

UNDERTAKING JT1.12

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To provide costs used to review the Lakeshore or Lake Ontario alternatives as compared to proposals

RESPONSE

As described in Alternatives, Exhibit A, Tab 3, Schedule 7, the Company looked at southern routing to reinforce the XHP grid to Station B.

A scenario of building a NPS 36 from Parkway West to Station B, running south along Highway 407, east along the QEW, and then along Lake Shore Boulevard was considered. The desktop costing of this scenario is \$950 million, but does not include IDC or escalation. This scenario would alleviate the minimum system pressure constraint, and would allow the Gas Supply benefits to be achieved.

A scenario of twinning the NPS 24 from the termination of the NPS 36 MSL line to West Mall Station with a NPS 24 line and then paralleling the NPS 20 Lake Shore line from West Mall Station to Station B with a NPS 36 pipeline was considered. The desktop costing of this scenario is \$590 million, but does not include IDC or escalation. This scenario would alleviate the minimum system pressure constraint, but would not allow all of the Gas Supply benefits to be achieved due to capacity being constrained upstream on the NPS 36 MSL line from Parkway.

With respect to the NPS 20 line along Lake Shore Boulevard, in either of the above scenarios, the pipeline may be abandoned along the paralleled sections. However, this would involve numerous pressure regulation stations and localized piping in order to provide appropriate pressure into the HP grid and service lines currently fed from the NPS 20 line. The incremental costs are not included in the above estimates.

Timing in both scenarios was a concern, due to the urban nature. Multiple constraints would likely arise that could not be identified with a desktop study. Routing changes due to constraints could substantially impact the costs. Other socio-economic factors that impact stakeholders, such as traffic disruption, construction noise, dust, etc. also need to be considered. There would be considerable risk of encountering suspect soils along these routes, and additional costs would be incurred for handling of any suspect soils encountered. These routes also have future potential for being impacted by other

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large infrastructure projects, examples being a tunnel to the island or the moving of the Gardiner Expressway. If relocation of a section of mains is required in the future, franchise agreements require sharing of the cost between the utility and the City. A routing with an easement in a utility corridor does not have the same level of future risk for relocation costs to be incurred.

Scenarios were examined that included a submarine pipeline routing through Lake Ontario, with a landfall south of Station B and connecting to Station B. These scenarios were screened out due to the long lead times expected with permitting, contracting specialized resources, and timing windows that would be anticipated for construction. The Company did not believe this could be in service prior to 2017. Costs, and particularly uncertainty of costs, both construction and maintenance, were also reasons why these routes were screened out of the process.