

ENBRIDGE GAS DISTRIBUTION INC. RESPONSE TO
ASSOCIATION OF POWER PRODUCERS OF ONTARIO INTERROGATORY #10

INTERROGATORY

A.4 What are the alternatives to the proposed facilities? Are any alternatives to the proposed facilities preferable to the proposed facilities?

Reference: EB-2012-0451 Exhibit A Tab 3 Schedule 7 Alternatives

Preamble: Enbridge discusses the alternatives to the proposed project and APPrO would like to better understand these alternatives as they relate to meeting primarily the growth objectives.

- a) Enbridge discusses the potential use of compression at Station B as a project alternative. If Enbridge were to consider only the system growth requirements, please describe what minimum compression facilities and the resulting costs would be required to accommodate growth requirements as at 2020 and also the incremental facilities to handle additional growth to 2025.
- b) Enbridge indicates that siting compression in an urban area can be problematic, and that this option was less favourable, but presumably, this conclusion may have been arrived at taking into account all of Enbridge's objectives. Please discuss the potential to utilize compression at this location to only meet the growth requirements.
- c) Enbridge indicates that use of compression would require new business and labour processes for the Company in this geographic region. Please confirm that the Company has significant expertise in operation and maintenance of compression equipment in its Tecumseh gas storage operation and that such business and labour processes could be adapted accordingly.

RESPONSE

- a) The Company did consider compression within the distribution system, but screened out the alternatives early in the process due to the following factors:
- i. The Company does not currently have compression within the distribution system.
 - ii. In order to have compression facilities with a reliability that approaches that of pipelines, a minimum of two (dual redundant) compression systems at each location complete would be required.
 - iii. Multiple sites for compression would be required in order to meet system requirements, creating significant additional operational complexity.
 - iv. Compression is not suited for the rapidly changing, and wide range of gas flows and pressures on the distribution system. Enbridge has experience with compression for stable and steady gas storage and long pipeline operations. Depending on the flows required, a distribution compression scheme would require multiple compression units of different sizes to accommodate the wide range of pressures and flows. With the inherent complexity of such a scheme, reliability may be compromised. Enbridge is not aware of any large distribution company that is successfully using compression in this way.

A rough estimate of the compression requirements is 15,000 HP for the Don Valley line in order to accommodate growth over the forecast period. The Company did not produce a cost estimate for this at Station B as it did not believe it could site the required compression at this location. Please refer to b) below.

- b) The urban location and foot print of Station B make this site unsuitable for compression facilities. The inability to meet air and/or noise emission requirements for an urban environment and the close proximity to sensitive receptors (less than 100 metres away) removed this option in the screening phase.

- c) Enbridge does not utilize compression in its distribution system. Enbridge currently uses large reciprocating compressor technology for seasonal storage injections in its Tecumseh gas storage operations, which are located in a rural/industrial area. Some of the processes could be adapted, but many new processes and procedures would need to be developed, as they are for different operating parameters, and in significantly different environments. Personnel could not be expected to be shared easily, given the distances. Lastly, compression within the distribution system would significantly alter the complexity of controlling flows within the system.