

Ontario Energy Board

Union Gas Limited

Application for pre-approval of the recovery of the cost consequences associated with the installation of three new compressors along Union's Dawn to Parkway pipeline transmission system.

**INTERROGATORIES OF
ENERGY PROBE RESEARCH FOUNDATION
("ENERGY PROBE")**

September 8, 2015

**Union 2017 Dawn Parkway Project
Interrogatories on Behalf of Energy Probe Foundation**

Energy Probe-IR #1

Ref: Exhibit A, Tab 3, Page 2

Preamble: Union highlights the “maturation of traditional supply sources from western Canada” as a reason for why Ontario should diversify its natural gas supply.

- a) Can Union provide a detailed breakdown of the remaining reserves in the Western Canadian Sedimentary Basin (WCSB) compared to the Marcellus and Utica shale gas plays?**
- b) Can Union provide a comparison of the average cost of production of natural gas from the WCSB to that of the Marcellus and Utica shale gas plays?**

Energy Probe-IR #2

Ref: Exhibit A, Tab 3, Page 2

Preamble: Union refers to the Alberta Energy Regulator’s report “Alberta’s Energy Reserves 2013 and Supply/Demand Outlook 2014-2023” for the company’s forecast of natural gas exports out of Alberta to Ontario and other eastern markets. But the AER report assumes that the WTI price of oil will average \$95.00 (US) in 2014 and will increase to \$111.81 by 2023 (page 7 of report).

Would the recent dramatic decline in the price of oil impact the availability of exports out of Alberta to other markets?

Energy Probe-IR #3

Ref: Exhibit A, Tab 5, Schedule 1, Page 12

Preamble: “ICF is currently projecting completion of 12 North American LNG export facilities between 2016 and 2021, which will export a total of 11.2 Bcfd by 2025.”

- a) Can you provide a detailed list of the 12 projects in question and whether they have been approved or at what stage of the approval process they currently stand?**
- b) How confident is ICF that these 12 export terminals will receive approval from either regulators or backing from investors in the face of environmental opposition and a slowdown in the global economy?**

Energy Probe-IR #4

Ref: Exhibit A, Tab 5, Page 11

Preamble: Union sees no future market opportunity for firm Dawn to Kirkwall transportation capacity intended for natural gas exports to the United States. Any further turn back of Dawn to Kirkwall firm transportation capacity will be utilized to mitigate the Parkway Delivery Obligation for Union's in-franchise customers. [EB-2013-0365 Decision dated June 16, 2014, Appendix B, p. 4 of 7, iii]

- a) Please provide an update to the forecast of Capacity Parkway Delivery Obligation for Union's in-franchise customers (Direct Purchase or contract customers including Halton Hills) and for System supply at November 2015, 2016 and 2017.**
- b) Please indicate if the PDO will be removed at that point or whether residual Parkway Delivery Obligations exist for either Direct Purchase or Sales (Union). If the latter, provide the forecast capacity/volumes for 2018.**

Energy Probe-IR #5

Ref: Exhibit A, Tab 5, Page 14

Preamble: Effective November 1, 2017, Union will have 5.9 PJ/d of firm contracted and system Dawn Parkway transportation demands with deliveries at Parkway as shown in Figure 5-4.

- a) Please provide a schedule that lists existing Dawn-Kirkwall and Dawn to Parkway Contracted Shippers and Contract details – Quantity (ies), Receipt Point(s), Delivery Point(s), and Term.**
- b) Please provide the same forecast at November 2017.**
- c) Please indicate which shippers are expected to terminate, based on the reverse open season or other notice by November 2017.**
- d) Please indicate which existing shippers have/are expected to select the as filed and revised True Up Provisions.**

Energy Probe-IR #6

Ref: Exhibit A, Tab 5, Schedule 1, Page 23

Preamble: ICF's forecast for oil is "between \$60 and \$70" in the short term and \$75 per barrel in the long term. Those figures are already off by as much as 40%. The oil forecast is a major component to this application. With low oil prices, investment in the oil sands declines and subsequently, so does output. With declining output in Alberta's oil sands sector, the industrial demand for gas also declines, freeing up greater reserves for exports to Eastern markets, as well as pushing down the price of those exports compared to gas from the Marcellus and Utica shale gas plays.

Can ICF provide a forecast for natural gas exports from Alberta if the WTI price of crude remains below \$45 for the remainder of 2015 and into 2016? Does that forecast (\$45 oil) materially impact its long-term forecast of oil at \$75?

Energy Probe-IR #7

Ref: Exhibit A, Tab 5, Schedule 1, Page 25

Preamble: Nearly the entire growth in natural gas demand in Ontario is a result of the power sector.

Can you provide the electricity demand forecast used to predict the power sector's need for natural gas? Is the forecast based on growing demand for electricity in the province? Declining? Or flat?

Energy Probe-IR #8

Ref: Exhibit A, Tab 5, Schedule 1, Page 53

Preamble: In Exhibit 5-2, ICF's forecast for natural gas demand in Ontario is significantly higher than that of the National Energy Board (NEB).

Can you explain why your forecast is significantly higher than that of the NEB?

Energy Probe-IR #9

Ref: Exhibit A, Tab 6, Page 19

- a) Please provide information on previous approved True Up provisions for Union and Other approved arrangements entered into by Union for transmission contracts.**

- b) Please indicate for each of the above arrangements:
 - i) the category of Project (e.g. Existing Pipeline, Pipeline Infrastructure expansion and new Facilities),
 - ii) the term, and
 - iii) penalties.
- c) Please provide details of the driver(s) for the new proposed revised True Up provision to increase the threshold cost from \$20.0 million to \$50.0 million.
- d) Please indicate the change in risks to the company and In-franchise customers.
- e) Please indicate when Union will file updated evidence reflecting the increased threshold.

Energy Probe-IR #10

Ref: Exhibit A, Tab 7

- a) Please provide existing Design Day Capacity Allocation at Dawn for the existing 9 units and position Plant B, DD Capacity of 1.8PJ/d.
- b) Please provide DD Capacity allocation with Dawn H compressor in service, assuming no incremental demand.
- c) Please indicate if Plant B will be maintained as Standby or Back-up or dismantled and removed.
- d) If the latter, is there any Salvage value or negative salvage value related to Plant B and what is the amount? If so, please provide the amount and supporting information.
- e) What is the Net Book value (Rate Base) of Plant B?

Energy Probe-IR # 11

Ref: Exhibit A, Tab 9, Schedules 1, 2 and 3

Preamble: The total estimated cost for the Project is \$622.5 million. This includes \$107.4 million coming into service in 2016 and \$500.8 million coming into service in 2017. The remaining \$14.3 million will be spent in 2018. The in-service facilities are described in Exhibit A, Tab 11.

- a) Please provide the on-site delivered cost of each of the 3 Siemens RB-211 44000 HP units.

- b) Compare these prices to delivered costs of the Parkway C and D units.
- c) Please discuss any material differences.
- d) Please indicate the reasons for the apparently high level of Contingencies for each of the 3 Compressors and associated facilities.
- e) In particular, for Dawn H, please indicate the breakdown of the contingency numbers and show how the Contingency number was derived.
- f) Please compare the answer to the Parkway C and D compressors and facilities-- forecast vs actual contingency incurrence.

Energy Probe-IR # 12

Ref: Exhibit A, Tab 9, Schedule 4

- a) Please explain the following Inputs to Schedule 4:
 - Lines 2 and 6 col 1: 441.8 and 447.8 TJ/d demands,
 - Line 2 col 3: 2.937\$/GJ/mo. - As this relates to average flow and peak and design day demands, and
 - Line 6 col 3: 0.232\$/GJ/mo.
- b) Please explain how the revenue forecasts relate to the distance based costs input to the Cost Allocation Model.

Energy Probe-IR #13

Ref: Exhibit A, Tab 9, Schedules 1, 2 and 3

- a) Please Confirm the EBO 134 Guideline relates primarily to Distribution System Expansion.
- b) Please indicate what is/are the corresponding OEB Guidelines for Transmission and in particular, Compression Projects.
- c) Please either provide a link to the OEB site or electronic copies of the above.
- d) Confirm the Dawn H Compressor is both a Replacement for Dawn Plant B and also a System Expansion Project.
- e) Please provide one or more examples of previous applications/approvals that had this dual requirement.

- f) Please provide for the example(s) a copy of the facilities Costs and Revenues and a sample of the Phase1 DCF analysis. Ensure Notes in Input assumptions are included.

Energy Probe-IR #14

Ref: Exhibit A, Tab 9, Schedule 6

- a) For the Parkway Projects please provide a Table that Separates the Capital Costs and Revenues for Plant H into
 - i) Replacement Capital and Operating Costs and
 - ii) System Expansion Capital and Operating costs based on the Rated Capacity and Peak DD capacity.
- b) Please provide a Scenario with a Phase1 DCF analysis and P.I. based on the assumption that the incremental System Expansion Capital and Operating Costs and Revenues for Dawn H are inputs, rather than the full Capital and Operating cost and revenues and the Lobo D and Bright C Compressors and associated facilities are System Expansion facilities.
- c) Please Tabulate the Results and Compare to the as filed DCF analysis.
- d) Please provide the above as an Excel Work book that includes both the base as filed Phase 1 and the requested Scenario Analyses.
- e) Please provide a Phase 2 and Phase 3 Analysis for the requested Scenario.

Energy Probe-IR #15

Ref: Exhibit A, Tab 10, Schedule1-Revenue Requirement

- a) Please provide the change in revenue requirement related the Dawn Plant B.
- b) Please indicate if this has been netted out (with any positive or negative salvage).
- c) Please discuss how the Rate of Return may change under the Board's Cost of Capital during the period 2015-2018 (Taking into account the term of Union's IRM plan).
- d) Provide a Revenue Requirement sensitivity based on 100 basis points change in Return.

Energy Probe-IR #16

Ref: Exhibit A, Tab 10, Table 10-1 and 10-2 Cost Allocation

Preamble: The current Board-approved method for allocating Dawn Station transmission costs associated with the Dawn Parkway System was most recently reviewed and approved by the Board in EB-2011-0210.

The change to the 2013 Board-approved Dawn Parkway System allocation factor is provided at Table 10-1. The allocation of Dawn Parkway System costs includes demands associated with the Project of 452,911 GJ/d, as provided in Exhibit A, Tab 8, Table 8-1.

- a) **Please assist with understanding the approved 2013 Cost allocation to each Service Area and Ex-franchise Customers and changes/differences due to the Projects:**
 - **Working paper(s) and notes that support the sources of, and calculation of the numbers in Table 10-1 at lines 1-7.**
 - **Working paper(s) that supports the sources of, and calculation of the numbers in Table 10-2 at lines 1-9.**
- b) **Please describe how current the Cost allocation is based; for example, between the Dawn Station and Dawn-Parkway System.**
- c) **Please provide the relevant Dawn-Parkway Demands for 2014-2018.**

Energy Probe-IR #17

Ref: Exhibit A, Tab10, Schedule 3

- a) **Please provide the EB-2015- 0035 Schedule(s) supporting the estimates.**
- b) **Please provide for the M1 and R1 Rate classes, the calculations underlying Commodity Delivery Charges on lines 2 and 12 and estimated sales customer bill reduction on lines 8 and 19.**
- c) **Please indicate in detail, the basis of the Change in the Total Bill for Sales customers and indicate the underlying commodity rate assumptions**