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August 19, 2019

Sent by Electronic Mail, RESS Electronic Filing and Courier

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

Dear Ms. Walli:

Re: EPCOR Natural Gas Limited Partnership ("ENGLP") EB-2018-0336 - Application for 2020 to 2024 Rates – Phase 2 Interrogatory Responses

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Please find attached interrogatory responses to Ontario Energy Board Staff and the Vulnerable Energy Consumers Coalition with respect to Phase 2 of this proceeding.

Please feel free to contact me if you have any questions regarding this matter.

Sincerely,

[Original signed by]

Vince Cooney, P.Eng, MBA
Senior Manager, Regulatory Affairs, Ontario
EPCOR Utilities Inc.
VCooney@epcor.com

cc. All intervenors in EB-2018-0336

1-STAFF-1 (Phase 2)
Reference: Response to VECC Interrogatory (IR) #10

Request:

In response to VECC IR#10, EPCOR Natural Gas LP (EPCOR Natural Gas) indicated that average annual spending for Main Additions for 2015 through 2018 was impacted by larger, more costly system reinforcement projects completed by NRG in 2016 and 2017. Please explain what EPCOR Natural Gas means by "costly" in its IR response.

Response:

The larger, more costly system reinforcement projects supporting system integrity that were referenced in response to VECC IR#10 include the Bradley x Wilson Line pipeline, the Putnam x Culloden pipeline and the Springwater pipeline. The length of these pipelines – approximately 15.4 km, 13.5 km and 3.5 km, respectively – were longer than others more typically installed under NRG's annual Mains Additions Program, and thus more costly in comparison.

1-STAFF-2 (Phase 2)
Reference: EPCOR Natural Gas Evidence of August 1, 2019, p.5

Request:

The SNC-Lavalin study in its draft report of March 2016, recommended projects to address pressure issues experienced in the northeast and southwest of the system. However, these recommendations arose before it was known that Union Gas Limited would provide additional gas supply at the Bradley station and therefore the report (a) recommended projects to address these pressure issues outside of the context of this new higher pressure gas supply, and (b) made different conclusions with respect to the value of certain projects it evaluated and highlighted than may have been reached in the context of this new gas supply.

Please explain as to why SNC-Lavalin did not revise its study based on the additional supplies that Union Gas Limited would provide at the Bradley Station.

Response:

ENGLP believes that timing pressures may have impacted outcomes. In particular, NRG may have been uncertain that (a) SNC-Lavalin would be able to update its study and re-run its simulations in a timely manner, and (b) a revision to the study would not impact the timeline to prepare evidence and file its already late cost of service application.

The SNC-Lavalin study took much longer to complete than NRG had originally envisioned. In the EB-2010-2018 Phase 2 Decision, the Board had directed NRG to file its system integrity study by no later than September 30, 2012. On August 9, 2016, NRG filed a draft version of the study dated January 2016, with its cost of service application in proceeding EB-2016-0236. On August 30, 2016, NRG filed an updated version of the study dated March 2016. Therefore, a draft and updated version of the study were filed nearly four years after the Board's deadline. Additional modeling and associated revisions to the study would likely have resulted in further delays.

Furthermore, NRG may have been concerned that revisions to the study could have impacted the filing of its cost of service application (EB-2016-0236). NRG was already late filing its cost of service application for rates effective October 1, 2015, which it ultimately filed on August 9, 2016.

In any event, ENGLP cannot confirm that NRG did not at any time engage SNC-Lavalin to complete additional modeling and to revise its study based on the additional supply that Union Gas Limited would provide at the Bradley Station. ENGLP believes that, based on the revision to the NRG filing and the SNC-Lavalin Study, additional modeling was likely done.

1-STAFF-3 (Phase 2)

Reference: **EPCOR Natural Gas Evidence of August 1, 2019, p.7**

Request:

The evidence states that due to supply and system limitations, the utility's challenges are not only associated with obtaining adequate supply but also with getting the supply to where it is needed in the system. As a result, the system has experienced system integrity issues in the form of low pressure in various parts of the system for a number of years.

Please identify all areas of the system with low pressure. If possible, please provide a map identifying the low pressure areas.

Response:

ENGLP has assumed that Board staff's question is with reference to low pressures in the system prior to undertaking the Four System Integrity Projects.

ENGLP has provided a map indicating system pressure information prior to the implementation of the Four System Integrity Projects. The map also includes the (simulated) low pressure areas identified in the SNC-Lavalin Study in response to 1-Staff-7 (Phase 2), which employed high demand day pressure data from NRG from November 12, 2014. These maps are limited with respect to actual system measurements, as is the case with response to 1-Staff-7 (Phase 2).

In response to 2-Staff-17, ENGLP highlighted the limited continuous pressure monitoring information that was at its disposal at the time, noting that as part of its Utility System Plan, it would invest in reliability including improvements to reliability and safety to upgrade the SCADA system and field instrumentation to improve the monitoring and control capability of the system. The response further noted that this system will allow pressures and flows to be automated and alarm monitored to notify operating staff in the event of a system pressure deviation.[1]

[1] Further evidence is available at Exhibit 2, Tab 3, Schedule 1, page 18, section 3.4.4.

The SNC-Lavalin Study noted that NRG provided data from November 12, 2014 to be used as input to SNC's study activities. This information is reproduced below from Exhibit 1, Tab 4, Schedule 2, pg.14-15:

3.6. BENCHMARK DATA

Actual supply pressures and locations for the high flow rate day November 12th, 2014 are shown in Table 3.6-1. Pressures provided are assumed to be gauge pressure.

Table 3.6-1 Benchmark Pressures

Location	Actual Pressure (psig)	Type
North Walsingham	83	UGL Input
New England	79	UGL Input
Putnam Station	81	UGL Input
Harrietsville Station	89	UGL Input
Ridge Rd	83	UGL Input
Rogers Rd and Talbot Ln	42	Feeding town of Aylmer
Hacienda Rd and Talbot Ln	52	Feeding town of Aylmer
John St South at Bradley Creek	51	Feeding town of Aylmer
Beech St	65	Feeding town of Aylmer
Belmont South	78	Feeding town of Belmont
Belmont North	33	Feeding town of Belmont
Port Bruce	53	Feeding town of Port Bruce
Brownsville South	38	Feeding town of Brownsville
Vanmoerkerke	63	Customer
YPMA	9	Customer
Sylvite Avon	55	Customer
FS Partners Straffordville	54	Customer
Klassen Farms	55	Customer
Kingsmill Grain	21	Customer
Graydon Farms	33	Customer
Isaak Bartsch	59	Customer
Best Line Farms	35	Customer
Herman	74	Check Point
Doerksen	60	Check Point
Whittaker Rd and Yorke Ln	79	Check Point

The SNC-Lavalin Study refers to low pressures in the area around Brownsville and in the south-west, as indicated by pressure information provided by NRG to SNC-Lavalin for November 12, 2014. Below are a sampling of references to the study with page references and emphasis added regarding areas:

- "This baseline model was modified to attempt to alleviate the low pressure areas in the **southwest** and **around Brownsville**." (p.18)
- "Adding a loop to the Ostrander Road pipeline, in addition to extending the pipe along the Wilson Line, helps to alleviate the low pressure areas **around Brownsville**."
- Low pressures occurring in the **Southwest**, despite higher pressures from simulated higher flow rates at NRG Gas Corp wells, "When gas flow rates are quadrupled from the Scotia Line group of wells, higher pressures occur in the south and south-east, but **low pressures still occur in the south-west**… …[i]ncreasing gas flow from the NRG Gas Corp wells could alleviate low pressures in the southern areas of the NRG System. However, the increase in flow rate is significant." (p.21)
- "Low pressure areas in the **south-west** and **around Brownsville**." (p.22)
- "The result shows that the low pressure areas in the **south-west quadrant** and **around Brownsville** have been eliminated." (p.23)
- "The main areas of concern… …are in the **Aylmer region** and in the **Brownsville region**…" – Huddleston email, SNC employee (p.75)

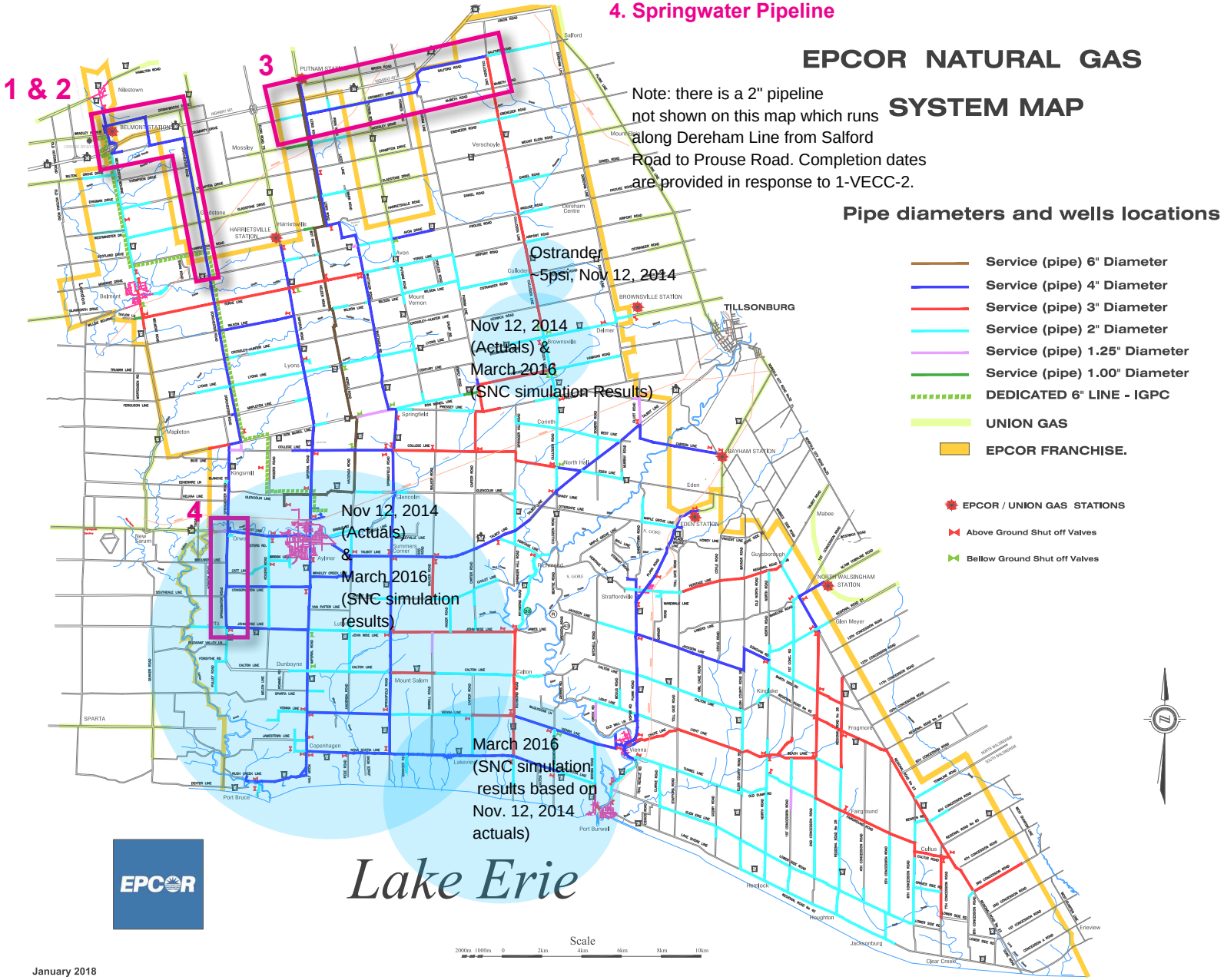
In its EB-2015-0308 application, NRG identified low pressures in the northeast portion of its franchise area "for the past five years".[2]

[2] EB-2015-0308, Lippold Affidavit, pg3, para 9.

The Four System Integrity Projects:
1. **Bradley Station Project**
2. **Bradley x Wilson Line Pipeline**
3. **Putnam x Culloden Pipeline**
4. **Springwater Pipeline**

EPCOR NATURAL GAS SYSTEM MAP

Note: there is a 2" pipeline not shown on this map which runs along Dereham Line from Salford Road to Prouse Road. Completion dates are provided in response to 1-VECC-2.



January 2018

1-STAFF-4 (Phase 2)

Reference: **EPCOR Natural Gas Evidence of August 1, 2019, p.9 and EB-2016-0236, Exhibit 1, Tab 1, Schedule 3, p.2 and Exhibit 2, Tab 1, Schedule 1, pgs.1-2**

Request:

In its Phase 2 evidence, EPCOR Natural Gas noted that the OEB granted Natural Resource Gas Ltd.'s (NRG, the predecessor utility) request to withdraw its failure to serve application based on NRG's assurances that the supply agreement with Union Gas Limited and the facilities proposed to be constructed would resolve the system integrity and volume issues raised in the application. In NRG's 2016 rates application (EB-2016-0236), NRG identified the capital projects to support the upgrades to the Bradley Station and noted that these projects were being undertaken to address system integrity issues.

a) Please explain why NRG in its 2016 rates application requested recovery of 1.5 million cubic metres of natural gas purchased from NRG Corp. at a premium price in quantities that was 50% higher than before.
b) Please outline the projects undertaken by NRG to reduce reliance on purchase of premium priced gas from NRG Corp.
c) In the OEB's Phase 2 Decision and Order (EB-2010-0018) dated May 17, 2012, the OEB on page 8 noted, "The issue before the Board is not so much the fact that it is inappropriate to purchase gas from a related company but rather that the pricing mechanism being sought by NRG seems to demonstrate that NRG Corp. exercises market power within the utility's franchise area….The Board is concerned that NRG's customers would pay significantly higher than market rates for what could be a material portion of their gas supply." Please provide evidence in NRG's rates application (EB-2016-0236) wherein NRG has made attempts to address the OEB's concerns and provide all capital projects undertaken by NRG to address the concerns and reduce the market power exercised by the former NRG Corp. through the pricing of locally produced gas.
d) Did NRG establish a link between the system integrity projects that it proposed to implement in its 2016 rates application and the purchase of system integrity gas from NRG Corp.? If no, why not?

e) Please explain how NRG prioritized capital projects to address system integrity in light of the OEB's Phase 2 Decision and Order in EB-2010-0018.

Response:

(a) NRG's 2016 rates application (EB-2016-0236) was placed in abeyance on January 30, 2017, withdrawn on December 14, 2018, and subsequently replaced by ENGLP's own rates application (EB-2018-0235). Nevertheless, ENGLP provides the following observations with respect to NRG's requested recovery of natural gas purchased from NRG Corp. in the 2016 rates application:

- With respect to volumes, NRG had received decisions in the past from the Board, which limited volumes for purchase of natural gas at premium prices from local producers. In particular, the Board's EB-2010-0018 Phase 2 Decision reduced the amount of natural gas for purchase from NRG Corp. at a premium price from 2.4 million cubic metres to 1 million cubic metres.
- Also with respect to volumes, from 2013 to 2016 NRG purchased volumes well in excess of 1 million cubic metres from local producers, which indicates the utility believed that the gas was required, and likely underpinned the request for additional volumes.
- Section 6.3.3 of the SNC-Lavalin Study, refers to increasing production from wells to resolve system integrity issues, as follows: "Increasing the gas flow rate from the NRG Gas Corp Wells… helps to move gas from the central south into the south-west."
- With respect to pricing, the premium price was unchanged. For context, the absolute premium price cost differential for the years 2013 to 2018 averaged approximately $127,200 annually, over that six-year period. (See 4-Staff-42).
- ENGLP has maintained volumes purchased through its agreement with NRG Corp. entered into November 1, 2017 at 1.0 million cubic metres (See 4-Staff-43) in line with the Board's position on the volume of local gas necessary for system integrity required in the EB-2010-0018 Phase 2 Decision.

(b) and (c)

In ENGLP's review of NRG's 2016 rates application, ENGLP is unable to find reference to NRG undertaking capital projects with the sole or express purpose of reducing reliance on the purchase of premium gas. The Four System Integrity Projects were undertaken to address system integrity issues identified in the northeast of its system near Brownsville, and in the southwest near and in the Town of Aylmer, not to address matters related to the pricing or use of premium gas received from areas of well production that are remote from the areas on the distribution system that were experiencing low pressures, and not to address system integrity issues which may or may not have existed elsewhere on NRG's distribution system.

NRG indicated in the EB-2015-0308 application, that it had attempted to get supply from Union Gas Limited at other existing receipt points on its system, including tying their high-pressure line to North Walsingham station[1]. However, NRG did not pursue these alternative supply points as the costs, as indicated by Union Gas Limited, would be expensive and difficult for NRG's customers to bear. Furthermore, supply received from these other supply points would have immediately addressed issues in the southeast of NRG's system, and not the issues in the northeast and southwest addressed by the Four System Integrity Projects.

Notwithstanding the above, the Bradley x Wilson Line project, as proposed and described in NRG's evidence[2], and further described in ENGLP's Phase 2 evidence, provided an incremental 1,500 m3/hour of firm hourly quantity gas at a minimum pressure of 135 psig into the NRG distribution system.

The Springwater pipeline was an extension of an existing section of pipeline along Springwater Road, which could now be fed by high-pressure gas facilitated by the Bradley x Wilson Line project and get gas into an area South of Aylmer that was experiencing low pressures.

[1] EB-2015-0308, Application and Evidence, November 6, 2015
[2] EB-2016-0236, Exhibit 2, Tab 1, Schedule 1, Page 1

The projects described above provided improved north to south flows of gas into the southwest area of the franchise, reducing any requirement for locally produced gas generally located in the southeast. This in turn would reduce the requirement for locally produced gas situated in the southeast, to support markets in the southwest.

(d) NRG may have established a link between the system integrity projects and the purchase of system integrity gas, however; they address two separate problems. System integrity gas in the southeast area of NRG's system mitigates pressure issues in the southeast and in the absence of that gas, it does not affect pressure issues in the northeast and southwest. The Four System Integrity Projects were undertaken to address areas of low pressure in the northeast and southwest.

Low pressure issues in the northeast and the southwest of NRG's distribution system, were confirmed by the simulation and modeling results of the SNC-Lavalin Study dated March 2016. Low pressures in the southeast of ENGLP's distribution system, were revealed by the study completed by Cornerstone Energy Services (Cornerstone) in December 2018.

(e) NRG provides evidence of its capital planning process at Exhibit 2, Tab 1, Schedule 1 of its EB-2016-0236 evidence, under the header of "Overview of Rate Base and Additions".

ENGLP summarizes NRG's correspondence with Union Gas Limited and its work with SNC-Lavalin that further informed its capital planning and prioritization in its Phase 2 Evidence.[3] In combination with the high demand day, and clear evidence that its pressure issues were in the northeast and the southwest, NRG sought to resolve these issues through the additional Bradley Station supply and the Four System Integrity Projects, which are summarized in Exhibit 2, Tab 1, Schedule 1 of its EB-2016-0236 evidence. The Four System Integrity Projects resolved the low pressure issues in the areas identified, as evidenced by the results of the Cornerstone Study.

For added clarity, the SNC-Lavalin Study refers to pressure issues "around Brownsville".[4] The Cornerstone Study does recommend in section 6.3 of its report an infrastructure

[3] Phase 2 Evidence, pg. 8, para 7
[4] EB-2018-0336, Exhibit 1, Tab 4, Schedule 2, pg22 and pg 23

improvement project to make the town of Brownsville high pressure; however, Cornerstone does not reference the town of Brownsville infrastructure improvement project in its overall conclusions.[5]

[5] EB-2018-0336, Exhibit 2, Tab 3, Schedule 2, pg17 and pg 20

1-STAFF-5 (Phase 2)
Reference: EPCOR Natural Gas Evidence of August 1, 2019, p.10

Request:

The evidence indicates that SNC-Lavalin completed the majority of the study and associated modeling work in 2015, prior to when Union Gas Limited and NRG reached agreement on a solution for additional gas supply. SNC-Lavalin's draft report of March 2016 identified the same pressure issues but the recommendations included in the report differ from what NRG implemented with the four system integrity projects.

a) Please confirm that NRG did not adopt the recommendations of the SNC-Lavalin study.
b) Did NRG undertake any other study to support the four system integrity projects that it completed in 2016 and 2017? If no, why not?
c) Please describe EPCOR Natural Gas' understanding of why the OEB ordered NRG to complete an independent system integrity study.

Response:

(a) NRG utilized the modeling results and recommendations of the SNC-Lavalin Study dated March 2016, new information not known at the time the report was produced, management judgment, and operations experience in determining prudent selection and implementation of available project options. Most importantly, the modeling results of the SNC-Lavalin Study identified the areas of the system that were experiencing low pressures—the northeast and southwest—and NRG implemented four system integrity projects which addressed these issues.

(b) ENGLP is not aware of a study undertaken by NRG on the four system integrity projects. ENGLP offers the following observations, which NRG management may have been considered in arriving at its decision:

- NRG had recently faced a critical system peak in the November 2014 heating season which came very near to resulting in the loss of space heating and water

heating service to residential customers during periods of temperatures below zero degrees Celsius;

- NRG had spent several years requesting supply from Union Gas Limited to no avail, as documented through its EB-2015-0308 application and evidence;
- The only new and economically viable gas supply that Union Gas Limited ultimately agreed to provide to NRG, was at Bradley station;
- NRG may have been uncertain that a study on the four system integrity projects could be completed in a timely manner, which would have impacted NRG's timeline for completion of the Bradley x Wilson Line project ahead of the next heating season.
- NRG may have believed that the receipt of a material quantity of high pressure gas in firm supply quantity at *any* supply point on its system would have materially improved system integrity *as a whole* and therefore an update to the SNC Report was deemed unnecessary or a poor investment of ratepayer funds; and/or
- The Board had not expressly provided authorization for updates to the report it issued, and therefore NRG may have believed that it would have been proceeding at risk for prudent recovery of its incurred study costs, in particular if NRG believed that little value would have been provided by a study update.

(c) NRG's customers require a reliable supply of natural gas.

The Board had indicated in its EB-2010-0018 Phase 2 Decision that system integrity demand was largely theoretical, and a system integrity study would provide another tool to augment management decision making by highlighting specific areas of the system experiencing low pressures and at greatest risk of interruption of service. By identifying these areas of risk, NRG would be able to prioritize the planning of its capital projects to address areas of the system experiencing low pressures.

1-STAFF-6 (Phase 2)
Reference: EPCOR Natural Gas Evidence of August 1, 2019, p.12

Request:

The evidence notes that the Putnam x Culloden pipeline also looped the pipeline along Culloden line, thereby improving operational flexibility and reliability. If a break or leak were to occur along this stretch of main, the flow of gas can be isolated locally at the leak and customers can be back-fed from the other direction, minimizing the number of customers impacted. This benefit would not have been achieved with SNC's recommendation. The evidence further notes, "Accordingly, the solution implemented by NRG reflected more foresight and avoided a suboptimal investment for ratepayers since by implementing the Putnam x Culloden pipeline, NRG was able to address the existing issues at Brownsville, ensure access to gas for new connections in the northeast area and increase reliability in the area".

a) The evidence states that SNC-Lavalin study did not examine the Putnam x Culloden pipeline. Why did SNC-Lavalin not examine the proposed pipeline from Putnam Station to the Culloden Line?
b) What does the evidence mean by, "This benefit would not have been achieved with SNC's recommendation"?
c) The benefits outlined in the evidence seem to indicate that it is a relief line (customers can be back-fed from the other direction) and refers to future benefits (ensure access to gas for new connections). What system integrity benefits did the Putnam x Culloden pipeline provide?
d) What does the evidence mean by, "The solution implemented by NRG reflected more foresight and avoided a suboptimal investment"?

Response:

A map depicting the Putnam x Culloden pipeline and the alternative SNC option is attached to aid with understanding.

a) ENGLP is not aware of why SNC-Lavalin did not examine the Putnam x Culloden pipeline.

There is more than one plausible route to achieve the objective of delivering gas from Putnam station to the areas that were experiencing low pressure around Brownsville. The pipe distance from to Putnam to Brownsville following the SNC-Lavalin option is marginally shorter than the Putnam x Culloden line that was implemented by NRG; however, the NRG path did not create a future 2" pipeline choke point on the system. Cornerstone's recommendations in their December 2018 report include investigating and resolving choke points, so avoiding creation of additional choke points, was likely a factor in NRG's routing decision. This is discussed in greater detail in part (d) of this interrogatory response.

b) The SNC-Lavalin study recommended extending the Wilson Line pipeline from Putnam Road to Whitaker Road. Had this solution been implemented, customers on the Culloden Line pipeline north of Ostrander Road would be fed solely from the south. If a line strike or other failure were to occur on the Culloden Line pipeline between Ostrander Road and Ebenezer Road, any customers north of the failure would be interrupted.

c) System integrity is inclusive of improvements to reliability for customers. The Putnam x Culloden pipeline allows gas from the Putnam Station to flow from west to east and into the Brownsville area with less restriction, addressing the low pressure issues identified around Brownsville. Modelling of the system completed in 2018 by Cornerstone, with the inclusion of the Putnam x Culloden pipeline, did not show low pressures in the Brownsville area and is consistent with the observations of operating staff.

d) The SNC study recommended extending the Wilson Line pipeline from Putnam Road to Whitaker Road. This option would have tied the Lewis/Whitaker Road 4 inch pipeline to the Culloden Line 3 inch pipeline with a single 2 inch pipeline along Ostrander Road, creating a choke point. The Putnam x Culloden pipeline achieved the same objective of moving gas from Putnam Station from west to east and into the Brownsville area but avoided the choke point that a 2 inch pipeline may have created. It also provided the added benefit of looping the Culloden Line pipeline as discussed in part (b) of this interrogatory.

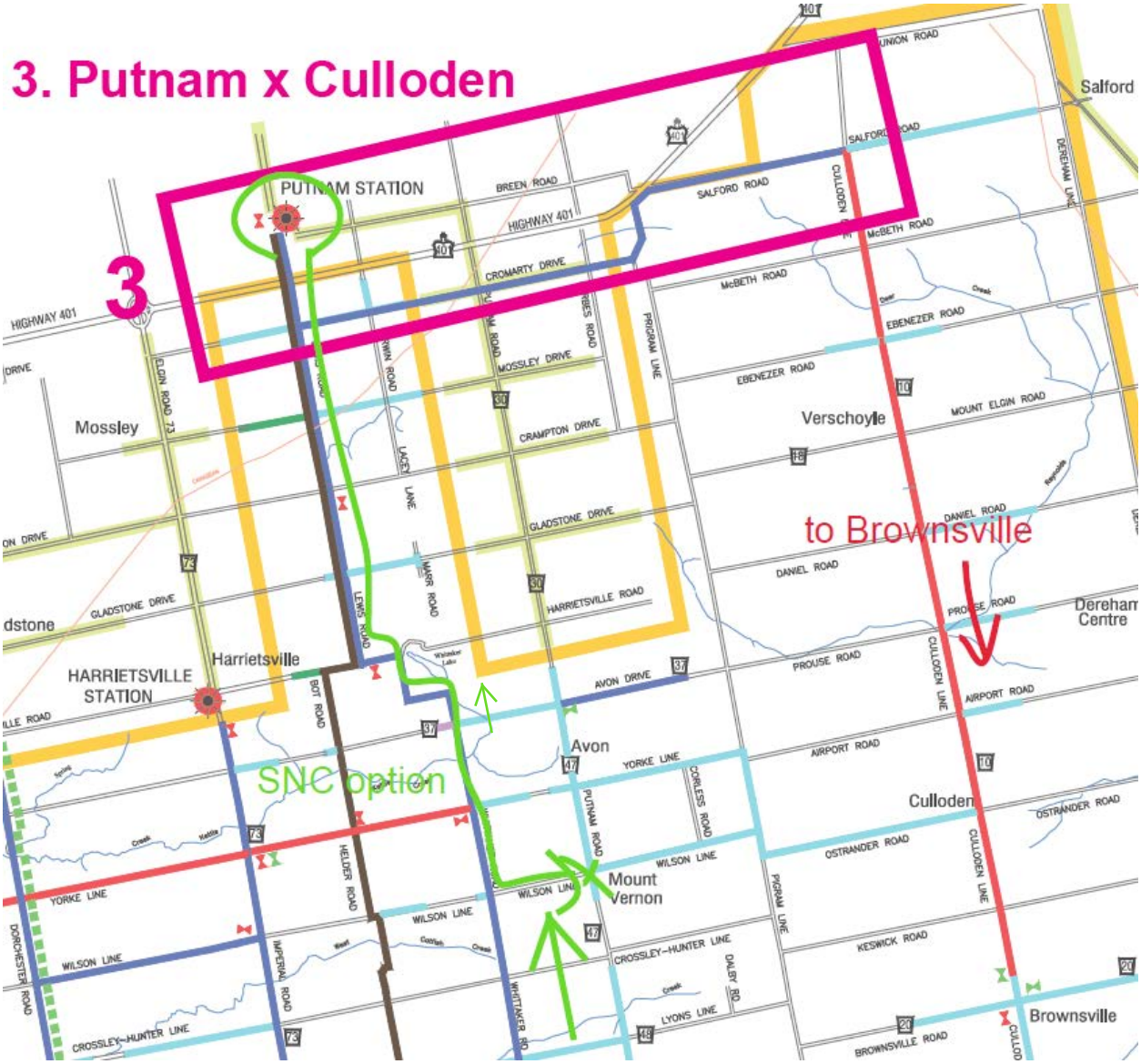


Figure 1-Staff-3 – Route options (NRG's implemented east then south route, and SNC's south then east route) and the relative location of low pressure area around Brownsville depicted (bottom right)

1-STAFF-7 (Phase 2)
Reference: EPCOR Natural Gas Evidence of August 1, 2019, p.31

Request:

EPCOR Natural Gas provided a map of its franchise area and identified the four system integrity projects that are subject of this application (Phase 2). Please provide a similar map that identifies the four system integrity projects and the low pressure areas identified in the SNC-Lavalin study.

Response:

A schematic showing the low pressure areas identified is included in Appendix C of the SNC study report. The schematic is an output of the modelling software and is not spatially accurate. The low pressure areas are indicated in red and yellow. Note that pressures are regulated down to 30 psi in urban areas and so “red” may or may not indicate a low pressure area in these cases.

ENGLP provides a map with the requested information as part of the response to 1-Staff-3.

1-VECC-1 (Phase 2)
Reference: EXHIBIT 1 Phase 2 Evidence August 1, 2019
EB-2016-0236/Tab 1/Schedule 1/pg.2

Request:

The following is taken from the above EB-2016-0236 reference:

> In 2017, $425,000 is forecasted to be spent on three system integrity projects to support further development in the Belmont area, in addition to providing greater pressures to the distribution system near Brownsville and Aylmer. The planned projects include the Salford Road/Dereham line loop ($172,600), the Mount Elgin main addition ($224,000), and the extension of Springwater Road ($25,000) (per SNC-Lavalin's system integrity study).

a) Please explain if the above noted projects were completed, at what cost and in what year.

b) Please explain the difference for the extension of the Springwater Road from the estimate above of $25k and the $265,015 that was actually spent of this project.

Response:

a) The utility installed the following pipelines in 2017 and 2018:

   i. In 2017, a 2 inch PE pipeline along Salford Road, from Culloden Line to Dereham Line, at a cost of $101,009;
   ii. In 2017 and 2018, a 2 inch PE pipeline along Prouse Road, from Culloden Line to Dereham Line, at a cost of $100,296; and
   iii. In 2018, a 2 inch PE pipeline along Dereham Line, from Salford Road to Prouse Road, at a cost of $250,390.

   Although similar in scope to the first two projects described above, the utility chose to run the pipeline east to west at Prouse Road instead of Mount Elgin Road. Note that these

pipelines are not all shown in the January 2018 system map provided. The extension of the Springwater Road pipeline was completed in 2017 at a cost of $292,000.

b) The Springwater Road pipeline extension, as both described in the SNC study and as constructed, included the installation of approximately 3.5 km of 4 inch PE pipe. The estimated project cost of $25,000 included in EB-2016-0236 equates to a cost of approximately $7 per meter. The cost of the pipe alone, currently more than $25 per meter, would have exceeded this estimate. ENGLP has been unable to determine the basis of the estimate provided by NRG. However, we can advise that $265,015 represents the 2020 net book value (rate base) of the actual project cost incurred to complete the pipeline.

1-VECC-2 (Phase 2)
Reference: 2-Staff-28

Request:

In response to the Board Staff question "Why did EPCOR decide to undertake a second system integrity study?" ENGLP responded:

> ENGLP decided to undertake a second system integrity study after a comprehensive review of the system integrity study completed by SNC-Lavalin for NRG. After that review, ENGLP concluded that the study did not adequately address the range of potential solutions to ongoing concerns regarding system pressures in parts of the distribution system. In particular, ENGLP was of the view that there were viable alternatives to continuing to use natural gas priced at above market rates to support system pressure in parts of the system. (emphasis added)

In the Phase 2 evidence ENGLP explains that the reason for a new study was the resolution with Union Gas (Enbridge) to supply additional gas at Union's Bradley station (see pages 8-9).

a) Please explain the reason for the different responses?

Response:

(a) The responses are different because the Phase 2 evidence passage cited is not responding to the same question.

The passage referenced discusses the provision of incremental gas supplies to address system integrity issues. ENGLP does not state in its Phase 2 evidence that the provision of incremental gas supplies was the sole manner of resolving the system integrity issues, rather it was a potential solution. The passage aligns with ENGLP's earlier statements that, "ENGLP concluded that the [SNC-Lavalin] study did not adequately address the range of potential solutions".

1-VECC-3 (Phase 2)
Reference: EB-2016-0236 SNC-Lavalin System Integrity Study, March 2016

Request:

At pages 23-24 of the SNC-Lavalin System Integrity Study (filed August 30, 2016) it states:

7.3. RECOMMENDATION

The Glencolin Line extension, the Wilson Line extension, and the Ostrander Road Loop were simultaneously added to the model. A flow schematic showing the result of the high gad flow day is shown in Appendix F.

The result shows that the low pressure areas in the south-west quadrant and around Brownsville have been eliminated. The Brownsville area is still colored red on the results schematic, because the Ostrander Road pressure regulator is set to 30 psig. However, the pressures have increased substantially with the lowest pressure at 26 psig.

It is recommended that the Glencolin Line and the Wilson Line be extended and the Ostrander Loop be added to the NRG system.

Table 8.1 – Unclassified Costs estimate

Extension	Pipe Diameter	Length (m)	Cost (CAD $)
Glencolin Line Extension	NPS 4	3200	213,800
Wilson Line Extension	NPS 3	500	34,800
Ostrander Road Loop	NPS 3	4060	207,900
Total	-	-	**456,500**

a) Have the recommended projects been completed. If so please provide when (in-service) and at what cost. If not please explain why not.

Response:

a) The Glencolin Line extension, Wilson Line extension and Ostrander Road loop, as described in the SNC-Lavalin study dated March 2016, have not been completed. With the implementation of the Four System Integrity Projects as described in the evidence, completion of these additional projects by NRG was unlikely to result in suitable benefit to ratepayers.