

**ENBRIDGE GAS DISTRIBUTION INC.
GTA Project (EB-2012-0451)**

**UNION GAS LIMITED
Parkway West (EB-2012-0433)**

**UNION GAS LIMITED
Brantford-Kirkwall / Parkway D (EB-2013-0074)**

**Council of Canadians Interrogatories for TransCanada PipeLines Limited
(Supplemental Evidence Aug. 16, 2013)**

COC – TCPL (Supplementary) #6

Reference: EB-2012-0451, EB-2012-0433, EB-2013-0074: TransCanada Supplemental Evidence pp. 10-11/17

TransCanada uses a technical recoverable estimate of approximately 560 Tcf for WCSB ultimate potential resources in its Base Case supply analysis. This number has more than tripled since 2005. This estimate has never been higher. Figure 7-1 shows the growth of forecast ultimate potential resources over time.

Requests:

6. (a) Please provide the data from National Energy Board (NEB), Energy Resources Conservation Board (ERCB), Alberta Geological Survey (AGS), British Columbia Ministry of Energy and Mines, (BCMEM), Canadian Society of Unconventional Gas (CSUG), Canadian Association of Petroleum Producers (CAPP), that comprised the basis for the estimates noted above and by Figure 7-1.
- (b) Please explain the method used for compiling this data to arrive at the aforementioned estimates.
- (c) Please provide the actual production from the sources indicated in Figure 7-1 for each of the years of 2000 – 2012.

COC – TCPL #7

Reference: EB-2012-0451, EB-2012-0433, EB-2013-0074: TransCanada Supplemental Evidence, pp. 13-14/17

As a result of the generally positive developments related to the potential economic production of 12 shale and other tight formation plays and in anticipation of LNG export capability, TransCanada has included approximately 11 Bcf/d of production in its Base Case by 2025 from new areas such as the Montney gas play, Duvernay, Horn River, Liard and Cordova shales (Figure 7-4).

Requests:

7. (a) Please describe the positive developments referred to and how these were taken into account in generating the estimate of 11 Bcf/d of production in its Base Case by 2025.
- (b) Please provide the production growth assumptions used to make the 11 Bcf/d forecast for the Montney gas play (in both BC and Alberta), and the Duvernay, Horn River, Liard and Cordova shale plays for each year between 2013 and 2025.
- (c) Please provide the number of wells that were assumed to be added to each of these plays in each year over the period 2013-2025 in order to arrive at these production forecasts.
- (d) Please list the other shale and tight formations, other than the Montney, Duvernay, Horn River, Liard and Cordova, that were included in the 11 Bcf/d forecast and the production levels assumed for each (by year from 2013 to 2025), and provide the number of wells that were assumed to be drilled in each year in each of these plays to meet this forecast.

COC – TCPL #8

Preamble:

The regulatory environment for shale gas extraction in the United States has been progressively tightening as more information becomes available related to impacts associated with development.

It is apparent that progressive regulatory reform is needed in Canada. For example: the British Columbia (BC) government has set a target of cutting greenhouse gas emissions by at least 33 per cent by 2020 and 80 per cent by 2050. According to the Pembina Institute, emissions from shale gas extraction will need to be addressed in order to meet these goals, which in turn could affect the pace and scale of shale gas development in BC.¹

Requests:

8. (a) Please describe the assumptions TCPL has made about the extent and costs of regulation of shale gas extraction from the WCSB for the present period and through 2025, including any future regulation required to achieve present Canadian commitments to reduce greenhouse gas emissions.
- (b) Please describe whether the regulation and/or taxation of carbon has been considered in this regard, and if so please provide any assessment that was carried out and in what manner.
- (c) Please provide any assessment or estimate of the extent of greenhouse gas emissions associated with the shale gas development that is projected to occur in the WCSB.

¹ According to the Pembina Institute, [BC's] Climate Action Plan estimated that the plan's policies "would be sufficient to reduce provincial emissions to 19% below 2007 levels by 2020. . . unaccounted for factors in the natural gas sector exacerbate that gap. Shrinking — and eventually eliminating — the gap will require all of the proposals in the Climate Action Plan to be fully implemented and a number of additional steps to be taken." (The Pembina Institute. Sept. 2011. Shale Gas: Risks to B.C.'s Climate Action Objectives. p. 26. <http://pubs.pembina.org/reports/shale-and-climate.pdf>)