

## Bonnie Adams

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**From:** Sharkey, Emma (ENERGY) <Emma.Sharkey@ontario.ca>  
**Sent:** Tuesday, September 19, 2017 9:17 AM  
**To:** Bonnie Adams  
**Cc:** zora.crnojacki@oeb.ca  
**Subject:** [External] RE: Enbridge Gas Distribution Inc. - Dow Moore Well Drilling Project - Duty to Consult

Thanks Bonnie, confirming receipt.

Emma

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**From:** Bonnie Adams [<mailto:Bonnie.Adams@enbridge.com>]  
**Sent:** September-19-17 8:32 AM  
**To:** Sharkey, Emma (ENERGY)  
**Cc:** [zora.crnojacki@oeb.ca](mailto:zora.crnojacki@oeb.ca)  
**Subject:** Enbridge Gas Distribution Inc. - Dow Moore Well Drilling Project - Duty to Consult

Good Morning,

Enbridge Gas Distribution Inc. ("Enbridge") is seeking guidance from the Ministry of Energy with regards to the need for duty to consult for the Dow Moore Well Drilling Project.

Enbridge has identified the need to drill two horizontal gas storage wells and an observation well in the Dow Moore Designated Storage Area ("DSA"). The two horizontal gas storage wells are needed to replace deliverability lost due to the abandonment of 5 gas storage wells and 1 observation well and the conversion of 1 gas storage well to an observation well. The observation well is required to monitor the gas content and pressure in the underground storage area which will assist with the continued safe and reliable delivery of natural gas to our existing and future customers.

The total area affected is expected to be less than 0.0018 square kilometers.

Enbridge plans to file applications with the Ministry of Natural Resources and Forestry ("MNRF") to drill the wells. In accordance to the OEB Act, the Minister of Natural Resources & Forestry shall refer to the Ontario Energy Board every application for the granting of a licence relating to a well in a designated gas storage area, and the Board shall report to the Minister of Natural Resources & Forestry on it. The drilling will take place in previously disturbed lands: the gas storage wells will be drilled on property owned by Enbridge and the observation well will be drilled on property belonging to one industrial landowner.

For further details regarding the Dow Moore Well Drilling Project, please refer to the attached project description which also includes a map of the Dow Moore DSA.

Please contact me if you have any questions.

Sincerely,

**Bonnie Jean Adams**  
Regulatory Coordinator

**Enbridge Gas Distribution**  
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500 Consumers Road | North York Ontario | M2J 1P8

# DOW MOORE WELL DRILLING PROJECT DESCRIPTION

## 1.0 PROJECT SUMMARY

Enbridge Gas Distribution Inc. (“Enbridge”) has identified the need to drill two horizontal gas storage wells and an observation well in the Dow Moore Designated Storage Area (“DSA”)<sup>1</sup>. The two horizontal gas storage wells are needed to replace deliverability lost due to the abandonment of 5 gas storage wells and 1 observation well and the conversion of 1 gas storage well to an observation well<sup>2</sup>. The observation well is required to monitor the gas content and pressure in the underground storage area which will assist with the continued safe and reliable delivery of natural gas to our existing and future customers. The proposed drilling is scheduled to occur in the first half of 2018.

There will not be an increase in storage capacity as the wells are being drilled to replace the deliverability lost due to the abandonment of the previously mentioned wells. Enbridge plans to file applications with the Ministry of Natural Resources and Forestry (“MNR”) to drill the wells<sup>3</sup>. In accordance to the OEB Act<sup>4</sup>, the Minister of Natural Resources & Forestry shall refer to the Ontario Energy Board every application for the granting of a licence relating to a well in a designated gas storage area, and the Board shall report to the Minister of Natural Resources & Forestry on it. The drilling will take place in previously disturbed lands: the gas storage wells will be drilled on property owned by Enbridge and the observation well will be drilled on property belonging to one industrial landowner. Each well site is expected to measure approximately 60 square metres or 0.00006 square kilometers for a total of 180 square metres or 0.00018 square kilometers.

Figure 1 shows the location of the proposed wells in the DSA. Figure 2 shows the location of the Dow Moore DSA.

## 2.0 PROJECT INFORMATION

Enbridge serves over 2.1 million active customers, 92% of which are residential customers. The load is mainly a seasonal heating load. Gas storage allows Enbridge to optimize the use of upstream transportation and purchase gas during periods not subject to peak pricing.

Enbridge currently operates approximately 113 billion cubic feet of gas storage in 11 DSAs. Nine of the DSAs are in the Sarnia area, one in Chatham-Kent and one in the Niagara region. The operation includes 108 injection/delivery wells and 29 observation wells.

The Dow Moore DSA is one of the DSAs in the Sarnia area and has been in continuous operation since 1988. Enbridge operates 14 injection wells and 1 observation well in the Dow Moore DSA. The landowner of the parcel of the land where the gas storage wells will be drilled is Enbridge and the owner of the land where the observation well will be drilled is Pembina Infrastructure and Logistics LP (“Pembina”). The Dow Moore DSA consists of Enbridge’s gas storage operation as well as hydrocarbon storage salt caverns operated by Pembina.

The operating agreement between Enbridge and Pembina,<sup>5</sup> and subsequent assignment give

<sup>1</sup> OEB Act, 1998, S.O. 1998, c.15, Schedule B Section 36

<sup>2</sup> Wells abandoned in 2017: TD 7, TD 8, TD 9, TD 21 & TD 22 (Lot 21, Conc. 12, Moore Twp. and TD 12 (Lot 22, Conc. 12, Moore Twp. Gas Storage well converted to observation well in 2017: TD 25 (Lot 21, Conc. 12)

<sup>3</sup> The proposed wells will be referred to as TD 26 (Observation), TD 27H and TD 28H (gas storage wells) in application documents.

<sup>4</sup> OEB Act, 1998, S.O. 1998, c.15, Schedule B Section 40

<sup>5</sup> Subsurface Lease Agreement (Lot 23)

Enbridge the right to drill, operate, maintain and abandon gas storage wells, pipelines and associated equipment within the lands owned by Pembina. The area is pre-disturbed and there have been continuous industrial and farming activities on the land since the early 1970's. These activities include salt solution mining, salt cavern hydrocarbon storage, natural gas storage and accompanying drilling, production, maintenance and abandonment activities.

### **3.1 AUTHORIZATIONS AND RECOMMENDATIONS REQUIRED**

The wells are being planned in accordance with the OEB regulations. Construction of the observation well is also regulated by the MNR through the Oil, Gas and Salt Resources Act and the Canadian Standards Association Z341 Standard – Storage of Hydrocarbons in Underground Formations.

Pending confirmation from the environmental screening, it is expected that the following are required.

- Recommendation from the Ontario Energy Board
- Approval from the Ministry of Natural Resources and Forestry

### **4.1 PROJECT ACTIVITIES**

The well will be drilled in compliance with the Oil, Gas & Salt Resources Act and associated Regulations and Standards. The well will be designed to prevent the contamination of freshwater aquifers or other porous zones; prevent fluid losses and provide for the control of pressures and fluids encountered by the well. The drilling of the well will be recommended by the Ontario Energy Board and approved by the Ministry of Natural Resources & Forestry. The operation, maintenance and abandonment of the well are regulated by the Ministry of Natural Resources and Forestry.

Although only one landowner is directly affected, a copy of the application will be sent to all landowners on the Dow Moore DSA. Landowners on a DSA are aware of the storage operator's ongoing storage-related activities. The landowners on the Dow Moore DSA are:

- City of Sarnia
- Dow Chemical Canada ULC
- Union Gas Co. of Canada, Limited
- Hydro One Network Inc.
- The Corporation of the Township of St. Clair
- Chippewas of Aamjiwnaang (Sarnia)
- 1195714 Alberta Ltd. carrying on business as Pembina Infrastructure and Logistics
- Babcock & Wilcox Industries Ltd. (Mineral Only) & Unitec Disposal Inc. (Surface Only)
- 959669 Ontario Inc.
- Alana Jeanne Fox and Foxburg Enterprises Inc.
- Judy Hall and Omer Hageniers and Brian Gordon Fox – Estate
- Enbridge Gas Distribution Inc.

Prior to drilling the well a gravel drill pad and laneway will be installed. Generally, the laneway and gravel pad will be constructed by stripping the topsoil and installing geotextile matting and gravel. A drilling rig will be moved onto location, the well will be completed and the drilling rig will be

moved off of the location. The area will be restored; the laneway and a small site surrounding the well will remain. Instrumentation will be installed and the data measurements at the well will be relayed to Enbridge and stored on a computerized system.

The total area affected is expected to be less than 0.0018 square kilometers, and the each well is expected to occupy approximately 0.00018 square kilometers.

## **5.0 POTENTIAL ENVIRONMENTAL EFFECTS AND MITIGATION MEASURES**

The Environmental Screening will assess physical, natural and socio-economical features potentially impacted by construction activities. Mitigation measures will be recommended as part of the screening to minimize potential adverse effects to the environment. The mitigation recommendations, together with Enbridge's drilling program which meets the requirements of the Oil, Gas & Salt Resources Act, should effectively serve to protect environmental features within the proposed well location.

It is anticipated that the majority of adverse and/or socio-economic effects will be construction-related, temporary and transitory, and likely avoided by locating the well within previously disturbed land. A Risk Assessment will be completed in compliance with CSA Standard Z341 – Storage of hydrocarbons in underground formations, as adopted by the Oil, Gas & Salt Resources Act.

## **6.0 PROJECT BENEFITS**

The project allows the continuance of the deliverability required to effectively serve our Utility customers and to allow the gas content and pressure to be measured in real time and provide data which will ensure the continued safe and reliable delivery of natural gas to existing and future customers.

## **CONTACT INFORMATION**

Regulatory  
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519-862-6032

# GEOGRAPHICAL LOCATION OF DOW-MOORE DESIGNATED STORAGE AREA (DSA)

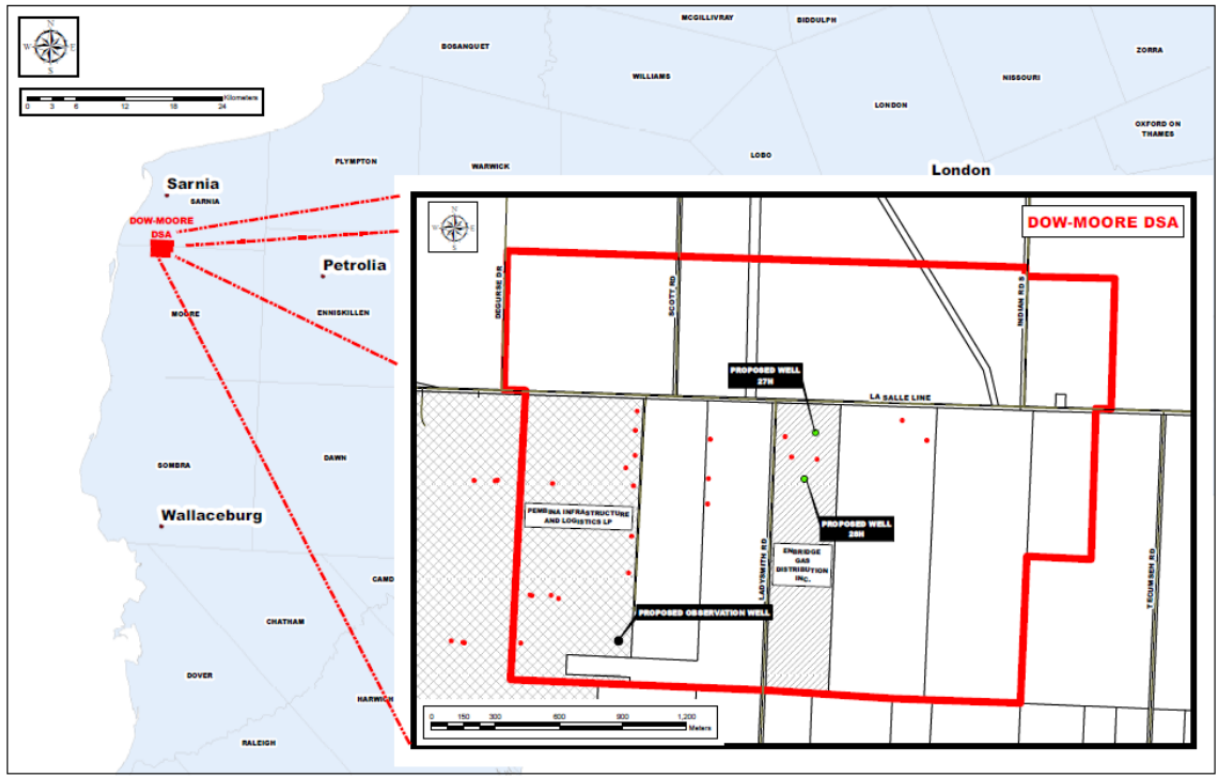


FIGURE 1