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August 12, 2020

**VIA RESS and EMAIL**

Ms. Christine Long  
Board Secretary  
Ontario Energy Board  
2300 Yonge Street, 27<sup>th</sup> Floor  
Toronto, ON M4P 1E4

Dear Ms. Long:

**Re: Enbridge Gas Inc. (Enbridge Gas)  
Ontario Energy Board (Board) File: EB-2020-0105  
Kimball-Colinville and Payne Well Drilling Project (Project)  
Reply Submissions**

In Accordance with the Board's Procedural Order No. 3 dated July 24, 2020 attached please find the Reply Submission of Enbridge Gas for the above noted proceeding.

The submission has been filed through the OEB's RESS.

Please contact the undersigned if you have any questions.

Sincerely,

(Original Digitally Signed)

Joel Denomy, M.A. CFA  
Technical Manager, Regulatory Applications

## **ONTARIO ENERGY BOARD**

**IN THE MATTER OF** the Ontario Energy Board Act, 1998, S.O. 1998, c.15, Schedule B; and in particular section 40(1) thereof;

**AND IN THE MATTER OF** an Application by Enbridge Gas Inc. to the Ministry of Natural Resources and Forestry for licences to drill wells in the Kimball-Colinville Storage Pool and the Payne Storage Pool

### **ENBRIDGE GAS INC. REPLY**

1. In accordance with Procedural Order No. 3, these are the reply submissions of Enbridge Gas Inc. ("Enbridge Gas") to the submissions of Ontario Energy Board ("Board") Staff, the Ministry of Natural Resources and Forestry ("MNRF"), Mr. Bryan Arnold and Mr. Douglas Henderson.

#### **Submissions of Board Staff**

2. Enbridge Gas agrees with Board Staff's summary of the evidence filed in this proceeding in support of Enbridge Gas' application ("Application") to the MNRF for licences to drill wells in the Kimball-Colinville Storage Pool and the Payne Storage Pool ("Project") and will not repeat the details in these submissions.
3. Board Staff concludes from the evidence that the Project is needed to replace deliverability that was lost in the subject designated storage areas ("DSAs") due to the abandonment and relining of several pre-existing wells. In addition, Board Staff observes that Enbridge Gas has met the requisite technical, environmental, land, consultation and other requirements for the Board to issue a report to the MNRF, subject to the proposed standard conditions set out in Appendix A of Board Staff's submissions. Enbridge Gas accepts all of Board Staff's proposed conditions without modification.
4. Board Staff invites Enbridge Gas in its reply submissions to provide further information in respect of three items, each of which is addressed below:

- i. *Further discussion with the MNRF about revised drilling program:* Since submissions were filed by Board Staff and the MNRF, Enbridge Gas has communicated with the MNRF about the deferred completion of the Project to the second quarter of 2021, as explained in the evidence.<sup>1</sup> The MNRF only requested a revised drilling program and Enbridge Gas provided this information to the MNRF on August 11, 2020.
- ii. *Leave to construct (“LTC”) approval:* The cost of pipeline installation for the TKC 67H well will be approximately \$601,000 and for the UP24 well, the estimated cost of pipeline installation will be \$498,000. This confirms that the construction parameters for these pipelines (both are NPS 10 and are 85 m and 120 m, respectively) do not trigger the need for an LTC application as noted in the evidence.<sup>2</sup>
- iii. *Additional drilling costs:* As a result of the drilling program being revised to defer completion and require two drilling stages instead of one, Enbridge Gas will incur additional costs of approximately \$140,000 primarily related to moving the drilling rig off and back on location. Like the other Project costs, this additional cost will not result in any rate increase during the incentive regulation term because Enbridge Gas is not seeking Incremental Capital Module treatment for the Project.<sup>3</sup>

### **Submissions of the MNRF**

5. Enbridge Gas notes that the MNRF has no objection to approval of the Application as proposed and the MNRF is satisfied that Enbridge Gas has provided a complete response to the MNRF interrogatories. The MNRF references the May 29, 2020 opinion letter Enbridge Gas received from the Ministry of Energy, Northern Development and Mines (“MENDM”) confirming that Enbridge Gas has satisfied the procedural aspects of Indigenous consultation for

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<sup>1</sup> See Enbridge Gas response to Board Staff interrogatory no. 4.

<sup>2</sup> See Exhibit B, Tab 1, Schedule 1, p. 4.

<sup>3</sup> See Enbridge Gas response to Board Staff interrogatory no. 3.

the Project to date. Enbridge Gas confirms its intention to continue its consultation activities with the identified Indigenous communities throughout the life of the Project and Enbridge Gas will notify the MENDM should any additional rights-based concerns or issues arise.

6. Enbridge Gas fully accepts its responsibility as operator of the wells to ensure that all safety and environmental issues are addressed and Enbridge Gas will comply with the *Oil, Gas and Salt Resources Act*, O. Reg. 245/97 and CSA Standard Z341: Storage of Hydrocarbons in Underground Formations ("CSA Z341").

### **Submissions of Mr. Henderson**

7. Mr. Henderson does not own or occupy land that will be directly affected by the Project. However, he does own property adjacent to the location proposed for the TKC 67H well. Mr. Henderson appears to be expressing more general concerns about the well drilling and operation practices of Enbridge Gas and how technology has improved access to and use of the Pools. For instance, Mr. Henderson makes certain claims about improved technology and other practices, such as drilling horizontal wells, that have expanded operational capabilities for natural gas storage. Enbridge Gas does not understand how these claims relate to the Project. As noted in the evidence, Enbridge Gas is not changing the operating pressure, capacity or deliverability in the pools as a result of the Project.<sup>4</sup>
8. Mr. Henderson asserts that Enbridge Gas has not answered his interrogatories, yet Enbridge Gas believes it has provided fulsome responses and Board Staff did not note any concerns about these responses.
9. Mr. Henderson alludes to a concern about risks and design strength regarding horizontal drilling. Enbridge Gas does not understand the nature of this concern and how it relates to the Project. Also, because this information has only been

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<sup>4</sup> See Enbridge Gas responses to Board Staff interrogatory nos. 2 and 3 and Arnold interrogatory no. 5.

provided as part of final submissions, Enbridge Gas has not had the chance to comment earlier about it.

10. However, to provide some further information to Mr. Henderson about Enbridge Gas's practices when assessing the ability of a storage reservoir to maintain mechanical integrity in response to an increase in the maximum operating pressure (which will not be done as part of the Project), Enbridge Gas does not rely on the strength of the rock. According to CSA Z341, the maximum operating pressure must remain at or below 80% of the fracture gradient, defined as "the pressure gradient that, when applied to subsurface formations, causes the formations to fracture physically." The failure criterion utilized assumes that the tensile strength of the rock is zero. Enbridge Gas instead relies entirely on the in-situ confining stress to provide structural integrity, with a large margin of safety between the minimum principal confining stress and the maximum storage pressure. Again, Enbridge Gas is not proposing to increase the maximum operating pressure in either of the storage pools as part of the Project, so this issue is not relevant to this proceeding.
11. Mr. Henderson also raises general concerns about the terms of gas storage leases and consultation with landowners. Enbridge Gas has provided responses to Mr. Henderson's interrogatories in this regard.<sup>5</sup> As the Board has stated in Procedural Order No. 3, changes to the terms of gas storage leases is an issue that is out of scope for this proceeding.

### **Submissions of Mr. Arnold**

12. Mr. Arnold also does not own or occupy land that will be directly affected by the Project. However, he does live in the vicinity (over 1 km away) to the proposed location of the TKC 67H well, as shown in the evidence.<sup>6</sup> Mr. Arnold has expressed concerns about prior work conducted by Enbridge Gas that the Board,

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<sup>5</sup> See Enbridge Gas responses to Henderson interrogatory nos. 3 and 4.

<sup>6</sup> See Enbridge Gas response to Arnold interrogatory no. 2.

in Procedural Order No. 3, has confirmed are out of scope for this proceeding. Enbridge Gas has had detailed communications with Mr. Arnold about these matters already. This includes a release signed by Mr. Arnold and compensation paid to him. If Mr. Arnold wishes to discuss these matters further or clarify the responses that Enbridge Gas has provided, he is welcome to contact Enbridge Gas.

13. Mr. Arnold questions the location of the Payne-Waubuno fault line. Enbridge Gas can confirm that the location is as set out in the evidence<sup>7</sup>. This location has been confirmed by numerous studies of Ontario geology and 3D seismic analysis. There has been no known movement on the fault post Devonian Time, approximately 359 million years ago. As noted in the evidence, the proposed horizontal well will be drilled in a northerly direction away from the fault. Natural Resources Canada states on its website<sup>8</sup> that the Great Lakes Region has had a low to moderate level of seismic activity and there has been no seismic activity in the Lambton County area in the last 30 years. The chance of reactivating the fault by the drilling of the proposed well is remote, given the distance of the proposed well from the fault, the lack of fault movement and the low level of seismic activity. A total of 31 horizontal wells have been drilled in Enbridge Gas storage pools with no adverse effects.
14. In response to Mr. Arnold's request for 3D imaging, Enbridge Gas notes that the well locations for abandoned and active wells are available to the public through the Ontario Oil, Gas & Salt Resources Library at <http://www.ogsrlibrary.com/>. 3D imaging is not made available to the public and Enbridge Gas does not own the software required to interpret this data. Also, the path of the proposed TKC 67H well was always planned to run parallel to the abandoned wells such that it will intersect the same part of the reef as the abandoned wells, with the surface location of the well on Enbridge Gas property.

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<sup>7</sup> See Enbridge Gas response to Arnold interrogatory no. 1.

<sup>8</sup> <https://www.seismescanada.rncan.gc.ca/zones/eastcan-en.php#SGLSZ>

15. Regarding the use of valves, Enbridge Gas confirms that blowout preventors (“BOPs”) are used throughout the drilling operations as required by the MNRF. Once the surface casing has been cemented to surface, the BOPs are removed for the welding of the casing bowl, but the BOPs are reinstalled and used through the remainder of drilling operations. When drilling is completed, a temporary plug is installed and the casing is filled with fluid to surface to allow the safe removal of the BOPs. Final wellhead installation then occurs and both a full opening master valve and an emergency shutdown valve are installed. As noted in the evidence, this valve can be shut remotely from the Corunna Compressor Station to stop flow from the well in the event of an emergency condition.<sup>9</sup>
16. Enbridge Gas does not rely on the landowners to report any issues but appreciates their cooperation and input. As noted in the evidence, Enbridge Gas monitors activity at the storage pools and remote stations continuously<sup>10</sup> through pressure and gas flow monitoring, cameras at remote stations and physical inspections.

## **Summary**

17. The evidentiary record in this proceeding demonstrates that the Project is required in order to replace pre-existing abandoned and re-lined wells in the affected DSAs and Enbridge Gas has met the Board’s and the MNRF’s requirements to proceed. Enbridge Gas therefore requests that the Board issue a report to the MNRF, subject to the conditions set out by Board Staff in Appendix A of its submissions, to recommend the MNRF issue the applied for licences to allow Enbridge Gas to commence the first stage of its drilling program in early September 2020.

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<sup>9</sup> Ibid.

<sup>10</sup> See Enbridge Gas response to Arnold interrogatory no. 4.

All of which is respectfully submitted, this 12<sup>th</sup> day of August, 2020.

**ENBRIDGE GAS INC.**

*[original signed by]*

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**Tania Persad, Senior Legal Counsel**