

TIMING

Note: Elements of this evidence have been updated through the submission of Exhibit A, Tab 3, Schedule 9 (filed on July 22, 2013).

1. The purpose of this evidence is to describe the timing requirements to construct and commission the proposed facilities. Enbridge is seeking a decision by the Ontario Energy Board (the "Board") in September 2013 to proceed with the project design, planning, and procurement in order to meet the in-service requirements of November 2015 for these facilities.
2. The in-service requirements are based on the following three factors that impact the 2015/2016 heating season: (1) inability to attach customers and meet minimum pressure requirements in the GTA Project Influence Area on peak day, (2) reliance on non-renewable transportation services that may be impacted in the 2015/2016 heating season¹, and (3) service requests from TransCanada's shippers for November 1, 2015. Distribution system requirements for growth and reliability are described at Exhibit A, Tab 3, Schedules 4 and 6, respectively. Gas supply reliability concerns and gas supply benefits are described at Exhibit A, Tab 3, Schedule 5.

Project Schedule

3. The schedule and total project costs are predicated on the successful completion of the next stage of project requirements. This includes detailed design engineering, the receipt of permits, the procurement of the necessary material, labour, and equipment, and the proposed construction schedule. A high level summary of the proposed project schedule follows, which is also provided as a Gantt Chart in Figure 1 attached to this schedule. The proposed construction schedule is described in Exhibit C, Tab 2, Schedule 2.

¹ Based on TransCanada's two recent public announcements: (1) Canadian Mainline Existing Capacity Open Season and (2) The Energy East Pipeline Open Season, which are described in Exhibit A, Tab 3, Schedule 5.

	<u>Start</u>	<u>End</u>
Regulatory Proceedings	December 2012	September 2013 (Expected)
“Pull Forward” Engineering ² (“PFE”)	In Progress	September 2013
Permits	In Progress	October 2014
Environmental	In Progress	September 2016
Detailed Engineering Design (“DED”)	September 2013	November 2014
Procurement	September 2013	March 2016
Construction (Segment A&B)	December 2014	September 2015
Testing and Commissioning	September 2015	October 2015

4. As mentioned in Exhibit C, Tab 2, Schedule 2, the construction schedule is driven by an extensive Horizontal Directional Drilling (“HDD”) program which will be performed by an HDD contractor working in parallel to the mainline contractor. Common construction scheduling between both segments allows more efficient use of contracted resources, leads to lower costs, and is the basis for the cost estimate in this application.

Critical Path Dependencies

Detailed Engineering Design (“DED”)

5. The Company is taking steps to mitigate risks with construction delays to meet the required in-service dates and to also mitigate project costs and overruns. These steps include the advancement of work to a Pull Forward Engineering (“PFE”) phase that would otherwise be performed in the DED phase. The PFE is necessary for procurement planning and permit applications. Examples of this work are described below.

² “Pull Forward” Engineering is engineering work advanced from the “Detailed Engineering Design” phase. This work is advanced during the regulatory proceeding to mitigate risks and costs associated with delays that may influence the construction schedule.

Procurement

6. The lead time to procure specialized HDD services to install large diameter pipe is expected to take more than one year. It is expected that there will be high demand for this specialized skill and equipment at the time of the proposed construction schedule as a result of other pipeline projects across Canada and the U.S. HDD design work must be completed in advance of HDD procurement and is therefore included in the PFE phase. The lead time to procure pipe and special fittings is also expected to take more than one year given the size and availability.

Permitting

7. The lead time for approximately 300 permit requirements is expected to vary from ten days to up to two years. Permits with the longer lead times, up to two years, are from the Ministry of Natural Resources for watercourse crossings with species at risk³. Other work requiring permits, such as tree pruning, can only be performed in specific seasonal windows. This requires the permits to be obtained up to one season in advance of construction in addition to the estimated one year required to apply and obtain the necessary permits. Other permits, such as hydrostatic water discharge permits, and some land requirements are also expected to take more than one year. The majority of the permit application process will commence following project approval; however, there is a potential for construction start delays due to permitting delays. Permits with longer lead times will commence earlier than project approval due to time sensitivities with both the permit requirements and project need.

³Redside Dace (fish species) habitat was identified at three watercourses. The Redside Dace is protected under the provincial legislation, the Endangered Species Act (Ontario) ("OESA"). An OESA Permit typically takes more than 1.5 years to obtain.

Project Changes and Schedule Impact

8. The proposed changes in Update No. 1, as described in Exhibit A, Tab 2, Schedule 4, required the Company to revisit the project cost estimate, schedule, and in-service dates. In particular, upsizing the Segment A pipeline from NPS 36 to NPS 42 requires incremental time in the engineering design and procurement phases. In addition, the lead time for materials for the NPS 42 design is several months longer than the lead time for materials for the NPS 36 design. This is a significant driver in the schedule to meet the required in-service date of November 1, 2015.
9. The revised design and procurement requirements shifted the originally proposed construction schedule, which conflicted with construction limitations in the winter months around the NPS 30 Don Valley line⁴. Pressures would have to be lowered to facilitate work in proximity to this line which may compromise its ability to adequately serve the City of Toronto in peak conditions as described in Exhibit A, Tab 3, Schedule 3. The increased project and operational risks were not considered to be tolerable to proceed as formerly presented.
10. As a result, it was determined that it is no longer feasible to start construction as originally proposed in August 2014 and target Segment A and B in-service dates in April 2015 and December 2014, respectively.
11. The Company is continuing to advance work on the critical path to mitigate risks with the project schedule. Critical path items can be advanced from the PFE phase for the first month beyond the currently contemplated timeline, however in

⁴ Although the construction of Segment B will begin in January 2015, any work around the NPS 30 Don Valley line will be performed in the spring and summer months due to winter construction limitations in proximity to this line.

subsequent months, working exclusively on critical path items would compromise the current cost and schedule estimates. The advancement of critical path work would be approximately \$0.5 million to \$1.0 million in the first month, which increases two to three times from this amount for the second month. Beyond the second month, costs would be expected to escalate significantly due to the requirement to potentially incur cancellations charges on long lead time items and critical resources, such as HDD and mainline contractors.

Summary

12. In summary, in order to have Segment A and B in-service prior to November 2015, construction must begin no later than December 2014. Since the design, permitting, and procurement process will take more than one year to complete, DED over and above the PFE must commence in October 2013. The Company is therefore seeking a decision from the Board no later than September 2013.

A Board decision beyond September 2013 may have one of the following impacts:

- i. An increase in the required PFE expenditure in order to continue work on the critical path items and maintain the ability to meet the in-service date.
- ii. A delay in the continuation of the PFE and procurement processes. As stated above, this may directly result in a failure to meet the in-service date of November 1, 2015 due to material lead times on the NPS 42 items.