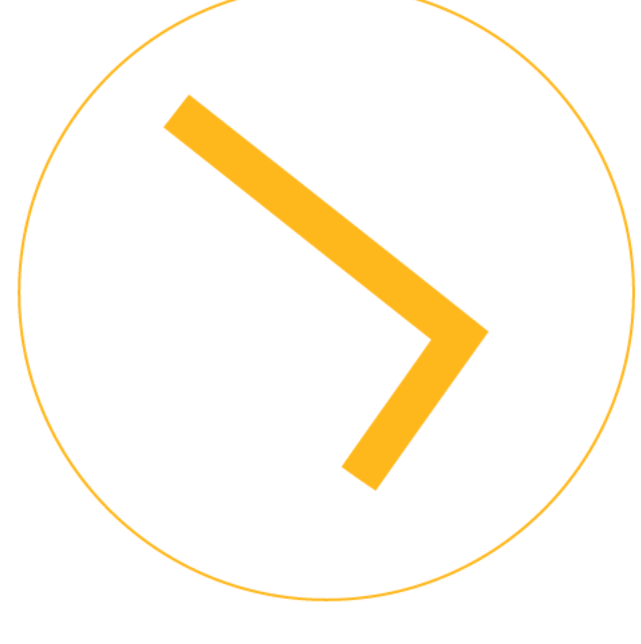
## Similar

- Both fuels are lighter than air and will rise and disperse when released into the atmosphere.
- Both fuel sources require proper handling for safe use, and are flammable and explosive under certain conditions.



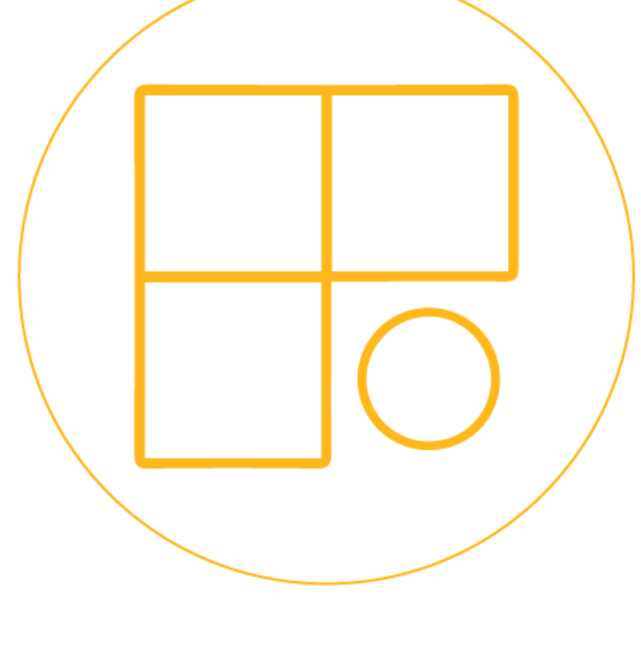
## Well-known

- Hydrogen is used today in many manufacturing processes, for example for pharmaceuticals and foods like vegetable oil.



## Advantage

- It is non-toxic and when used as a sole fuel it does not contribute to climate change.



## Difference

- The hydrogen molecule is smaller than natural gas.
- Hydrogen burns more quickly.



# Hydrogen Blending Safety

- > Safety is Enbridge's top priority and one of its core values.
- > We have applied rigorous safety standards to planning, design, development and construction.
- > As we do with natural gas, using proper safety procedures and handling is just as important with hydrogen gas.
- > This is not a new technology. Several facilities successfully operate in Europe, some for over a decade.
- > We require approval from our regulators, the Ontario Energy Board and the Technical Standards and Safety Authority, before we can move ahead with this project.
- > The smell of blended gas will maintain the distinct "rotten egg" smell like natural gas.



# How will my bill be affected?

Hydrogen has an energy content that is roughly one third that of natural gas. If hydrogen-blended gas is used in your home, you would see a slight increase in your gas usage compared to traditional natural gas on your bill. The increase is anticipated to be less than \$10 per year based on the typical gas usage of a residential home. Enbridge is currently looking at ways to acknowledge the slight increase in your annual gas consumption.

Page 1 of 3

**ENBRIDGE**  
Life Takes Energy®

**SMELL GAS? 1-866-763-5427**

Joe Customer  
123 Fairtree Lane  
Markham ON

Service Address

Account Number

Bill Date  
May 31, 2019

**WHAT DO I OWE?**  
Billing Period Apr 30, 2019 - May 29, 2019

**Total Amount \$87.97**  
(Taxes included)  
Due Date Jun 20, 2019

Charges for Natural Gas  
Charges from Other Companies

**HOW MUCH GAS DID I USE?**

Meter Reading  
Meter Number: 13555  
Estimated: 13444

You used **112m<sup>3</sup>**  
approx. 3.73m<sup>3</sup> per day

This cost you **\$56.31**  
approx. <sup>1</sup>/<sub>1.88</sub> per day

Did you know?  
Your average daily use is more this year than last year. Choose eBill to access your last 24 bills. [enbridgegas.com/eBill](#)

74m<sup>3</sup> 2018  
112m<sup>3</sup> 2019

**MY LAST 13 MONTHS GAS USE**  
(Taxes Included)

| Month  | Usage (m <sup>3</sup> ) | Cost (\$) |
|--------|-------------------------|-----------|
| May 18 | 46.16                   | \$27.01   |
| Jun 18 | 37.01                   | \$34.47   |
| Jul 18 | 34.47                   | \$23.89   |
| Aug 18 | 38.56                   | \$38.56   |
| Sep 18 | 44.03                   | \$44.03   |
| Oct 18 | 53.19                   | \$53.19   |
| Nov 18 | 80.08                   | \$80.08   |
| Dec 18 | 83.19                   | \$83.19   |
| Jan 19 | 101.04                  | \$101.04  |
| Feb 19 | 89.93                   | \$89.93   |
| Mar 19 | 88.94                   | \$88.94   |
| Apr 19 | 86.31                   | \$86.31   |
| May 19 | 112.00                  | \$112.00  |

• See page 2 for details •

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**ENBRIDGE**  
Life Takes Energy®

**SMELL GAS? 1-866-763-5427**

For Inquiries: 1-877-362-7434  
Make Payments to:  
Enbridge Gas Inc.

**enbridgegas.com**

**WHAT AM I PAYING FOR?**  
Billing Period Apr 30, 2019 - May 29, 2019

Balance from Previous Bill \$120.60

Payment Received (May 02, 2019) \$120.60\*

Balance Forward \$0.00

Charges for Natural Gas \$56.31

Charges from Other Companies \$31.66

**Total Amount Due \$87.97**

**NATURAL GAS SUPPLY**

Your gas supply rate 10.6809¢/m<sup>3</sup>  
Gas cost adjustment Apr 01/19-Mar 31/20 1.2125¢/m<sup>3</sup>  
Total effective gas supply rate 11.9034¢/m<sup>3</sup>

**CHARGES FOR NATURAL GAS**  
Apr 30, 2019 - May 29, 2019

Customer Charge \$20.00

Delivery to You \$11.46

Transportation to Enbridge \$4.70

Gas Supply Charge \$11.97

Cost Adjustment \$1.68

**Charges for Natural Gas \$49.83**\*\*

HST\* \$6.48

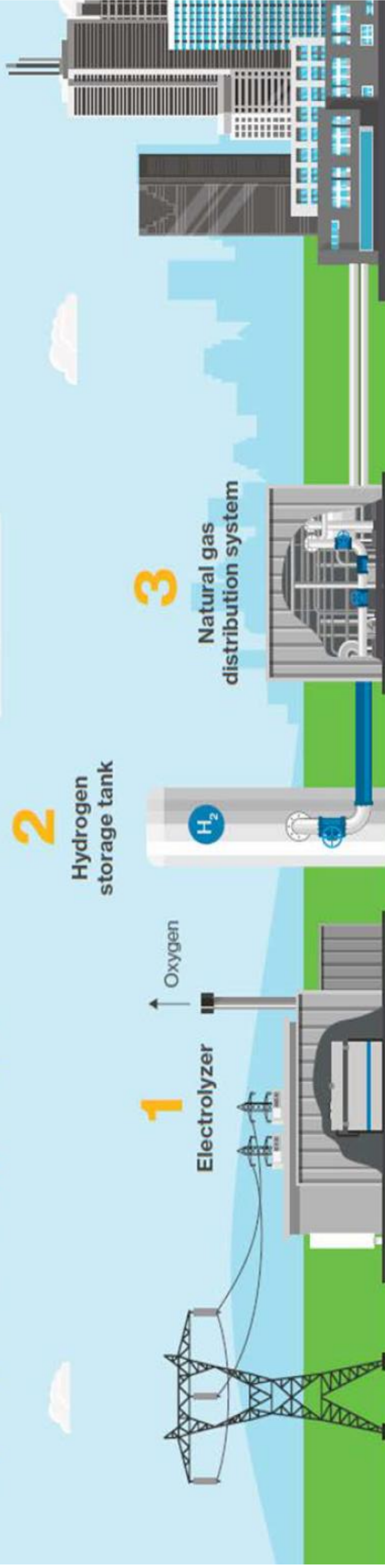
**Total Charges for Natural Gas \$56.31**



# Where does the Hydrogen Come From?

## Enbridge Invests in Power to Gas

Future State - Blending hydrogen into the natural gas distribution system to offset the carbon content of the fuel



**1** Since electricity can't be stored, when there is a surplus, an electrolyzer can take the electricity and use it to split water into hydrogen and oxygen.

**2** The hydrogen that is produced is then stored.

**3** Instead of converting the hydrogen back into electricity, the hydrogen may be blended into the natural gas distribution system at a pre-determined percentage, to reduce the carbon content of the gas.

**4** A lower carbon gas is delivered to customers.





# How Will Up to 2% Hydrogen Blending Affect My Appliances?

- > Your appliances would continue to operate as they have been.
- > Appliances would not require testing as a result of the blending project.
- > It is always recommended that customers have gas appliances inspected annually to ensure they are operating safely and efficiently.
- > Always follow manufacturer recommendations for maintenance.





# Prudence to Verify Safety



Enbridge completed a detailed engineering assessment covering many aspects of hydrogen blending including:



- > Research & Development from similar projects around the world.



- > Assessment of components within the natural gas network.
- > Assessment of end-user equipment including field survey.



- > Developing design guidelines.

- > Undertaking risk assessments.

- > In-House validation testing.



# Project Location – Phase 1

## Blended Gas Distribution Area



Hydrogen blending will be isolated to the area shown on the map. Blended gas will be added into the system from Enbridge's Markham-based Technology and Operations Centre.

## Pipeline Installation

**Phase 1:** approximately 1.3 km of pipe.

## Disconnect Locations

In order to isolate the hydrogen blended system from the rest of the Enbridge network, various disconnects will be required.







# Pipeline Design and Safety

## Pipeline Design

Our pipelines are designed to meet and/or exceed the regulations of the Canadian Standards Association (Z662 Oil and Gas Pipeline Systems) and the applicable regulations of the Technical Standards & Safety Association (TSSA).

## Pipeline Safety and Integrity

We take many steps to ensure the safe, reliable operation of our network of natural gas pipelines, such as:

- Design, construct, and test our pipelines to meet or exceed requirements set by industry standards and regulatory authorities;
- Continuously monitor the entire network; and
- Perform regular field surveys to detect leaks and confirm corrosion prevention methods are working as intended.

# Permits and Approvals

Enbridge must obtain approval from the Ontario Energy Board to move forward with construction of the pipelines required to inject hydrogen into the distribution system. In addition, other permits and approvals that may be required are:

| Agency  | Permit/Approval  |
|---|--|
| Toronto Region Conservation Authority   | Permit to work within a Conservation Authority Regulated Area  |
| Ministry of Natural Resources and Forestry and/or the Ministry of Environment, Conservation and Parks | Endangered Species Act (2007) Permit   |
| Fisheries and Oceans Canada   | Species at Risk Act (2002) Permit  |
| Ministry of Tourism, Culture and Sport  | Comment/Acceptance letter for archaeological and cultural heritage assessments   |
| Municipal Permits   | <ul style="list-style-type: none"><li>• Noise By-Law Exemption</li><li>• Road Occupancy Permit</li><li>• Permit to Injure or Destroy Trees</li></ul> |



# Continuous Stakeholder Engagement

Enbridge is committed to open dialogue throughout the Leave to Construct Application process. Stakeholders will have the opportunity to remain engaged in the process through:

- Participation in the Ontario Energy Board hearing as an intervenor or interested party.
- Access to details regarding the hearing and how to become an intervenor can be found at [www.oeb.ca/participate](http://www.oeb.ca/participate).
- Contacting Enbridge or Dillon project team members.

**Project updates can be found at the website:**

**[www.enbridgegas.com/LowCarbonEnergyProject](http://www.enbridgegas.com/LowCarbonEnergyProject)**

# Project Schedule

| CONSULTATION THROUGHOUT |   | Task   | Proposed Timing             |
|-------------------------|---|--|-----------------------------|
|                         |   | Open Houses  | March 2019                  |
|                         |   | Confirm Preferred Route                                    | March 2019                  |
|                         |   | Documentation: Environmental Report                        | May 2019                    |
|                         | <b>We are here</b>  | <b>Hydrogen Blending Information Session</b>               | July 2019                   |
|                         |   | Ontario Energy Board Submission                            | Summer 2019                 |
|                         |   | Phase 1 Construction (Tentative)*<br>*pending OEB approval | April 2020 – September 2020 |
|                         |   | Phase 2 Construction(Tentative)*<br>*pending OEB approval  | September 2020 – March 2021 |
|                         |   | Post-construction monitoring                               | 2020-2021                   |



# Stay Informed!

- Visit our project website: [enbridgegas.com/LowCarbonEnergyProject](http://enbridgegas.com/LowCarbonEnergyProject)
- Get project updates by providing us with your email or mailing address
- Sign in, **complete the questionnaire** and drop it in the box at the door or give it to one of our Project Team Members
- For comments, questions or for more information, please contact:

| Tanya Turk   |  |
|--|--|
| Senior Environmental Advisor<br>Enbridge Gas Inc.                    | Environmental Assessment Project Manager<br>Dillon Consulting Limited        |
| 416-495-3103   | 519-571-9833   |
| <a href="mailto:Tanya.Turk@enbridge.com">Tanya.Turk@enbridge.com</a> | <a href="mailto:LowCarbonEnergyEA@dillon.ca">LowCarbonEnergyEA@dillon.ca</a> |
| 101 Honda Boulevard<br>Markham, ON L6C 0M6                           | 51 Breithaupt Street, Suite 200<br>Kitchener, ON N2H 5G5                     |

| Tristan Lefler   |  |
|--|--|
| Senior Environmental Advisor<br>Enbridge Gas Inc.                    | Environmental Assessment Project Manager<br>Dillon Consulting Limited        |
| 416-495-3103   | 519-571-9833   |
| <a href="mailto:Tanya.Turk@enbridge.com">Tanya.Turk@enbridge.com</a> | <a href="mailto:LowCarbonEnergyEA@dillon.ca">LowCarbonEnergyEA@dillon.ca</a> |
| 101 Honda Boulevard<br>Markham, ON L6C 0M6                           | 51 Breithaupt Street, Suite 200<br>Kitchener, ON N2H 5G5                     |

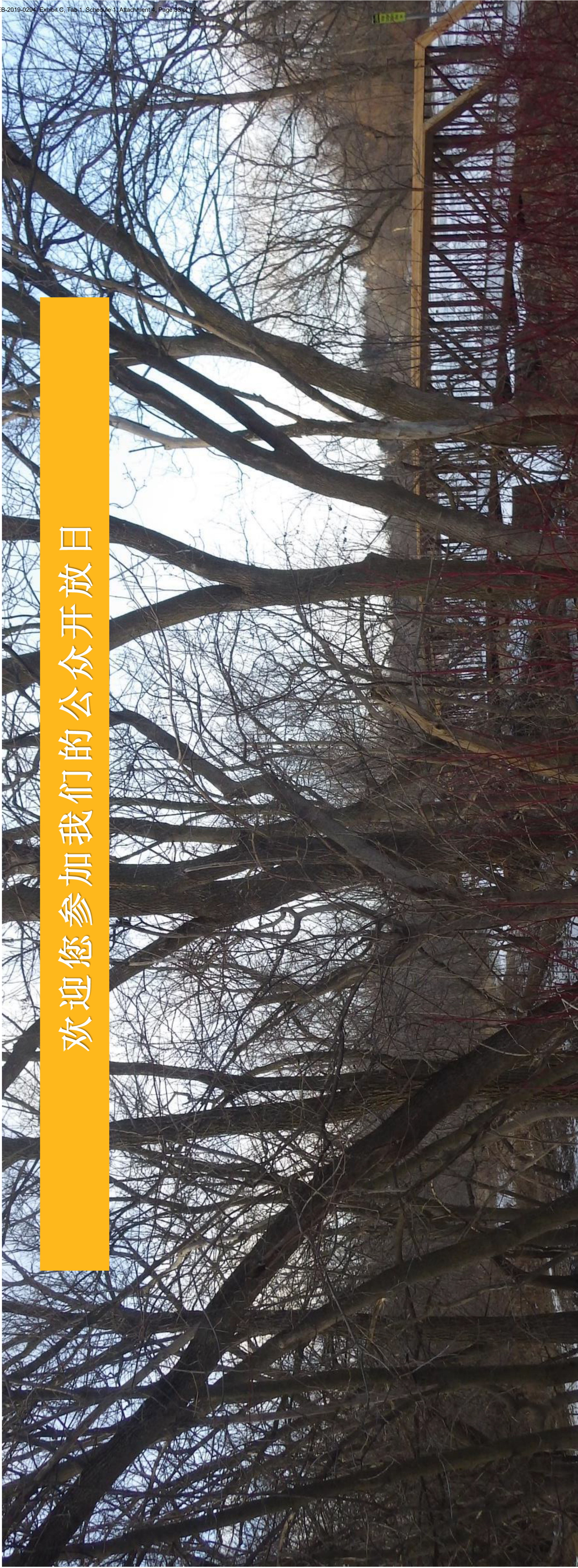
Under the *Freedom of Information and Protection of Privacy Act*, all comments and questions submitted regarding this project will be submitted as part of the LTC project that will be a part of the public record and will be made available to individuals or organizations with an interest in this project. Personal information such as name, address, and telephone number will not be included in the environmental assessment report or additional consultation reports but may be released, if requested, to any person as part of the review process.





# 低碳能源项目

欢迎您参加我们的公众开放日





# 目的

## 公司定位

Enbridge为安大略全省370多万住户、商户和工业客户，安全、可靠地输送天然气。我们致力于以负责任的方式将我们对环境的影响降至最低。

### 为什么我们在此？

- 提供低碳能源项目的信息，该项目的目标是将最多2%的氢气混入您的天然气供应中。
- 让社区、利益相关者和原住民团体参与进来，接收并考虑您的意见。
- 介绍混入氢气会如何影响我们的客户。
- 根据您的要求，提供额外的宣讲会。



请在前台签到，并通过完成问卷提供您对该项目的意见。



# 致力于磋商

我们致力于综合的磋商过程，希望听到您对该项目的看法。

## 我们的磋商做法是：

全面 - 联系所有可能有兴趣或受影响的人，提供了解和参与的机会。

透明 - 让您接触到做决策所用资料并予以清楚地解释。

负责 - 解释您的意见在做决策过程中如何使用。



作为该磋商过程的一个重要部分，我们将与所有利益相关者配合找出并解决项目问题。



# Enbridge的原住民政策

Enbridge承认原住民的多样性，他们就生活在我们工作和运营的地方。我们知道，生活在加拿大和美国的原住民的历史，对他们经济幸福、社会幸福都产生过毁灭性冲击。Enbridge认识到原住民社区与广大社会和好的重要性。基于互相尊重、以实现共同目标为重心，与原住民之间积极向上的关系会为原住民社区和Enbridge带来建设性的结果。

对于Enbridge经营业务地点附近的原住民民族和团体，Enbridge致力于追求与他们的可持续的关系。为实现此目标，Enbridge将用下述原则管理自己：

- 我们承认加拿大和美国原住民民族拥有的法律和宪法权利，我们承认原住民民族与他们的传统土地和资源间关系的重要性。我们致力于与原住民社区合作，合作方式是承认和尊重这些法律和宪法权利以及这些权利所适用的土地和资源，我们致力于确保以对环境负责的方式开展项目和运营。
- 我们认识到联合国土著人民权利宣言（UNDRIP）在现有加拿大和美国法律环境中的重要性，也认识到两国政府做出的保护原住民权利的承诺。
- 寻求与原住民实现早期和有意义的接触，这样他们的意见能帮助影响可能在原住民使用的传统土地上实施的项目。通过这样的过程，就Enbridge的项目和经营，我们与原住民直率、真诚地磋商。
- 我们致力于与原住民合作，使他们从Enbridge的项目和经营中受益，包括贸易、教育、就业、采购、生意发展和社区发展的机会。
- 我们在Enbridge员工和承包商中培养对原住民历史和文化理解，以使Enbridge和原住民社区发展更好的关系。

这种承诺是一种共享的责任，涉及Enbridge及其附属公司、员工和承包商，我们将以反映上述原则的方式做事。Enbridge将提供持续的领导力资源，确保上述原则有效地实施，包括制订实施策略和具体行动方案。

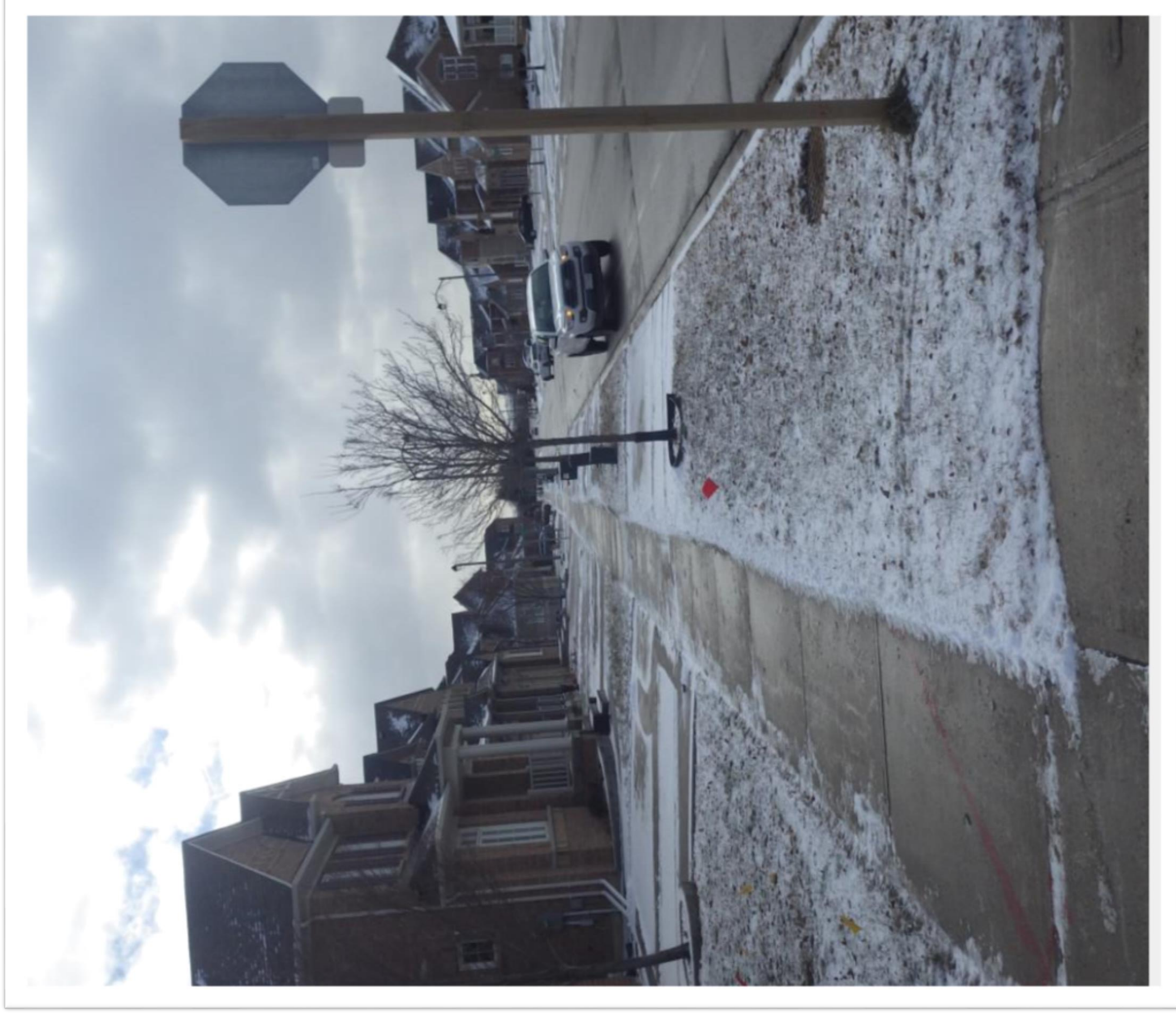
Enbridge致力于定期审核该政策，确保该政策仍有现实意义并满足不断变化的期望值。



# 项目介绍

## 提案内容

- Enbridge提案，在天然气输送网络中一个隔离的区域，混入低浓度氢气，为的是减少温室气体的排放。
- 这将需要铺设6.8公里的管道和相关基础设施。





# 氢气混合



氢气混合是将少量氢气注入天然气网。



对环境的好处是这种混合气更“绿色”，碳排放较少。



混入天然气中的氢气将最多不超过2%（以容积计）。混合后的天然气将维持在管线特性范围内，混合天然气的供气区域内的服务可靠性将不会变化。



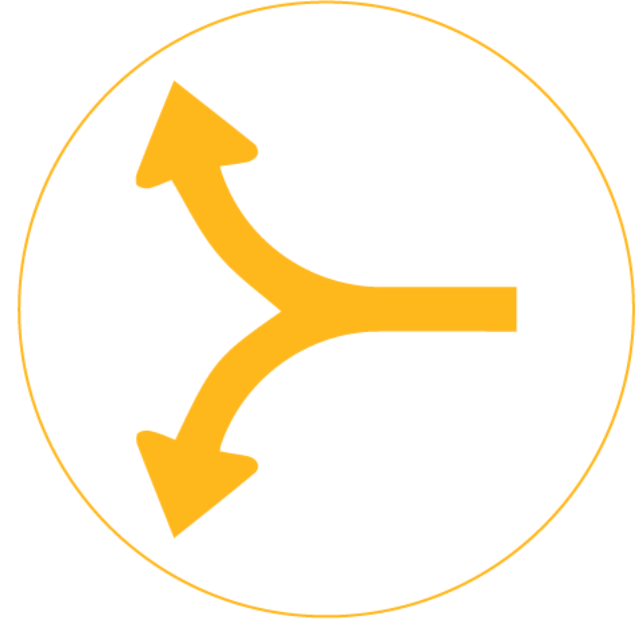
引入氢气的量那么小，与纯天然气相比，客户不会看到对现有服务有任何影响。

# 氢气与天然气对比



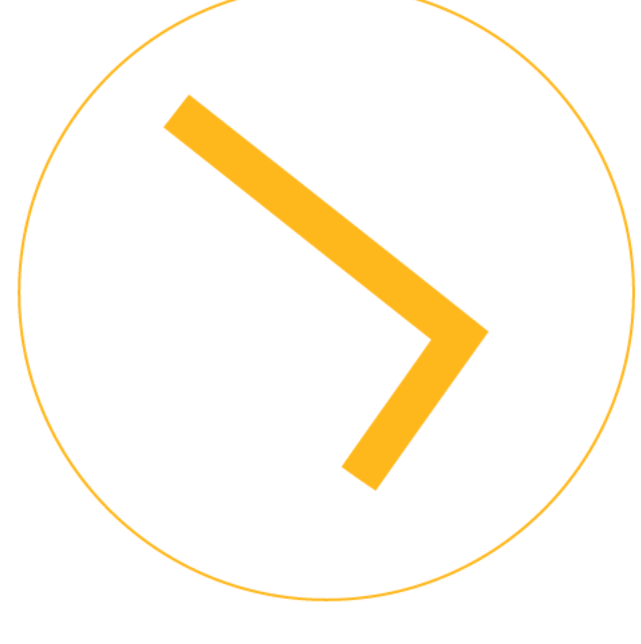
## 相似处

- 两者燃料都比空气轻，释放到大气中后都会上升并消散。
- 为实现安全使用，两种燃料都需要正确操作，都易燃且在特定条件下会爆炸。



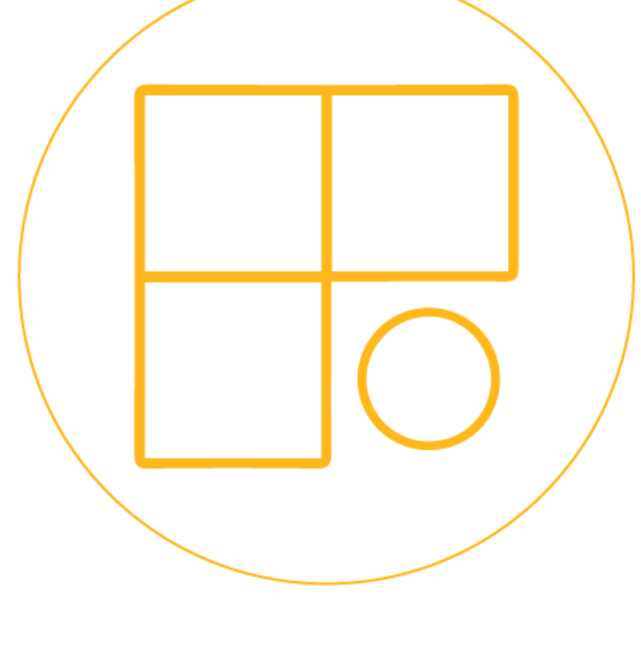
## 众所周知

- 如今，氢气用在许多制造工艺中，如医药和蔬菜油等食品。



## 优点

- 无毒，作为单独燃料使用时，不会增加气候变化。



## 不同处

- 氢分子比天然气分子小。
- 氢气燃烧更快。



# 氢气混合的安全

- > 安全是Enbridge的头等大事，也是其核心价值之一。
- > 我们在规划、设计、开发、和施工中应用严格的安全标准。
- > 正如我们对待天然气，应用正确的安全程序和操作，对于氢气同样重要。
- > 这不是新技术。许多企业在欧洲成功运行，有的已经超过十年。
- > 在我们能够推进该项目之前，需要获得监管机构——安大略省能源局、技术标准和安全管理局的批准。
- > 混合气的气味仍然是明显的“臭鸡蛋”味，像天然气一样。



# 您的账单将会受怎样影响？

氢气的热能含量是天然气的大约1/3。如果您家使用氢气混合的天然气，与传输天然气相比，您会看到在账单上您用的天然气量会稍微增加一些。以一户典型的天然气的住宅用户计，预计一年增加的费用将在10加元以下。Enbridge目前正在研究如何确认您每年略有增加的天然气消耗量。

Page 1 of 3

**ENBRIDGE**  
Life Takes Energy®

**SMELL GAS? 1-866-763-5427**

Joe Customer  
123 Fairtree Lane  
Markham ON

Service Address  
Account Number

Bill Date  
May 31, 2019

**WHAT DO I OWE?**  
Billing Period Apr 30, 2019 - May 29, 2019

**Total Amount \$87.97**  
(Taxes included)  
Due Date Jun 20, 2019

Charges for Natural Gas  
Charges from Other Companies

**HOW MUCH GAS DID I USE?**

Meter Reading  
Meter Number: 13555  
Estimated: 13444

You used **112m<sup>3</sup>**  
approx. 3.73m<sup>3</sup> per day

This cost you **\$56.31**  
approx. <sup>1</sup>/<sub>1.88</sub> per day

Did you know?  
Your average daily use is more this year than last year. Choose eBill to access your last 24 bills. [enbridgegas.com/eBill](#)

74m<sup>3</sup> 2018  
112m<sup>3</sup> 2019

**MY LAST 13 MONTHS GAS USE**  
(Taxes Included)

| Month  | Amount   |
|--------|----------|
| May 18 | \$46.16  |
| Jun 18 | \$37.01  |
| Jul 18 | \$34.47  |
| Aug 18 | \$23.89  |
| Sep 18 | \$38.56  |
| Oct 18 | \$44.03  |
| Nov 18 | \$80.08  |
| Dec 18 | \$53.19  |
| Jan 19 | \$101.04 |
| Feb 19 | \$89.93  |
| Mar 19 | \$68.94  |
| Apr 19 | \$56.31  |
| May 19 | \$110.97 |

Page 2 of 3

**ENBRIDGE**  
Life Takes Energy®

**SMELL GAS? 1-866-763-5427**

For Inquiries: 1-877-362-7434  
Make Payments to:  
Enbridge Gas Inc.

**enbridgegas.com**

**WHAT AM I PAYING FOR?**  
Billing Period Apr 30, 2019 - May 29, 2019

Balance from Previous Bill \$120.60

Payment Received (May 02, 2019) \$120.60\*

Balance Forward \$0.00

Charges for Natural Gas \$56.31

Charges from Other Companies \$31.66

**Total Amount Due \$87.97**

**NATURAL GAS SUPPLY**

Your gas supply rate 10.6809¢/m<sup>3</sup>  
Gas cost adjustment Apr 01/19-Mar 31/20 1.2125¢/m<sup>3</sup>  
Total effective gas supply rate 11.9034¢/m<sup>3</sup>

**CHARGES FOR NATURAL GAS**  
Apr 30, 2019 - May 29, 2019

Customer Charge \$20.00

Delivery to You \$11.46

Transportation to Enbridge \$4.70

Gas Supply Charge \$11.97

Cost Adjustment \$1.68

**Charges for Natural Gas \$49.83**\*\*  
HST\* \$6.48

**Total Charges for Natural Gas \$56.31**



# 氢气来自哪里？

## Enbridge Invests in Power to Gas

Future State - Blending hydrogen into the natural gas distribution system to offset the carbon content of the fuel

## Enbridge 投资电力到天然气

未来状态——将氢气混合入天然气配送系统中以消减燃料中的碳含量

2  
Hydrogen storage tank  
氢气储存罐

1  
Electrolyzer  
电解槽

3  
Natural gas distribution system  
天然气配送系统

1 Since electricity can't be stored, when there is a surplus, an electrolyzer can take the electricity and use it to split water into hydrogen and oxygen.

因为电力无法储存，多余的电力可用于将水电解成氢气和氧气。

2 The hydrogen that is produced is then stored.

电解生成的氢气将会储存起来。

3 Instead of converting the hydrogen back into electricity, the hydrogen may be blended into the natural gas distribution system at a pre-determined percentage, to reduce the carbon content of the gas.

将储存的氢气按事先设定的百分比注入天然气配送系统中。

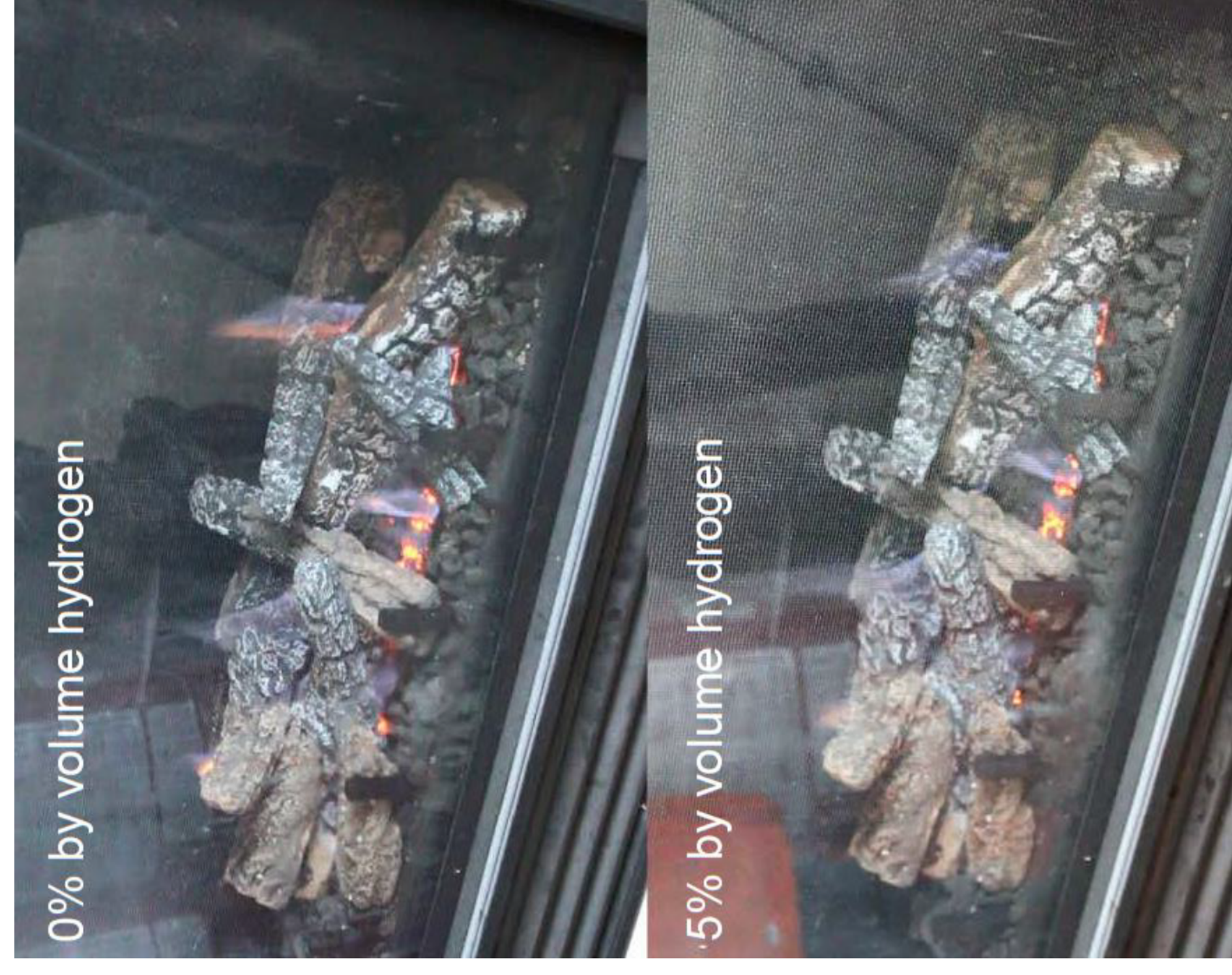
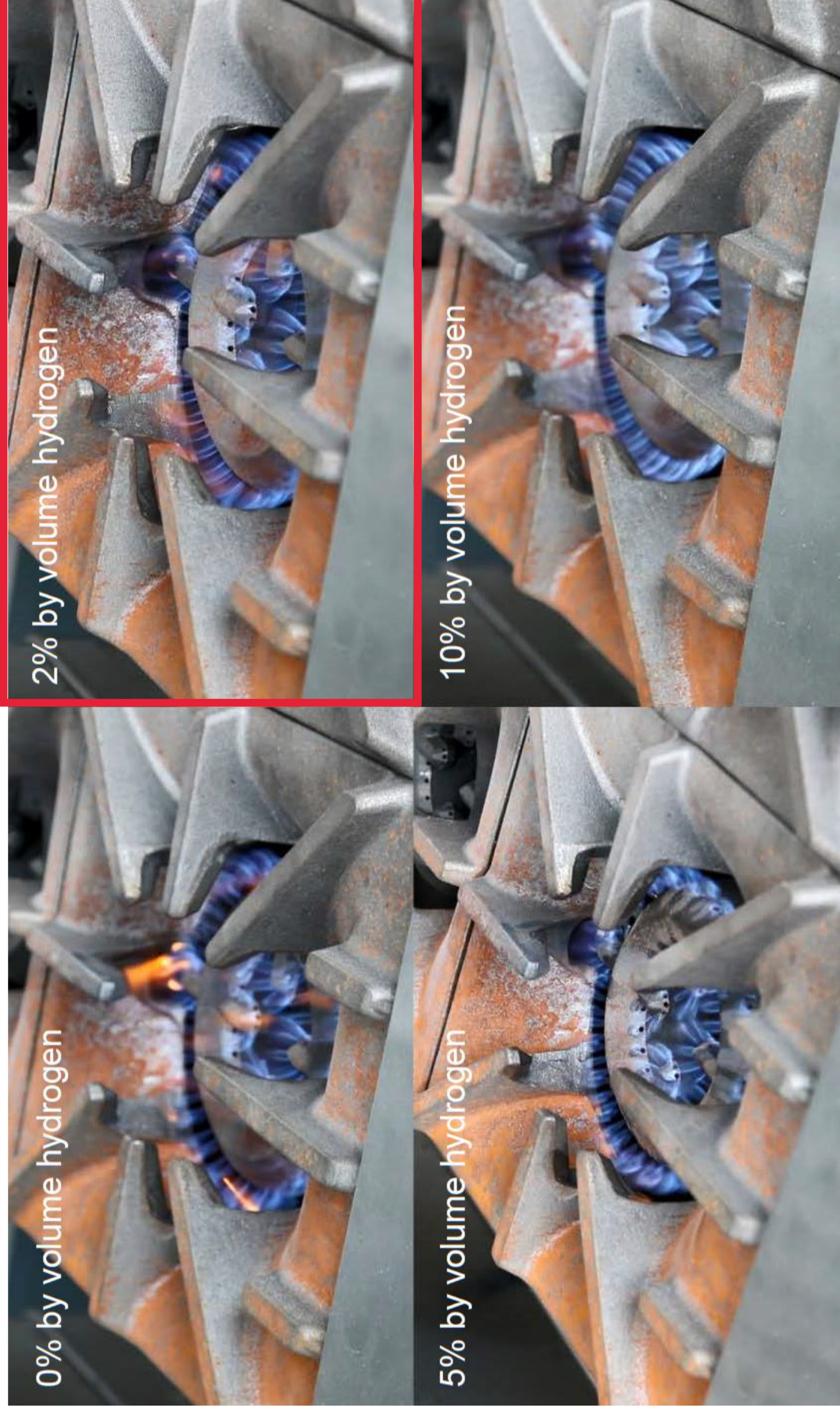
4 A lower carbon gas is delivered to customers.

含碳较低的天燃气输送给用户。



# 混合不超过2%的氢气将如何影响我的家用设备？

- 您的设备会继续向以往一样使用。
- 设备不会因该气体混合项目而需测试。
- 始终建议顾客对其天然气设备进行年检以确保其安全且高效运转。
- 始终遵从厂家的保养建议





# 审慎的安全验证



Enbridge完成了详细的工程评估，覆盖氢气混合的许多方面，包括：



- 来自世界各地类似项目的研发
- 对天然气网络内各环节的评估
- 终端用户设备评估，包括现场调查
- 制订设计指南
- 实施风险评估
- 内部验证测试









# 项目位置 - 第二期

## 混合气配送区域

氢气混合将局限于图示区域。

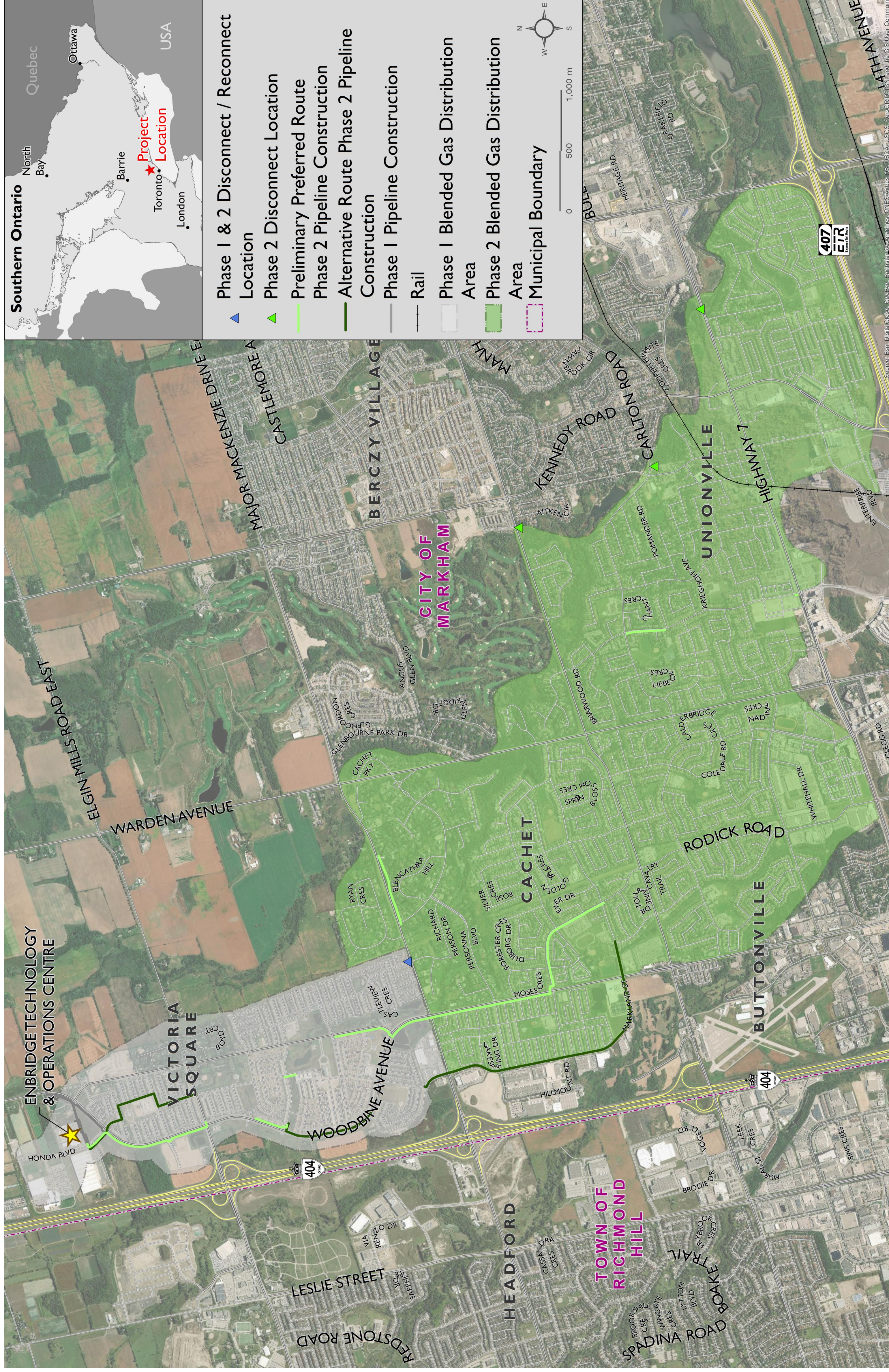
混合气将在Enbridge于万锦市的技术和运营中心加入系统中。

## 管道铺设

第一期：多个位置不同管径的管道约5.5公里。

## 切断位置

为将该氢气混合系统自Enbridge的系统中分离，需要在多个地点切断。





# 管道设计和安全

## 管道设计

我们的管道设计要达到或超过加拿大标准协会的规定（Z662石油天然气管道系统）以及技术标准和安全协会（TSSA）的适用规定。

## 管道安全与健全

我们采取许多措施确保我们的天然气管道网络安全、可靠地运行，例如：

- 设计、施工、测试我们的管道，以达到或超过行业标准和监管机构设定的要求；
- 持续监测整个网络；
- 定期实施实地检测，以及时发现泄漏点并确认防腐方法起到预期作用。



# 许可与批准

需要管道将氢气注入输送系统，为铺设相应的管道，Enbridge必须获得安省能源局的批准。此外，其它可能需要的许可和批准有：

## 机关

## 许可/批文

多伦多地区保护局 (TRCA)

许可在保护局监管区域内工作

自然资源和林业厅和/或环境、保护和公园厅

濒于灭绝物种法 (2007) 许可证

加拿大渔业及海洋部

濒危物种法 (2002) 许可证

旅游、文化与体育厅

考古和文化遗产评估的评论/接受函

市政许可证

- 噪音条例豁免
- 道路占用许可证
- 伤害或销毁树木许可证



# 利益相关者的持续参与

在整个《施工批准》申请过程中，Enbridge致力于开放对话。利益相关者将有机会通过以下方式保持参与：

- 以介入者或相关方的身份参加安省能源局的听证
- 听证详情以及如何成为介入者，可以在[www.oeb.ca/participate](http://www.oeb.ca/participate)找到
- 与Enbridge或Dillon项目组成员联系

项目最新进展可在如下网站找到：

[www.enbridgegas.com/LowCarbonEnergyProject](http://www.enbridgegas.com/LowCarbonEnergyProject)



# 环境评估过程和项目日程

| 任务   | 建议的时间             |
|--|-------------------|
| 公众开放日  | 2019年3月           |
| 确认首选路线   | 2019年3月           |
| 形成文件：环境报告  | 2019年5月           |
| <p style="color: red; text-align: center;">我们现在在此</p> <p style="text-align: center;"></p> <p style="text-align: center;"><b>氢气混合信息披露会议</b></p> | 2019年7月           |
| 提交给安大略能源局  | 2019年夏            |
| <p>第一期施工（暂定）*</p> <p>*取决于安大略能源局批文</p>  | 2020年4月 – 2020年9月 |
| <p>第二期施工（暂定）*</p> <p>*取决于安大略能源局批文</p>  | 2020年9月 – 2021年3月 |
| 施工后监测  | 2020年 – 2021年     |



# 保持消息灵通！

- 浏览我们的项目网站：[enbridgegas.com/LowCarbonEnergyProject](http://enbridgegas.com/LowCarbonEnergyProject)
- 给我们提供您的邮件地址或通讯地址获得项目最新消息
- 签到，完成问卷调查并将其投入门口的盒子中，或交给我们的项目组成员
- 若提交评论、疑问或获得更多资料，请联系：

## Tanya Turk

高级环境顾问  
Enbridge Gas In.

416-495-3103

[Tanya.Turk@enbridge.com](mailto:Tanya.Turk@enbridge.com)

101 Honda Boulevard  
Markham, ON L6C 0M6

## Tristan Lefler

环境评估项目经理  
Dillon Consulting Limited

519-571-9833

[LowCarbonEnergyEA@dillon.ca](mailto:LowCarbonEnergyEA@dillon.ca)

51 Breithaupt Street, Suite 200  
Kitchener, ON N2H 5G5

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## **Appendix D**

### ***Frequently Asked Questions Handout***



**ENBRIDGE LOW-CARBON ENERGY PROJECT  
TOP TEN FREQUENTLY ASKED QUESTIONS  
JULY 9, 2019**

**1. Why is Enbridge doing this?**

Ontario is seeking lower-carbon, sustainable energy solutions, like hydrogen and renewable natural gas made from organic waste. At Enbridge, we believe all forms of energy can play a role in Ontario's shift to a low-carbon economy. Hydrogen is a zero-carbon fuel. With our long-term commitment to "green the grid," we've initiated this project to add to our green, renewable energy portfolio, while continuing to meet the demand for safe, reliable and affordable energy.

**2. Why did you choose this area to implement hydrogen blending?**

Enbridge is currently operating a Power to Gas energy storage facility using hydrogen at our 101 Honda Boulevard facility in Markham. The areas immediately adjacent to the hydrogen production facility were selected as the most suitable candidates. The customers in this area are residential and commercial with no industrial customers.

**3. Will this impact my appliances?**

We have completed a compatibility study on appliances in the blended gas distribution area. Based on the results, your appliances would continue to operate as they have been. Customers should always follow manufacturer recommendations for maintenance.

During the study, we looked at the gas interchangeability to confirm that the combustion parameters remain within the range of our gas specifications based on our historical gas distribution values for the past 12 years. To add an additional layer of confidence, we also completed a survey of appliances in this area, combined with a review of the appropriate codes and standards, to ensure compatibility with hydrogen concentrations of up to 2% by volume.

**4. How will my natural gas bill be affected by having blended gas?**

Hydrogen has an energy content that is roughly 1/3 of natural gas. If hydrogen-blended gas is used in your home, you would see a slight increase in your gas usage compared to traditional natural gas on your bill. The increase is anticipated to be less than \$10 per year based on the typical gas usage of a residential home. Enbridge is currently looking at ways to acknowledge the slight increase in your annual gas consumption.

**5. How much hydrogen will be blended with natural gas?**

Up to 2% of the blended gas would be hydrogen (by volume).

**6. Is Enbridge planning to increase the hydrogen volume at a later date?**

No current tangible plans exist to increase beyond 2%. Enbridge is regulated by the Ontario Energy Board, and any increase in the hydrogen volume would require additional public consultation and Ontario Energy Board approval.



**7. Has hydrogen blending been implemented before or are we the first?**

Several hydrogen blending projects are currently operating in Europe. This is the first utility-scale project in North America. Enbridge's Engineering department researched, analyzed, and tested the technical feasibility and safety of hydrogen blending for this proposed project.

**8. What percentage of hydrogen are they blending in Europe?**

Currently, some areas in Europe are blending up to 10% hydrogen.

**9. Is hydrogen safe?**

Yes. As with every combustible fuel (including natural gas), proper safety procedures and handling is required. Safety is Enbridge's top priority and one of its core values. Enbridge Gas operates over 147,000 km of pipeline infrastructure, and we safely and reliably maintain it just like you would care for any of your important assets.

**10. Will the project affect the water resources, wildlife species and/or natural habitats?**

By installing the pipeline in existing road rights-of-way, most natural areas are avoided. Further, mitigation measures will be implemented during construction to minimize any impacts to natural features, including watercourses, wetlands, and wildlife habitat. With the implementation of mitigation measures, any impacts are anticipated to be short-term and temporary.

*All questions and comments received by April 30, 2019 regarding the Enbridge Low-Carbon Energy Project have been logged in summary form in the Environmental Report. Enbridge will continue to review and respond to questions and comments from the public after the Leave-to-Construct application is filed with the Ontario Energy Board.*



## ENBRIDGE 低碳能源项目

### 十大常见问题

2019年7月9日

#### 1. Enbridge为什么做这件事？

安省寻求低碳、可持续的能源解决方案，如氢气和用有机废物制造的可再生天然气。在Enbridge，我们相信，在安省向低碳经济转向的过程中，所有形式的能源均能发挥作用。氢气是一种零碳能源。因为我们长期承诺“绿化天然气网”，所以我们启动了该项目，为我们的绿色、可再生能源大集体再添一员，同时继续满足对安全、可靠和可负担能源的需求。

#### 2. 你们为什么选择这个区域实施氢气混入？

在万锦市Honda大道101号，Enbridge经营一个电制气中心，用氢气储能。紧邻该氢气生产中心的区域被选择为最适合的对象。这个区域的客户有居民、商业，但没有工业客户。

#### 3. 这会影响我的器具吗？

在混合气体输送区域，我们已完成器具兼容性研究。根据研究结果，您的器具将向以往一样正常使用。客户始终应遵从厂家的保养建议。

研究过程中，根据过去12年我们的历史性气体输送数值，我们探讨了气体互换性，以确认燃烧参数仍在我们的气体规格范围内。为再加一层信心，我们也完成了这个地区器具的调查，外加查阅相关规范和标准，以确保与体积上最多2%氢气浓度的兼容性。

#### 4. 使用混合气会如何影响我的账单？

氢气的能源含量约为天然气的1/3。如果您家使用混合了氢气的天然气，您会看到在账单上您用的天然气量，与传统天然气相比，会稍微增加一些。根据居民家庭典型的天然气使用情况，预计一年增加不到10加元。Enbridge目前正在考虑方法，认可您每年天然气用量的少量增加。

#### 5. 会有多少氢气混入天然气？

混合气体中最多2%为氢气（按体积）。

#### 6. Enbridge打算日后增加氢气体积吗？

现在没有任何实实在在的计划要增加其体积到2%以上。Enbridge由安省能源局管理，氢气体积的增加需要额外公众咨询和安省能源局批准。



7. **氢气混合以前已经实施过吗，还是我们是首例？**

目前欧洲有多个氢气混合项目在运营中。在北美，这是第一个市政规模的项目。Enbridge的工程部为这个提案项目在氢气混合的技术可行性和安全性方面进行了调研、分析和测试。

8. **在欧洲，氢气混合的百分比是多少？**

目前在欧洲某些区域，氢气混合最多为10%。

9. **氢气安全吗？**

安全。与各种可燃燃料（包括天然气）一样，需要恰当的安全程序和操控。安全是Enbridge的头等大事和核心价值。Enbridge Gas经营147,000多公里的管道基础设施，我们对其进行安全、可靠地管理，就像您爱护您重要的财产一样。

10. **该项目会影响水资源、野生物种和/或天然栖息地吗？**

通过在现有道路铺设管道，多数天然区域得以避免。再者，在施工过程中会采取缓解对策，以最大程度减少对自然地貌的影响，包括水资源、湿地、和野生动物栖息地。通过实施缓解对策，预计任何影响都将是短期的、临时的。

在2019年4月30日之前收到的、关于Enbridge低碳能源项目的所有提问和评论，都已以汇总形式记载于《环境报告》中。在向安省能源局提交《施工批准》申请后，Enbridge会继续研读来自公众的提问和评论并做出回应。



## **Appendix E**

### ***Updated Consultation Logs***



| Public Correspondence  |            |  |                         |  |                    |
|------------------------|------------|--|-------------------------|--|--------------------|
| Date of Contact (2019) | Name       | Comment  | Date of Response (2019) | Response and Issue Resolution (if applicable)  | Follow-Up Required |
| March 19               | [REDACTED] | Resident in the blended area was concerned about the effects of blended gas on appliances.   | March 19                | Enbridge representative confirmed 2% of hydrogen is not anticipated to have any impact on appliances provided the manufacturer specifications are followed.  | N                  |
| March 19               | [REDACTED] | Resident requested additional information on the Project at an open house.   | March 19                | Enbridge representative provided link to additional information as requested.  | N                  |
| April 23               | [REDACTED] | Resident asked various follow-up questions on greenhouse gas calculations, hydrogen safety, impact to stakeholders, leaks, and appliance damage.   | April 24                | Dillon representative responded to Resident with deadline for public input to be incorporated into the Environmental Report and acknowledged receipt of Resident's questions from April 23.  | N                  |
|                        |            |  | June 17                 | Resident sent follow-up email asking when the Environmental Report would be completed and how to receive a copy of the report. Resident also asked when responses to his April 23 questions would be provided.   | N                  |
|                        |            |  | June 17                 | Enbridge representative responded with a link to the Environmental Report on the project website and indicated that responses to the Resident's questions would be ready soon.   | N                  |
| July 9                 | [REDACTED] | Resident asked if the July 9 public information session would include information not already provided in the previous Open Houses conducted in March. Resident indicated he received responses from Enbridge on June 28 to the questions he had asked in April and had additional follow-up questions to send along. Resident also wanted to confirm that public comments were still being accepted until August 9. | June 28                 | Enbridge representative provided responses to Resident's questions from April 23.  | N                  |
|                        |            |  | July 10                 | Enbridge representative apologized for late reply and indicated that the July 9 session included largely the same information as the previous Open Houses. Enbridge representative told Resident to send any additional questions when ready and stated that feedback would be accepted for the next 30 days for inclusion in a supplemental report, noting that any feedback received after that time would be welcome but would not inform the report. | N                  |



| Public Correspondence  |            |  |                         |   |                    |
|------------------------|------------|--|-------------------------|---|--------------------|
| Date of Contact (2019) | Name       | Comment  | Date of Response (2019) | Response and Issue Resolution (if applicable)   | Follow-Up Required |
|                        |            |  | August 9                | Resident sent in additional follow-up questions related to the responses that Enbridge provided on June 28.   | N                  |
| See above              | ██████████ | See above  | August 12               | Enbridge representative responded and acknowledged receipt of the Resident's questions, thanking him for his interest in the project. Enbridge representative informed Resident that a response to the follow-up questions in his August 9 email would be provided in September.  | N                  |
|                        |            |  | Sept 23                 | Enbridge representative followed up with responses to the questions posed in Resident's August 9 email.   | N                  |
| March 15               | ██████████ | Resident in the blended area inquired if the volatile nature of hydrogen gas was the reason for new gas pipe installation; where the new pipeline would be installed; and if hydrogen would affect older gas appliances. | March 18                | Enbridge representative indicated the additional pipeline will be installed below grade and will be required to support the hydrogen blending area and would remain separate from the natural gas network. It was also noted there are no anticipated appliance malfunctions since the combustion characteristics will remain the same. | N                  |
|                        |            |  | March 18                | Resident raised concerns over the location of the new pipe installation.  | N                  |
|                        |            |  | March 20                | Enbridge representative confirmed they are in the design phase and are currently identifying the preferred location for the pipeline. A link to the open house storyboards was also provided.   | N                  |



| Public Correspondence  |            |   |                         |  |                    |
|------------------------|------------|---|-------------------------|--|--------------------|
| Date of Contact (2019) | Name       | Comment   | Date of Response (2019) | Response and Issue Resolution (if applicable)  | Follow-Up Required |
| March 15               | [REDACTED] | Resident was concerned over the amount of water vapour produced when hydrogen combines with oxygen and if this differs significantly from the water vapour produced during the natural gas combustion process. Resident was also concerned about the potential impact of additional water vapour on appliances, specifically a furnace. | March 18                | Enbridge representative responded indicating that the amount of water vapour produced will increase but the amount is not significant at up to 2% hydrogen blending. Natural gas appliances are already built with corrosion resistant materials and the introduction of small amounts of hydrogen is not anticipated to have a negative effect on appliances. | N                  |
| March 15               | [REDACTED] | Resident in the blended area requested information on the hydrogen blending percentage, impact on Volatile Organic Compounds (VOCs), and impacts on appliances.   | March 15                | Enbridge representative indicated no impact to natural gas appliances is anticipated, since the gas combustion characteristics will remain the same with an up to 2% hydrogen blending rate. Enbridge requested to follow-up with the Resident regarding their VOC question.   | N                  |
| March 15               | [REDACTED] |   | March 15                | Resident responded indicating he was not concerned with VOC emissions since the hydrogen blending rate is only up to 2%.   | N                  |
| March 19               | [REDACTED] | Resident raised questions via telephone regarding the open house format, the open house materials, comment tracking, the purpose of the Project and where to find additional information.   | March 18                | Enbridge representative indicated that VOCs are carbon-based chemicals and the blending of hydrogen is not anticipated to increase VOC emissions.  | N                  |
| March 19               | [REDACTED] | Resident raised questions via telephone regarding the open house format, the open house materials, comment tracking, the purpose of the Project and where to find additional information.   | March 19                | Enbridge representative answered Resident questions via telephone regarding the format of the open house, the open house materials, the amount of hydrogen to be blended, how comments will be tracked, the purpose of the Project, and where to find additional information.  | N                  |
| March 22               | [REDACTED] | Resident raised questions via telephone regarding the open house format and the impact of the Project on existing and new appliances.   | March 22                | Enbridge representative answered Resident questions via telephone regarding the open house format and the anticipated impact on both existing and new natural gas appliances.  | N                  |



| Public Correspondence  |            |  |                         |  |                    |
|------------------------|------------|--|-------------------------|--|--------------------|
| Date of Contact (2019) | Name       | Comment  | Date of Response (2019) | Response and Issue Resolution (if applicable)  | Follow-Up Required |
| March 26               | [REDACTED] | Resident raised issues via telephone including: his concerns regarding limited notification time prior to the open houses, vague information provided in the notification materials regarding hydrogen blending volume, impacts of hydrogen on pipe integrity, the increased volatility of hydrogen, and the impact of hydrogen on appliances. | March 26                | Dillon representative spoke with Resident via telephone and followed up with an email noting and responding to his concerns.   | N                  |
| April 17               | [REDACTED] | Resident inquired about hydrogen safety and risk of explosion/back-feeding into the pipeline.  | April 17                | Enbridge representative provided details on hydrogen flammability at up to 2% blending and information on back-feeding.  | N                  |
| April 3                | [REDACTED] | Resident asked various questions regarding hydrogen blending volume, service disruption, impact to local fire services, past hydrogen blending projects, and benefit to homeowners.  | April 24                | Dillon representative provided responses to questions.   | N                  |
| April 3                | [REDACTED] | Resident asked various questions regarding the planned hydrogen blending volume, comparative energy consumption, and whether the cost of blended gas will be lower for consumers.  | April 8                 | Enbridge representative informed the Resident that answers to their questions are being developed and will be provided in the near future. Representative provided the Project website link for further information. | N                  |
| Mar 25                 | [REDACTED] | Resident asked various questions including whether there is a previous example of this kind of project in Ontario, implications to the Resident's gas bill, compatibility with appliances, and pipeline safety and leaks.  | April 25                | Dillon representative provided responses to the Resident's questions.  | N                  |
|                        |            |  | Mar 25                  | Enbridge representative informed the Resident that answers to their questions are being developed and will be provided in the near future. Representative provided the Project website link for further information. | N                  |
|                        |            |  | April 18                | Dillon representative provided responses to the Resident's questions.  | N                  |
|                        |            |  | April 23                | Resident thanked the Enbridge representative for the responses and requested the engineering assessment for the Project.   | N                  |



| Public Correspondence  |      |   |                         |  |                    |
|------------------------|------|---|-------------------------|--|--------------------|
| Date of Contact (2019) | Name | Comment   | Date of Response (2019) | Response and Issue Resolution (if applicable)  | Follow-Up Required |
| See above              | █    | See above   | April 30                | Enbridge representative responded that the engineering assessment is not currently available but will be made available when Enbridge applies to the OEB.  | N                  |
|                        |      |   | May 1                   | Resident thanked Enbridge representative for the response.   | N                  |
|                        |      |   | April 9                 | Enbridge representative reached out to Resident to acknowledge receipt of his questions from the public meetings and offered to provide more information at his request.   | N                  |
|                        |      | Resident provided a list of questions at the public Open Houses to Enbridge and Dillon representatives. Resident asked various questions including whether the hydrogen blended gas is environmentally friendly, costs for implementing the change and any additional costs that may be borne by customers, project notification methods and community involvement process, examples where this kind of gas blend has been used previously, safety risks, effects on home insurance premiums, and compatibility with existing appliances. | April 10                | Resident responded to Enbridge representative stating that he had left a list of questions with a representative at the public meetings and was awaiting a response to those questions.  | N                  |
| March 19               | █    |   | April 11                | Enbridge representative responded to Resident that they were working through his questions and requested his patience as they respond to a high volume of inquiries.   | N                  |
|                        |      |   | May 13                  | Resident followed up with Enbridge representative stating they have not yet heard back on their list of questions from April and are still awaiting a response. They indicated concern that the OEB application would be filed prior to resolving public concerns. | N                  |
|                        |      |   | May 22                  | Enbridge representative responded that they would have responses to the Resident's questions very soon and apologized for the delay. They indicated that the OEB application had not yet been filed.   | N                  |



| Public Correspondence  |      |   |                         |   |                    |
|------------------------|------|---|-------------------------|---|--------------------|
| Date of Contact (2019) | Name | Comment   | Date of Response (2019) | Response and Issue Resolution (if applicable)   | Follow-Up Required |
| See above              | █    | See above   | May 23                  | Enbridge representative sent an email to the Resident with answers to his questions and provided instructions on how to access the Environmental Report, once it is filed, and stay updated on the OEB application through the OEB website.   | N                  |
|                        |      |   | July 22                 | Dillon representative emailed Resident regarding a follow-up question he left with an Enbridge representative at the July 9, 2019 information session. Dillon representative invited Resident to get in touch if he had any further questions or comments.  | N                  |
| May 31                 | █    | Local business owner expressed curiosity in the project, asked about the amount of hydrogen to be generated, what would be done with the oxygen, and wanted more information to inform potential synergies with their own business plans. | June 3                  | Enbridge representative responded to the questions and directed the business owner to review information on the project website and provided a link. Enbridge representative informed the business owner that they would be added to the contact list for future updates and forwarded their email to Enbridge's Business Development Team. | N                  |
|                        |      |   | May 13                  | Enbridge representative called the Resident and left a voicemail.   | N                  |
| March 23               | █    | Resident left a question at the second Open House asking how customers' bills would be offset to account for increase in consumption due to the blended gas mixture. Resident requested they be contacted by telephone with a response.   | May 17                  | Enbridge representative called and spoke with the Resident and advised that they are looking at ways to acknowledge the slight increase in the annual bills and would communicate back to customers once an approach was determined. Resident indicated satisfaction with Enbridge representative's response.                               | N                  |



| Public Correspondence  |            |  |                         |   |                    |
|------------------------|------------|--|-------------------------|---|--------------------|
| Date of Contact (2019) | Name       | Comment  | Date of Response (2019) | Response and Issue Resolution (if applicable)   | Follow-Up Required |
| June 25                | [REDACTED] | Resident expressed concern about impacts to his gas appliances.  | Sep 18                  | Dillon representative indicated that engineering and feasibility studies were conducted to ensure that the blended gas mixture would not impact the operation of natural gas appliances.  | N                  |
| May 1                  | [REDACTED] | Resident's submitted a mail-in questionnaire requesting information on: how the preferred and alternative routes were determined, the timeframe and budget for the project, how blending hydrogen will effectively lower the carbon footprint, and what previous studies have been done regarding hydrogen blending. | June 28                 | Enbridge representative responded to Residents' questions.  | N                  |
| June 28                | [REDACTED] | Resident emailed questions regarding how much hydrogen (%) would be added to the natural gas and effects on cost, as well as effects to appliances due to condensation from burning the new hydrogen mixture.  | July 22                 | Dillon representative responded to Resident's questions indicating that the amount of hydrogen in the blended gas mixture would be up to 2% by volume and that Enbridge is looking at ways to account for the slight increase in consumption. As well, Dillon representative indicated that engineering and feasibility studies were conducted to ensure that the blended gas mixture would not impact the operation of natural gas appliances. | N                  |
| July 3                 | [REDACTED] | Resident asked if project would affect their neighbourhood on Raintree Drive in Markham and asked about the July 9 public information session.   | July 11                 | Dillon representative responded to Resident stating that Raintree Drive would be included in Phase 2 of the project and provided tentative construction timing, as well as a link to the project website for further information.   | N                  |
| July 16                | [REDACTED] | Researcher at an ironmaking business in Hamilton expressed interest in Enbridge's work with hydrogen and requested to speak with someone regarding potential opportunities to collaborate.   | July 18                 | Enbridge representative responded that the email was forwarded to Enbridge's Business Development Team and that someone would be in touch. Enbridge representative also provided links to the project website for further information.  | N                  |



| Public Correspondence  |            |   |                         |  |                    |
|------------------------|------------|---|-------------------------|--|--------------------|
| Date of Contact (2019) | Name       | Comment   | Date of Response (2019) | Response and Issue Resolution (if applicable)  | Follow-Up Required |
| See above              | [REDACTED] | See above   | July 24                 | Enbridge representatives from the Business Development Team called and spoke with the researcher and concluded that no action is currently needed but indicated they will keep the researcher updated on developments with hydrogen solutions as the technology evolves. | N                  |
| July 10                | [REDACTED] | Resident asked if additional information sessions would be held as they missed the session on July 9.   | July 24                 | Dillon representative responded with links to resources on power-to-gas projects in Europe and provided a link to the Environmental Report on the project website.   | N                  |
|                        |            | Resident asked for more information about the pilot tests on hydrogen gas that Enbridge conducted as well as where the technology has been implemented in Europe, for how long, to what extent, and any issues that have arisen. Resident also asked about where to find information on the EA. | July 25                 | Resident thanked Dillon representative for information.  | N                  |



| Interest Group Correspondence |   |  |                         |   |                    |
|-------------------------------|---|--|-------------------------|---|--------------------|
| Date of Contact (2019)        | Name  | Comment  | Date of Response (2019) | Response and Issue Resolution (if applicable)   | Follow-Up Required |
| April 10                      | Adam McDonald (York District Catholic School Board) | York District Catholic School Board representative called Dillon representative inquiring about various aspects of the Project including the timing of pipeline construction, where the new pipes will be installed, and whether the new pipes are replacing existing natural gas pipes. | April 10                | Dillon representative answered most of the representative's questions via phone. Dillon representative committed to follow-up via email regarding his question about the existing pipeline infrastructure.  | N                  |
| July 30                       | Adam McDonald (York District Catholic School Board) | York District Catholic School Board representative sent an email to Dillon representative asking for an update on EA, OEB approval and construction schedule.  | April 11                | Dillon representative provided additional detail about the existing pipeline infrastructure via email.  | N                  |
| March 7                       | Mashid Zeinali (Telecon)<br>Brian Elbe (Bell)       | Dillon representative provided Notice of Project.  | August 2                | Dillon representative responded that Enbridge filed the Leave to Construct (LTC) application with the OEB on May 15, 2019 and stated the construction schedule would be refined pending approval from the OEB. Dillon representative provided link to the project application on the OEB website. | N                  |
| March 7                       | Amanda Kailan (Rogers)                              | Dillon representative provided Notice of Project.  | April 18                | Bell representative (Telecon) provided a markup drawing for Bell underground utilities.   | N                  |
|                               |   |  | April 18                | Brian Elbe, Bell underground structures manager, noted that Bell has extensive underground infrastructure in the area and requested attendance at utility coordination meetings.  | N                  |
|                               |   |  | June 27                 | Rogers representative requested attachment provided with March Notice of Project email as it had not been forwarded to the correct Rogers office.   | N                  |
|                               |   |  | August 6                | Dillon representative apologized for late reply and provided the Notice of Project attachment.  | N                  |



| Agency Correspondence - Federal |  |   |                         |   |                    |  |
|---------------------------------|--|---|-------------------------|---|--------------------|--|
| Date of Contact (2019)          | Name   | Comment   | Date of Response (2019) | Response and Issue Resolution (if applicable)   | Follow-Up Required |  |
| February 1                      | Fisheries and Oceans Canada (DFO)                                    | Dillon representative emailed the Notice of Project.  | --                      | --  | N                  |  |
| March 7                         | Transport Canada   | Dillon representative emailed the Notice of Project.  | March 14                | Automatic reply received from Transport Canada requesting proponent to self-assess the Project to determine the applicability of Transport Canada involvement.  | N                  |  |
| July 3                          |  | Dillon representative provided notice of the public information session to be held on July 9, 2019. | July 25                 | Automatic reply received from Transport Canada requesting proponent to self-assess the Project to determine the applicability of Transport Canada involvement.  | N                  |  |
| March 7                         | Ryan Zade (Ministry of Energy, Northern Development and Mines)       | Dillon representative emailed the Notice of Project.  | March 18                | Representative confirmed the Notice of Project was received and that there was no input at this time; however, ongoing information and project updates were requested.  | N                  |  |
| March 7                         | Anjala Puvananathan (Canadian Environmental Assessment [CEA] Agency) | Dillon representative emailed the Notice of Project.  | March 20                | Dillon representative committed to providing project updates.   | N                  |  |
| March 7                         |  |   | March 20                | CEA Agency acknowledged receipt of the Notice of Project and requested proponents review CEA Act, 2012 to confirm the applicability to the proposed Project.  | N                  |  |
| July 3                          | Emily Webb (CEA Agency)  | Dillon representative provided notice of public information session to be held July 9, 2019.        | July 4                  | CEA Agency representative referred back to previous correspondence on March 20 and requested that CEA Agency be removed from the project distribution list if the project is not subject to a federal environmental assessment. | N                  |  |



| Agency Correspondence - Federal |   |  |                         |  |                    |
|---------------------------------|---|--|-------------------------|--|--------------------|
| Date of Contact (2019)          | Name  | Comment  | Date of Response (2019) | Response and Issue Resolution (if applicable)  | Follow-Up Required |
| June 25                         | Christian Bonneau (Measurement Canada; Innovation, Science and Economic Development Canada) | Measurement Canada representative emailed Enbridge representative stating they had been contacted by members of the public with questions about the project, specifically with reference to blending ratio, measurement, and impact on consumers' bills. | July 5                  | Enbridge representative responded to Measurement Canada representative's questions and provided flyer for the public information session to be held on July 9. | N                  |
|                                 |   |  | July 5                  | Measurement Canada representative thanked Enbridge representative for the information and indicated he would reach out if he had any further questions.        | N                  |



| Agency Correspondence - Provincial |   |   |                         |   |                    |
|------------------------------------|---|---|-------------------------|---|--------------------|
| Date of Contact (2019)             | Name  | Comment   | Date of Response (2019) | Response and Issue Resolution (if applicable)   | Follow-Up Required |
| February 1                         | Steve Strong<br>(Ministry of Natural Resources and Forestry)      | Dillon representative provided the Notice of Project.                     | --                      | --  | N                  |
| March 7                            | Marek Wiesek<br>(Ministry of Transportation [MTO])                | Dillon representative provided Notice of Project.                         | March 7                 | MTO noted based on the location of installation it is outside MTO's control and MTO permits are not required.   | N                  |
|                                    |   |   | February 15             | TRCA confirmed receipt of request and confirmed they will submit the request to their GIS team.   | N                  |
|                                    |   |   | February 20             | TRCA requested confirmation of information requested.   | N                  |
|                                    |   |   | February 22             | Dillon representative confirmed the information request.  | N                  |
|                                    |   |   | March 8                 | TRCA requested a digital data agreement.  | N                  |
|                                    |   |   | March 8                 | Dillon representative signed the data agreement.  | N                  |
|                                    |   |   | March 27                | TRCA confirmed receipt of the data agreement and attached a response to the information request.  | N                  |
| February 1                         | Zack Carlan<br>(Toronto and Region Conservation Authority [TRCA]) | Dillon sent a request for information and provided the Notice of Project. | July 12                 | TRCA representative emailed Dillon representative to indicate he would call that afternoon regarding the project.   | N                  |
|                                    |   |   | July 12                 | Dillon representative emailed TRCA representative after phone call and thanked him for calling. Dillon representative indicated that TRCA representative's information was passed along to the appropriate Enbridge representative who would be contacting him soon. Dillon representative also provided a link to the Environmental Report (ER). | N                  |
|                                    |   |   | July 15                 | Enbridge representative emailed project team internally and indicated they had contacted the TRCA representative on July 9 and left a voicemail and then spoke to the TRCA representative on July 11.   | N                  |



| Agency Correspondence - Provincial |  |   |                         |   |                    |
|------------------------------------|--|---|-------------------------|---|--------------------|
| Date of Contact (2019)             | Name   | Comment   | Date of Response (2019) | Response and Issue Resolution (if applicable)   | Follow-Up Required |
| See above                          | Zack Carlan (TRCA)   | See above   | July 18                 | TRCA representative emailed Enbridge representative thanking him for the voicemail and discussion of the proposed project.<br>TRCA representative reiterated that TRCA was not provided a formal Notice of Commencement, or ER as part of the submission to the OPCC but that it was understood that Enbridge would extend the deadline for comments to 42 days so that TRCA comments could be incorporated prior to the Ontario Energy Board Leave to Construct submission.<br>TRCA representative acknowledged receipt of the link to the final ER that was provided via email on July 12 and stated that TRCA would provide comments back to Enbridge within the agreed 42 day timeline. | N                  |
| July 3                             |  | Dillon representative provided notice of the public information session to be held on July 9, 2019.               | July 26                 | TRCA representative acknowledged receipt of the notice and provided a letter stating they were unable to attend the session but would like 1 copy of the session materials sent to the TRCA office for their files.   | N                  |
| August 23                          |  | TRCA representative emailed comments on the ER.   | July 30                 | Dillon representative thanked TRCA for their email and provided PDF copies of the poster boards and handouts from the information session.  | N                  |
| March 13                           | Kourosh Manouchehri (Technical Standards and Safety Authority [TSSA])<br>Laura Hatcher (Ministry of Tourism, Culture and Sport [MTCS]) | Enbridge representative provided the Notice of Project and confirmed planned in-person meeting for April 9, 2019. | October 11, 2019        | Enbridge provided a response to TRCA's comments, including an Addendum to the ER.   | N                  |
| March 7                            |  | Dillon representative provided Notice of Project.   | March 22                | TSSA representative confirmed receipt of information and the meeting on April 9, 2019.  | N                  |
|                                    |  |   | April 4                 | MTCS provided a letter outlining MTCS requirements for the Project related to archaeology and cultural heritage.  | N                  |



| Agency Correspondence - Provincial |      |   |                         |   |                    |
|------------------------------------|------|---|-------------------------|---|--------------------|
| Date of Contact (2019)             | Name | Comment   | Date of Response (2019) | Response and Issue Resolution (if applicable) | Follow-Up Required |
| March 12                           | MTCS | Timmins Martelle Heritage Consultants' representative submitted the Stage 1 Archaeological Assessment report for MTCS review. | --                      | --  | N                  |



| Agency Correspondence - Municipal |   |  |                         |   |                    |  |
|-----------------------------------|---|--|-------------------------|---|--------------------|--|
| Date of Contact (2019)            | Name  | Comment  | Date of Response (2019) | Response and Issue Resolution (if applicable) | Follow-Up Required |  |
| January 25                        |   | Enbridge representative requested a meeting to provide advance information about the Project.  | January 25              | A meeting was held on February 4, 2019.       | N                  |  |
| March 7                           | Amanda Collucci (Markham Councillor)                                  | Enbridge representative provided the Notice of commencement and public open house information.   | --                      | --  | N                  |  |
| March 21                          |   | Enbridge representative provided an update on the open house results from the March 19, 2019 open house event.   | --                      | --  | N                  |  |
| February 22                       | Glenn Ambrose (Markham Fire Department)                               | Enbridge representative met with the Markham Fire Department to discuss the Project. Various questions were addressed during the meeting regarding the project generally and hydrogen combustion specifically. | --                      | --  | N                  |  |
| March 7                           | Reid McAlpine (Markham Councillor)                                    | Enbridge representative provided the Notice of commencement and public open house information.   | --                      | --  | N                  |  |
| January 24                        | Frank Scarpitti (Mayor, City of Markham)                              | Enbridge representative requested a meeting to provide advance information about the Project.  | --                      | A meeting was held on February 7, 2019.       | N                  |  |
| March 7                           |   | Enbridge representative provided the Notice of commencement and public open house information.   | --                      | --  | N                  |  |
| March 7                           | Andrea Berry (Sr. Manager Corporate Communications – City of Markham) | Enbridge representative provided the Notice of commencement and public open house information.   | --                      | --  | N                  |  |
| March 21                          |   | Enbridge representative provided an update on the open house results from the March 19, 2019 open house event.   | --                      | --  | N                  |  |



| Agency Correspondence - Municipal |  |  |                         |  |                    |  |
|-----------------------------------|--|--|-------------------------|--|--------------------|--|
| Date of Contact (2019)            | Name   | Comment  | Date of Response (2019) | Response and Issue Resolution (if applicable)  | Follow-Up Required |  |
| March 7                           | Graham Seaman (Director Sustainability and Asset Management – City of Markham) | Enbridge representative provided the Notice of commencement and public open house information.                 | --                      | --   | N                  |  |
| March 21                          |  | Enbridge representative provided an update on the open house results from the March 19, 2019 open house event. | --                      | --   | N                  |  |
| March 7                           | Trinella Cane (Commissioner, Corporate Services – City of Markham)             | Enbridge representative provided the Notice of commencement and public open house information.                 | --                      | --   | N                  |  |
| March 21                          |  | Enbridge representative provided an update on the open house results from the March 19, 2019 open house event. | --                      | --   | N                  |  |
| February 5                        |  | Enbridge representative requested a meeting to provide advance information about the Project.                  | --                      | A meeting was held on February 7, 2019.  | N                  |  |
| March 7                           |  | Enbridge representative provided the Notice of commencement and public open house information.                 | --                      | --   | N                  |  |
| March 21                          | Alan Ho (Markham Councillor)   | Enbridge representative provided an update on the open house results from the March 19, 2019 open house event. | --                      | --   | N                  |  |
| July 3                            |  | Dillon representative provided notice of the public information session to be held on July 9, 2019.            | July 4                  | Markham Councillor's executive assistant requested the notice be provided in JPEG format.  | N                  |  |
| July 3                            | Billy Pang (Markham-Unionville MPP)  | Dillon representative provided notice of the public information session to be held on July 9, 2019.            | July 19                 | Dillon representative apologized for late reply and provided a JPEG version of the notice.   | N                  |  |
| July 3                            |  |  | July 5                  | Office of Billy Pang responded stating that the MPP could not be present at the information session but would look forward to hearing progress on the project. | N                  |  |



| Agency Correspondence - Municipal |  |  |                         |   |                    |
|-----------------------------------|--|--|-------------------------|---|--------------------|
| Date of Contact (2019)            | Name   | Comment  | Date of Response (2019) | Response and Issue Resolution (if applicable) | Follow-Up Required |
| April 11                          | City of Markham Public Utilities Coordinating Committee (PUCC) | Enbridge presented the Project at the PUCC meeting on April 11 and answered participant questions. | --                      | --  | N                  |