

ENBRIDGE LINE 10 WESTOVER SEGMENT REPLACEMENT

Peer Review Report

Prepared for:

Copetown Landowners Group

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ENBRIDGE LINE 10 WESTOVER SEGMENT REPLACEMENT

IN THE MATTER OF the *National Energy Board Act*, R.S.C 1985 c. N-7, as amended and the Regulations made thereunder;

AND IN THE MATTER OF an application by Enbridge Pipelines Inc. for the Line 10 Westover Segment Replacement Project;

AND IN THE MATTER OF Hearing Order OH-001-2016 and NEB File No. OF-Fac-Oil-E101-2015-09-02

PEER REVIEW REPORT

Hardy Stevenson and Associates Limited

30 June 2016

1.0 INTRODUCTION

Enbridge Pipelines Inc. is proposing to replace a portion of its existing Line 10 pipeline. The proposed Line 10 Westover Segment Replacement Project (“the Project”) will replace approximately 32 kilometres (“km”) of 12-inch-diameter pipe with 35 km of a new 20-inch-diameter pipe between Enbridge’s Westover Terminal to the Nanticoke Junction facility. The Project proposes to include three reroutes totaling approximately 11 km. One proposed reroute is through lands owned by Copetown Landowners Group and other landowners. The reroute from Kilometre Post (“KP”) 5 to KP 14 is referred to in this report as the “Copetown Diversion”.

On December 4th, 2015, Enbridge Pipelines Inc. submitted an application (“the Application”) to the National Energy Board (“NEB” or “the Board”) for approval to construct and operate the proposed Project¹. On February 17th, 2016, the Board issued a Hearing Order (“Hearing Order”) for the Project. The Hearing Order provides Enbridge with the opportunity to file additional evidence during the hearing process.

On April 18, 2016 Enbridge filed additional update information² including: updated Project scope and engineering information; updated stakeholder engagement and Aboriginal consultation information; updated land acquisition details; updated environmental survey status and schedules; and additional supporting documentation. Additional information has

¹ December 18, 2015, Letter Irene Smith, Enbridge to Sheri Young, National Energy Board Re: “Enbridge Pipelines Inc. (“Enbridge”) Line 10 Westover Segment Replacement (“Project”) Application Pursuant to Section 58 on the National Energy Board Act (“NEB Act”) and Section 45.1 of the Onshore Pipeline Regulations (“OPR”) (Filings A74506 and A74508)”

² April 18, 2016, Letter Adam Oswell, Enbridge to Sheri Young, National Energy Board “Additional Evidence and Application Update for the Line 10 Westover Segment Replacement Project (“Project”) Hearing Order OH-001-2016 (“Hearing Order)”

also been filed at various times in response to Copetown Landowner Group information requests (“IRs” or “IR”) and National Energy Board IRs.

This report is a peer review by Hardy Stevenson and Associates Limited (“HSAL”) of the Project focused specifically on the existing Line 10 through the Copetown area and the proposed Copetown Diversion reroute.

2.0 PEER REVIEW METHODOLOGY

The following peer review methodology is used by HSAL. The peer review methodology is presented in the form of questions:

- Is the purpose of the Environment and Socio-Economic Assessment (ESA) work clearly stated, and are all issues and impacts encompassed through the stated purpose?
- Is the methodology sound enough to permit our objective review of the issues, data and facts?
- Are relevant data and facts clearly and consistently used in the reports / study?
- Are certainties and uncertainties of the ESA studies openly and objectively stated?
- Are there data gaps? Can we trust the data?
- Are the conclusions supported by the data and research undertaken?
- If the peer review team examined the data, would it reach the same conclusions?
- Are realistic mitigation measures proposed?
- What are our conclusions as peer reviewers?
- What is our recommendation?

Each of these questions was examined through HSAL’s peer review of the Line 10 specific to the Copetown area.

3.0 RESEARCH COMPLETED

To inform the peer review, we completed the following research:

- Reviewed NEB Filing Requirements.
 - Specifically, NEB Requirements for Assessing Route(s)
- Reviewed Enbridge's November 2015 Environment and Socio-Economic Assessment ("ESA") completed by CH2M Energy Canada and Dillon Consultants Limited.
- Reviewed supporting environmental and socio-economic data.
- Reviewed Enbridge NEB Filing and Supporting Documentation.
- Reviewed Enbridge's responses to the NEB and CLG Information Requests.
- Met with Copetown landowners who form the Copetown Landowners Group and obtained data regarding possible: agricultural, natural environment and socio-economic environment effects and walked the land in the vicinity of the proposed and existing route in the Copetown area.
- Interviewed the owners of the Copetown Woods Golf Course and Flamborough Hills Golf Course.
- Completed a high level comparative analysis of Copetown Diversion against a route parallel to the existing Line 10 route.
- Assessed and reviewed Ontario Ministry of Natural Resources and Forestry's biophysical and socio-economic data relevant to the Copetown Diversion route and a route paralleling the existing Line 10.
- Reviewed the Canadian Environmental Assessment Act 2012.
- Examined other Enbridge pipeline projects (i.e. Alberta Clipper Project and Edmonton to Hardisty Pipeline Project) where the pipeline crosses golf courses.
- Examined other Enbridge commissioned studies (Line 11 EA) by Dillon Consultants Limited looking at alternative alignments.

4.0 PEER REVIEW FINDINGS

4.1 Purpose of Line 10 Copetown Diversion

The purpose of the Application is stated in *ESA Section 1.2 the Project Overview*. In *ESA Section 1.4, Scope of the Project*, Enbridge describes the scope of the project as identifying the physical components and activities required to carry out the Project enabling it to proceed.

Through the review of the information filed as part of the NEB 'Leave to Construct' application, including the Environmental and Socio-Economic Impact Assessment³ HSAL concludes that Enbridge is clear on the stated purpose of the Project.

The Project Purpose is described in *Section 1.3* of the Application as *"a routine maintenance project that, upon completion, will restore this segment of Line 10 to its original operating capacity of approximately 74,200 bpd."*⁴ In the *ESA Section 2.1* Project Purpose is stated as replacing:

*"a segment of the existing Line 10 pipeline where preliminary data suggests that this segment, which dates from the 1960s, has experienced an increasing number of preventative maintenance digs to visually inspect and repair the line, and has therefore, reached Enbridge's conservative threshold for replacement."*⁵

Enbridge is also concerned about maintenance impacts to golf courses where Line 10 crosses them in Copetown and other areas. In 2013, Enbridge identified an alternative route in the Copetown area and other areas.

Replacing the existing Line 10 12-inch-diameter pipeline with a new 20-inch-diameter pipeline is seen to be the solution. The replacement pipeline will be approximately 35 km long. The ESA states, the Project will improve reliability and safety of the system, and restore the pipeline to its approved operating capacity. Enbridge states, *"the Project includes three proposed reroutes in order to avoid golf courses, rural residences, and a residential subdivision, totaling approximately 11 km"*⁶.

³ CH2M Hill Energy Canada Limited and Dillon Consulting Limited, Westover Segment Replacement Project, Environmental and Socio-Economic Impact Assessment, prepared for Enbridge Pipelines Inc, November 2015

⁴ Enbridge Pipelines Inc. Line 10 Westover Segment Replacement Project, Section 1 Executive Summary p. 2 of 2 – (bpd) barrels per day

⁵ Application Submitted to the NEB, Section 2.1 Project Purpose, Appendix 6.1 1a of 10

⁶ Enbridge Pipelines Inc. Line 10 Westover Segment Replacement Project, Section 1 Executive Summary p. 1 of 2

4.2 Environmental and Socio-Economic Assessment

To meet the requirements of the *NEB Filing Manual*, Enbridge commissioned CH2M Hill and Dillon to assess the biophysical and socio-economic effects of the new Line 10 route including the proposed new Copetown Diversion pipeline route. To address NEB Filing *Manual Guide A – A.2 Environment and Socio-Economic Assessment*, in relation to the Copetown area, CH2M Hill and Dillon completed a description of the environment and socio-economic setting in the vicinity of the Copetown Diversion in ESA, *Section 5.0, ESA Appendices 2A and 2B, Section 9.0 and Appendix 3*. CH2M Hill and Dillon also completed an effects assessment to address *Section A.2.6 of the Filing Manual – Effects Assessment*.

The identification and analysis of effects occurs in ESA *Section 6.0* and the identification of mitigation measures for effects occurs in ESA *Sections 6.0 and 8.0 and Appendix 4*. The significance of effects is addressed in ESA *Section 6.0*. To address NEB Filing Guideline requirement A.2.7, CH2M Hill and Dillon identified cumulative effects, and mitigation measures. The significance of cumulative effects were assessed and evaluated in ESA *Section 7.0. Table A-1* of the NEB Filing Manual requires an analysis of circumstances and interactions requiring detailed biophysical and socio-economic information. The ESA examines 19 biophysical and socio-economic factors in ESA *Sections 5.0, 6.0 and 7.0, and Appendices 2A, 2B, 3 and 4*.

4.3 Methodological Errors

In reviewing Enbridge's NEB Application and ESA report, HSAL identified methodological errors in the environmental and socio-economic study process such that we were not able to complete an objective review of the issues, data and facts. Nor could we reach the same conclusion that the Copetown Diversion is the preferred route for Line 10 in the Copetown area. The following are the methodological errors HSAL identified:

- The design of the public consultation process did not allow the elicitation of environmental and socio-economic assessment comments important to informing Enbridge's environmental assessment decisions.
- Route alternatives should have been assessed in the Copetown area.
- Underreported data and missing data.
- Lack of clarity in the application of evaluation criteria.
- Mitigation measures have been unevenly applied and assessed.
- Incomplete identification and analysis of cumulative impacts.

As a result of these methodological errors, HSAL is not able to reach the same conclusion as Enbridge that the Copetown Diversion is the preferred route in the Copetown area vs. a

route paralleling the existing Line 10 route or other route alternatives. In addition, when comparing and evaluating the existing Line 10 alternative route at the high level against the proposed Copetown Diversion alternative, HSAL observes that a route paralleling the existing Line 10 in the Copetown area would be preferred over the Copetown Diversion route.

4.3.1 NEB Filing Manual and EA practice

In terms of public consultation program design, the NEB Filing Manual directs how the public consultation process should be designed and implemented. *Section 3.4.2 - Design of Consultation Program*⁷ requires Enbridge to present information about the design of the consultation program and the factors that influenced the design. *Section 3.4.3 - Implementing a Consultation Program*⁸ requires Enbridge to present the *outcomes of the consultation program for the project*. In addition, where concerns arise, Enbridge would be expected to identify concerns and address them⁹.

Concerns:

To close the loop in consultation activities and address concerns before they become complaints, the Board expects applicants to:

- seek to understand the full nature of concerns expressed by persons or groups;
- consider the feasibility of any mitigation proposed by persons or groups to address those concerns;
- respond to concerns; and
- work with persons or groups to jointly resolve concerns.

Fig. 1 NEB Filing Manual, Addressing Concerns

4.3.2 Design of Public Consultation Process

Enbridge describes their public and stakeholder consultation process up to November 2015 in *Section 4.0* of the Application. Consultation with landowners began in 2013 and is discussed in *Section 8*. Enbridge has committed to continue to consult. Enbridge consulted with the public and stakeholders guided by their Corporate Social Responsibility (“CSR”) Policy, of which, the Goals and Principles state:

- *“Enbridge will engage stakeholders clearly, honestly, and respectfully.*

⁷ NEB Filing Manual, Section 3.4.2 IMPLEMENTING A CONSULTATION PROGRAM p. 3.5

⁸ NEB Filing Manual, Section 3.4.3 p. 3.6

⁹ NEB Filing Manual, Section 3.4.3 p. 3.9

- *Enbridge is committed to timely and meaningful dialogue with all stakeholders, including shareholders, customers, and employees, Aboriginal and native American peoples, governments, regulators, and landowners, among others.”¹⁰*

Based on the Goals and Principles, Enbridge designed a stakeholder consultation program involving: identifying potentially affected groups and individuals (*Section 4.3 Stakeholder Identification*); completing a wide range of outreach activities including mail-outs, online communication, one on one meetings, presentations, open houses, project webpage, toll-free number and establishing an office with public engagement staff in the City of Hamilton (*Section 4.4 Overview of Stakeholder Consultation*). *Table 4.1* of the Application lists materials distributed and *Table 4.4* provides a summary of stakeholder consultation activities.

HSAL is able to trace how Enbridge consulted the public and stakeholders. HSAL would have also consulted the same stakeholders using similar forums and venues. *Section 4* of Enbridge’s filing, ‘Stakeholder Consultation’¹¹ indicates that Enbridge consulted with a broad range of stakeholders, using multiple methods, and received comments on wide range of matters. Enbridge’s documentation of the public consultation process and comments received is thorough. Documentation was provided in response to *CLG I.R. 1.12 (b)* through the following tables: *Results of Public Consultation from the Open Houses, Full Consultation Log – Line 10 Routing Concerns and Table of Public Comments Received*.

Table 4.5 of Enbridge’s Application provides a summary of stakeholder issues and concerns and Enbridge’s responses. Concerns include the following: need for the project, soil conditions on farms after replacement, depth of cover, route of existing pipeline, right-of-way route selection and other matters. In response to comments on route selection, Enbridge states, “*The Project includes three proposed reroutes in all, totaling approximately 11 kilometers, along new ROW.*”¹²

In reviewing Enbridge’s response to stakeholder questions, responses to questions regarding right-of-way (“ROW”) Route Selection and the June 23rd, 2015 letter to landowners and attachments,¹³ HSAL has drawn the conclusion that, except for minor route adjustments, the Copetown Diversion route was presented to the public as the preferred route already decided for Line 10 in the Copetown area. This is problematic because it limits the scope of public and stakeholder consultation to the preferred route rather than

¹⁰ Enbridge Pipelines Inc. Line 10 Westover Segment Replacement Project, Stakeholder Consultation, Section 4.1, p. 1 of 26

¹¹ Enbridge NEB Application, Section 4.0

¹² Table 4.5 p. 19 of 26

¹³ Letter “ENBRIDGE PIPELINES INC. LINE 10 WESTOVER SEGMENT REPLACEMENT PROJECT’ from David O’Brien to neighbours 23 June 2015

appropriately consulting on route alternatives and other environmental assessment decisions.

In reviewing the design and implementation of the consultation process, HSAL observes there are significant gaps in the design of public consultation process that undermine the conclusion that Enbridge received the public and stakeholder information critically important to the ESA process. While Enbridge undertook a wide ranging consultation process through which they received information on stakeholder and landowner interests, there were key questions not asked that should have been fundamental to the process. Specifically, HSAL is not able to identify that Enbridge asked for and received public and stakeholder comments that could influence environmental assessment decision making.

Further, to meet the expectations of the NEB Filing Manual, and sound EA practice, HSAL would have expected the public consultation process to seek public input on the key environmental assessment decisions Enbridge is required to make and note their responses. As a result, Enbridge's Line 10 public and stakeholder consultation process did not allow critically important biophysical and socio-economic information to be identified and meaningful consultation to occur before key environmental assessment decisions were made.

As a result, HSAL is unable to identify how the public consultation influenced the *outcomes of the public consultation program for the project*. Due to these gaps, HSAL is not able to conclude that Enbridge was successful at conducting a meaningful public consultation program.

A. The most important environmental decision - the selection of the preferred route alignment - was made before the public was consulted

Making the key decision about the Line 10 route alignment before consulting the public, and more specifically the affected landowners, is a critical flaw in the public consultation program.

Enbridge's Open House Story Boards state: *"Three proposed reroutes are being considered: Copetown Woods and Flamborough Hills golf clubs, Knollwood Golf Club, the Mount Hope subdivision and Southern Pines Golf & Country Club; new rights-of-way would be acquired for these reroutes; a final pipeline route will be determined through: —field studies (environmental and archeological), —input from directly affected landowners; Pipeline routes are often not final until the end of the regulatory process."*¹⁴ While the Story Boards state that the Copetown Diversion route was being considered, HSAL notes that there is not a reference of the alternative route paralleling Line 10 nor are other potential route

¹⁴ Enbridge NEB Application, Open House Story Boards, Appendix 4.18, Page 5 of 14

alternatives mentioned. The Open House maps only show the golf course reroutes and the remainder of the Line 10 route.

In response to CLG I.R. No. 1.8 (c) Enbridge states, *“Enbridge launched the Line 10 Replacement Pipeline Project on May 15th, 2013. There was no consultation prior to the launch.”* This confirms that the Copetown diversion route was selected before public input was obtained. Enbridge used the consultation process to describe their decision and only make minor refinements to the already selected route.

The Province of Ontario confirmed the importance of consulting the public before key decisions are made and the definition of ‘*meaningful*’ through two Consolidated Joint Board decisions. The Consolidated Joint Board review of the Township of St. Vincent and Town of Meaford hearing involved a landfill selection process.¹⁵ The Joint Board strongly criticized a consultation program in which critical landfill siting decisions were made by the proponent without meaningful public input:

*“In the Board’s view, the public participation here was informative, and not consultative. The decisions were generally made without public input, and the public was informed of those decisions. The decision that the preferred “alternative to” was a new landfill site in the Township was made without public involvement. The criteria... were selected and prioritized... without public involvement. The decision to go to the Gillespie site was made without consulting the public.”*¹⁶

As discussed by Lundgren, in *Re Steetley Quarry Products*,¹⁷ the Consolidated Joint Board found that the proponent had carried out an inadequate public consultation program:

“The Board believes that the [1987] Guidelines clearly contemplate meaningful public consultation in a cooperative atmosphere, commencing in the earliest stages of planning, before any final or irreversible decisions are made. In the Board’s opinion, a review of the [1987 Guidelines] would lead the public to reasonably envision taking part in the planning process and to expect to be able to influence decisions.

The evidence indicates that the proponent had little, if any, regard for the [1987 Guidelines]. The decision to landfill the South Quarry was made in the absence of meaningful public participation. At best, the public consultation process was used to canvass reactions to the decision to landfill, to identify community concerns, and to develop mitigation measures and a compensation package. The Board finds this approach not only inadequate but also inconsistent with the [1987 Guidelines]. The

¹⁵ As cited by R. Lundgren, Canadian Environmental Law Association, CH 88-03 1990

¹⁶ Ibid p. 37 As cited by R. Lundgren, Canadian Environmental Law Association, CH 88-03 1990

¹⁷ (1995), 16 C.E.L.R. (N.S.) 161 (Jt. Bd).

proponent should have made every effort to include the community from the earliest stages in a meaningful public consultation process, particularly when there was already discontent within the community with Steetley’s past and current operations.”¹⁸

The requirement to complete meaningful public consultation continues as one of the fundamental purposes of the *Canadian Environmental Assessment Act (CEAA)*. For example, under “Purposes,” *Section 4 (1) (e) the Act* states the purpose of the Act is “to ensure that opportunities are provided for meaningful public participation during an environmental assessment.”¹⁹

B. Consultation narrowed to preferred Copetown Diversion route

While consultation did occur with landowners on the existing Line 10 and landowners on the Copetown Diversion route, specific environmental assessment questions were not asked to all stakeholders and the one on one consultation was overly narrowed to matters related to: 1) ‘property acquisition’ and discussions about the willingness of the property owner willingness to sell their land; and, 2) gathering environmental data that would point out minor adjustments to the preferred route alignment. For example, in response to CLG I.R. No. 1.8 (g) Enbridge states,

“A stakeholder consultation program was undertaken by Enbridge for the Project and detailed information relating to the program is provided in Section 4 - Stakeholder Consultation of the Project Application [NEB Filing ID: A74506-7]. Through its consultation program, Enbridge has worked closely with potentially affected stakeholders and landowners to identify interests and concerns related to the Project. Enbridge has incorporated and considered stakeholder and landowner feedback, both in favour and in opposition of the pipeline route, into Project planning and in the selection process for the proposed replacement pipeline route. Feedback from landowners was incorporated into the proposed route for Line 10, which was then provided to CH2M HILL for assessment in the Environmental and Socio-Economic Assessment (“ESA”).

Further, feedback regarding the construction and operation of the Project, including the proposed route, were noted where applicable within the ESA for each element in Section 6.0 under the subheading “Identified Potential Effects, Mitigation Measures and Potential Residual Effects”. Where specific issues or concerns were raised, potential effects and corresponding mitigation were identified [NEB Filing ID: A74580-2].”

¹⁸ Ibid., p 218.

¹⁹ Canadian Environmental Assessment Act, Current to June 6, 2016 and Last Amended on December 31, 2014.

HSAL can confirm that Enbridge worked with Copetown area landowners to identify their interests and concerns; including their support or opposition to the preferred route. However, public consultation was overly narrow and involved information gathering on the biophysical and socio-economic effects of the preferred route through the Copetown Area, rather the broader public and stakeholders about key environmental assessment decisions. Specifically, information was gathered on minor route deviations rather than alternative route alignments.

Enbridge was also involved in negotiations with landowners about land acquisition. 'Negotiations about land acquisition' is not a public consultation program.

In response to *CLG IR 1.8 (g)*²⁰, Enbridge states they received comments and incorporated input into the selection process for the proposed replacement pipeline route. However, HSAL is unable to identify documentation showing what these comments were and how they were incorporated into decisions about the selection of the route alignment and other EA decisions.

As well, in speaking directly with the members of the Copetown Landowners Group, HSAL learned that these members feel that the Enbridge's Land Acquisition Agent imparted a sense that landowners would not be able to affect Enbridge's decision to go through their lands as part of the Copetown Diversion²¹. Thus, public comments on environmental assessment decisions would not be heard.

C. Consultation about route alternatives and the route preferred alignment should have been the core element in the design of Enbridge's public consultation program with all stakeholders

Through the Information Request (IR) process, the CLG asked *"How has Enbridge's proposed route been determined through field studies and consultation with impacted landowners to date?"*²² (CLG No. 1.2). Enbridge responded, *"In determining its proposed route, Enbridge uses various studies, including engineering and environmental studies and consultation with landowners, stakeholders, and other interests, to identify route options to minimize impacts to the public and the environment."*

²⁰ CLG I.R. No. 1.8 (g)

²¹ Personal interview with John Neeb, Farmer and Member of Copetown Landowners Group. June 10, 2016. Personal Interview with Doug Gowland, Landowner and Member of Copetown Landowners Group. June 10, 2016. Personal Interview with Andrew Guiducci, Landowner and Member of Copetown Landowners Group. June 10, 2016. Personal Interview with Sian McGregor, Farmer and Member of Copetown Landowners Group. June 11, 2016.

²² CLG IR No. 1.2

While collecting public comments on matters that would influence minor route adjustments is sound practice, Enbridge's response does not clarify what the public comments were, how they were used to identify minor route adjustments or used to help minimize impacts to the public and the environment. In reviewing the ESA, *Section 6.1, Integration of Consultation and Engagement*, HSAL is not able to identify how these stakeholder comments have been influential. *ESA Section 6.1.4* refers to engagement, however there are no details provided and therefore no way to trace what those comments were and how they have been addressed.

Thus, HSAL has drawn the conclusion that Enbridge's consultation with landowners is centered on discussing landowner willingness to sell and Enbridge's ability to purchase land at a reasonable cost. While information on the biophysical and socio-economic environment was gathered from landowners, Enbridge should have also asked for information about agricultural and other environmental and socio-economic impacts that would allow a comparison and evaluation of the preferred Copetown Diversion route vs. paralleling the existing Line 10 vs. paralleling other potential route alignments in the Copetown area.

D. Enbridge should have sought public comments that would have informed and influenced the findings of the ESA

At its core, the design of the public consultation process should focus on key decisions integral to an environmental assessment. In the experience of HSAL a meaningful, appropriately designed public consultation process would, at a minimum, ask the public the following questions:

- Is the study area appropriate?
- Are the alternative routes and alternative methods sufficient and have we missed any obvious routes or methods?
- Are the evaluation criteria we are proposing to use fulsome and comprehensive?
- Is the evaluation method clear, logical and fair?
- Have all the potential effects of the alternative and preferred routes been identified?
- Are cumulative effects apparent?
- Does the evaluation clearly lead to our choice of the preferred alternative?
- Are there additional mitigation measures for negative natural, social and economic effects that should be considered?

- Are there follow-up activities that need to be addressed during construction and mitigation?

HSAL would have expected the public to be asked these questions on Open House display boards, information handouts and through PowerPoint presentations. On reviewing the Public Consultation Open House comment table, the Full Consultation Log regarding Routing Concerns and the Table of Public Comments Received, we can find no information showing that such questions were asked or comments received.

E. Summary

Enbridge did consult a wide variety of stakeholders and received a wide range of information about pipelines, safety, decommissioning and risks. Discussions occurred with significant landowners. Information received is well documented. Consultation was initiated from the time the Project was announced and it continues.

However, in the opinion of HSAL, there are significant gaps in the design of the public consultation process as the public was not consulted in a meaningful manner before the preferred route was selected. The consultation is too late. The public consultation process with the broader public and stakeholders involved canvassing reactions to Enbridge's initial decision about their preferred alignment including the Copetown Diversion. The ongoing consultation with property owners (both the Copetown Diversion owners and existing Line 10 owners), was overly narrowed to matters of property acquisition and minor route diversions arising from environmental information received.

Because of problems with the design of the public consultation process, little to no data was gathered from the public by Enbridge to inform decisions about comparative effects and impacts or to have public comments assist in the evaluation of either the preferred route or alternative route alignments, should alternative alignments have been assessed.

Public consultation must be meaningful. To be meaningful, a consultation program should consult the public before decisions about the pipeline route is made. Receiving broad comments from the public on a variety of pipeline topics is important, but simply receiving fortuitous comments²³ from the public about the route of the pipeline and ROW route selection is a significant gap.

²³ CLG IR 1.9 (a)

4.3.3 Unassessed Route Alternatives

CH2M and Dillon discuss Route Selection in *Section 4.0* of the ESA. *Section 4.2 'Replacement Pipeline Routing Consideration'* states that Enbridge “is currently exploring opportunities, through in-depth consultation with landowners, local communities and officials, to deviate from the existing pipeline route in some areas where there are Project, community and environmental benefits to do so”.²⁴

In *Section 5.0* of the ESA, CH2M Hill and Dillon describe the environmental and socio-economic setting along the existing Line 10 pipeline route as well as the Copetown Diversion. *Table 5.1-1* is a broad overview of the Regional Study area describing the environmental and socio-economic setting across 19 factors. Several factors are discussed in detail where the environmental and socio-economic setting is significant. Overall, HSAL would have gathered similar information to provide an overview of the environmental and socio-economic conditions.

In *Section 6.0* of the ESA, CH2M Hill and Dillon describe the effects assessment process. In reviewing the assessment method in *Section 6.1 – Methodology*, HSAL notes that the application of the data to compare alternative alignments and selection of a preferred route alternative is not included in the methodology. Further, in *Table 6.1-1, Map, Effects Assessment Spatial Boundaries*, a route paralleling Line 10 is not considered in the assessment. Instead an assessment of the preferred route alignment was completed.

HSAL would have expected the CH2M Hill and Dillon ESA methodology would involve using data to identify differences between route alignments and complete a comparative environmental evaluation of potentially viable alternative routes. In the opinion of HSAL, the analysis of alternative routes is the core requirement of an environmental assessment process. Potential alternative routes occur in the Copetown area and could have been assessed, such as:

1. A route paralleling the Existing Line 10 and Line 11;
2. Removal and replacement of the existing Line 10 (rather than abandonment);
3. A route that parallels the existing TransCanada and Imperial Oil lines;
4. A route paralleling the Hydro One (“HONI”) transmission right of way; and,
5. Other potential new diversion routes including the Copetown Diversion route.

HSAL would have expected alternative routes to have been evaluated due to: 1) NEB Filing Manual Requirements; 2) expectations of a normal EA practice; and 3) Enbridge’s own practice of assessing alternative pipeline routes.

²⁴ CH2M Hill and Dillon, ESA, Section 4.2, p. 4.1

A. Filing Manual Requirement to Assess Alternatives

HSAL compared the methodology used by Enbridge against the methodology recommended in the *NEB Filing Manual*²⁵ and concluded that while Enbridge has met the requirements of *Guide A, Section A.2* to describe the environment and socio-economic setting of the Copetown Diversion, they have not followed several other important NEB Filing Requirements. NEB Filing Manual, Section 4.2.2 *Filing Requirements – Alternatives*, outlines the NEB filing requirements for the alternatives and the selection criteria for different projects, routing, design and construction alternatives. The relevant Filing Requirements are produced in *Figure 2 – 4.2.2. Filing Requirements – Alternatives*.

In comparing the *NEB Filing Requirements – Alternatives, Section 4.2.2. S 2*, to the ESA actually completed by Enbridge, HSAL is not able to identify a description, comparison and justification of the selection of the proposed route against other route options using appropriate selection criteria. In relation to, '*Section 4.2.2. Guidance – Alternatives, Alternatives Evaluated*', HSAL is not able to identify that Enbridge considered other technically, economically and environmentally-feasible routes meeting the need. In regards to '*Selection Criteria*', HSAL is not able to identify that different project routing alternatives were summarized and compared using criteria to justify and demonstrate how the proposed Copetown Diversion option was selected and why it is the preferred option.

4.2.2 FILING REQUIREMENTS – ALTERNATIVES

1. Describe the need for the project along with the rationale for selecting the applied for project over other possible options.
2. Describe and justify the selection of the proposed route and site including a comparison of the options evaluated using appropriate selection criteria.
3. Describe the rationale for the chosen design and construction methods. Where appropriate, describe any alternative designs and methods evaluated and explain why these other options were eliminated.

4.2.2. Guidance – Alternatives²⁶

Alternatives Evaluated

In the context of economic feasibility, alternatives are other technically, economically and environmentally-feasible means of meeting the need for the project and its eventual retirement, such as a different:

- transportation mode;
- transmission system that could achieve the same purpose as the proposed facilities;

²⁵ National Energy Board Filing Manual, Section 4.2.2. Filing Requirements – Alternatives, Release 2015-01 p. 4.3

²⁶ National Energy Board Filing Manual, Section 4.2.2. Filing Requirements – Alternatives, Release 2015-01 p. 4.4

<ul style="list-style-type: none"> • route or site; • facility design; or • construction method, including different means of development, implementation and mitigation. <p>Selection Criteria</p> <p>Different project, routing, design and construction alternatives must be summarized and compared using criteria that justify and demonstrate how the proposed option was selected and why it is the preferred option. The level of detail provided by the applicant may reflect the more conceptual nature of the options. When comparing project routing, design or construction options, elaborate on the following criteria, as appropriate:</p> <ul style="list-style-type: none"> • engineering design; • economic feasibility or life span4 costs; • effect on reliability and security of the existing system; • demonstrated public concern; and • environmental and socio-economic constraints or potential effects.
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Figure 2 – 4.2.2. Filing Requirements – Alternatives

B. EA Practice

Enbridge reviewed NEB Filing Guidelines in *ESA Section 1.8 Concordance with the NEB Filing Manual*.²⁷ The Concordance Table compares information required in *Section A.2.5 Description of the Environmental and Socio-Economic Setting* against the information gathered and the ESA section where the information can be found.

However, as part of normal EA practice, HSAL would have expected the CH2M Hill and Dillon ESA to also present the concordance of the ESA with Section 4.2.2 of the *NEB Filing Manual, Filing Requirements – Alternatives*. Further, based on the Filing Manual requirements, we would have expected Enbridge to:

- a) Present comparative data in a manner that would allow a systematic comparison of the biophysical and socio-economic effects of a route paralleling the existing Line 10 or other alternative route alignments against the Copetown Diversion;
- b) Summarize and compare alternative routes using the selection criteria so as to justify whether the Copetown Diversion has greater or lesser effects than a route paralleling the Existing Line 10 or other routes.

²⁷ Table 1.8-1. NEB Filing Manual Checklist for Guide A-A.2 and Guide K-K.2 Environment and Socio-Economic Assessment CH2M Hill Energy Canada Limited and Dillon Consulting Limited, Westover Segment Replacement Project, Environmental and Socio-Economic Impact Assessment

- c) Evaluate whether the Copetown Diversion would be preferred against a route paralleling the current Line 10 route alignment or other routes and draw conclusions based on the evaluation.

In response to the IRs²⁸, Enbridge describes the effects of a route paralleling the current Line 10, however, a 'description' is not an 'environmental assessment' as there is no comparative analysis and evaluation based on factors and criteria occurred.

In *Section 6.0* of the ESA, CH2M Hill Energy Canada and Dillon Consulting list criteria they use to determine the significance of adverse effects of the preferred route. The result is the identification of significant residual effects. They completed an environmental analysis of the preferred route and present interactions tables that list: elements, interactions, the description of the interaction, residual effects, cumulative effects and a monitoring plan. Further, using tables they identify potential effects for a number of environmental features, spatial boundary and location, key mitigation measures and potential residual effects²⁹. Enbridge also used tables to evaluate significance.³⁰ In *Section 6.1.8*, CH2M Hill and Dillon discuss significance in terms of whether an effect has a high probability of occurrence and includes other indicators of significance. HSAL would have used similar descriptors.

In summary, the CH2M Hill Energy Canada and Dillon Consulting methodology for the biophysical and socio-economic examination of the preferred route represents sound practice. However, the same data should have been gathered and applied in alternative route evaluation (Copetown Diversion vs. paralleling Line 10 vs. other potential routes). An appropriate comparison to alternative routes was not provided. Doing so for alternatives could have allowed Enbridge to justify the selection of a Preferred Route.

C. Enbridge has compared and evaluated Route Alternatives for other pipelines

Enbridge has compared alternative routes for other pipelines in a manner that would be consistent with environmental assessment practice. Their experience in identifying and assessing pipeline route alternatives in relation to Line 11 in the Westover area is illustrative.

HSAL reviewed the Line 11 route identification and justification process in the Westover area. Dillon Consulting Limited was retained by Enbridge to complete an ESA of one segment of Line 11 located between Westover Station and approximately 500m north of

²⁸ CLG IR 1.17 (a)

²⁹ E.g. Table 6.2.9-1, Potential Effects, Mitigation Measures and Residual Effects of Construction and Operation of the Project on Vegetation.

³⁰ E.g. Table 6.2.9-2, Significance Evaluation of Potential Residual Effects of Pipeline Construction and Operation on Vegetation; and

Concession Road West. The study was scoped to include a route evaluation (Section 6, Route Evaluation).

Dillion Consulting Limited states,

“The route evaluation involved comparing the existing corridor with the reroute alternative with the objective of identifying a Preferred Route for the Project. The route evaluation provided an opportunity to minimize or eliminate potential adverse effects of the Project on the biophysical and socio-economic environment. The evaluation included input received from the stakeholder consultation program and was used to address stakeholder concerns where possible.”³¹

Further, in providing an overview of the route evaluation in Section 6.1 Methodology, process they state,

“The route evaluation included the comparison of the existing corridor with the reroute alternative to determine which would have the least environmental and socio-economic impact and that met Enbridge’s technical and economic requirements. It is important to note that a Preferred Route may not satisfy every established criteria; however, mitigation techniques may be implemented to minimize the effects. The evaluation began with a high-level review followed by a more detailed evaluation of routes. The route evaluation included a buffer from the existing corridor and reroute alternative to account for potential minor deviations should they be required at a future point of time.

In Section 6.2 Route Evaluation Process Dillon states,

“The purpose of the evaluation was to compare sections of the existing corridor and the potential reroute alternative.”³²

For the Line 11 replacement study cited above, two route options are identified: a route to the west of the existing Line 11 and a route paralleling Line 11 on the eastern side. In the opinion of HSAL, Dillon met the requirements of Section 4.2.2 of the NEB Filing Manual. Dillon Consulting Limited also gathered data so as to meet the requirements of Tables A-1 to A-3 of the NEB Filing Manual (2013). They state,

“The biophysical and socio-economic factors assessed as part of the ESA included those provided in Tables A-1 to A-3 of the NEB Filing Manual (2013) identified within the spatial and temporal boundaries established for the Project. Table A-1 was used to

³¹ Enbridge, Line 11 Westover Segment Replacement and Decommissioning Project: Environmental and Socio-Economic Assessment, Dillon Consulting Limited, January 2014, p. 78

³² Dillon Consulting Limited, January 2014, p. 78

identify potentially affected valued components, and Tables A-2 and A-3 were used to further refine potential effects and mitigation measures.”³³

For Line 11, Dillon identified routing criteria, identified rules that informed the application of criteria and applied data in a manner that resulted in the identification of the Preferred Route. In the opinion of HSAL, Dillon’s route evaluation process for Line 11 represents sound environmental practice. It should have been the practice used to assess alternative routes in the Copetown area.

4.3.4 Under Reported Data

CH2M Hill and Dillon collected significant biophysical and socio-economic data at a high level on the preferred Line 10 route alignment including the Copetown Diversion³⁴. Data was gathered using available map and data sources, interviews and through professional staff walking the land.

Based on our review of the data and additional data available, HSAL concludes that some data is underreported and more granular data should have been gathered and applied for some factors. Had the data been examined and applied in route evaluation, it is likely that the proposed new Copetown Diversion route would be less preferred than a route paralleling the existing Line 10 in the Copetown area. For example, the following data should have been gathered and applied in the comparison of route alternatives:

- a. Prime agricultural land, specialty crops, tile beds and drainage effects.
- b. The design of the Copetown Woods Golf Course. Specifically, whether the Copetown Woods Golf course was designed and constructed with Line 10 and 11 route alignments and management in mind. Further, whether the effects are the same if the new Line 10 route is abutting the golf course or crossing the golf course.
- c. Whether, as a 27-hole course, construction of a route paralleling Line 10 would allow continuation of a golf course function for Flamborough Hills Golf Course.
- d. Golf course maintenance practices and long-term development plans.
- e. Whether Line 11 maintenance would continue pertaining to the golf courses.
- f. Identification and information about the house that would be demolished for a Line 10 parallel route.

³³ Enbridge, Line 11 Westover Segment Replacement and Decommissioning Project: Environmental and Socio-Economic Assessment, Dillon Consulting Limited, January 2014, p. 7

³⁴ ESA data tables and map based data.

- g. Information about how extensive the removal of wooded areas would be for a route paralleling Line 10.

HSAL would expect in-depth data to be applied equally in the comparison of the Copetown Diversion route and a route paralleling Line 10.

Enbridge refers to methods such as Horizontal Directional Drilling (HDD), for avoiding construction effects and mitigating the magnitude of those effects and managing the effects where they are unavoidable. Given the significant effects to agricultural land associated with the Copetown Diversion, HSAL would have expected greater discussion about alternative methods of avoiding construction impacts, mitigating or managing effects on a route paralleling Line 10. We would have also expected a greater discussion of effects due to the demolition of a private residence and business in paralleling Line 10, should these effects occur due to the easement and workspace at the Line 10 HDD entry point.

Based on the data provided, HSAL is not able to identify data on how extensive the removal of wooded areas for a route paralleling Line 10 would be. Neither can we find the discussion of comparative environmental data on the removal of woodlands associated with other alignments including the Copetown diversion. Had the data been available, the disruptive effects on the route parallel to Line 10 could be compared to determine if the route has the least disruptive effects on woodlands for this factor.

4.3.5 Environmental Criteria and Weighting

CH2M Hill and Dillion Consulting present route selection considerations. In general, HSAL can support their use of these considerations for route selection decisions. Given that route considerations are discussed in the ESA report, HSAL would have expected them to be applied as criteria to support route evaluation. In the ESA, CH2M Hill and Dillion Consulting list considerations³⁵ as:

- avoiding residences and urban development;
- avoidance, to the extent practical, of known locations that provide site-specific habitat for species of concern, or the application of special mitigation measures;
- complying with applicable regulatory requirements;
- avoiding socially and culturally important areas;
- crossing all highways and all-season roads at as close to right angles as feasible;
- where practical, following existing linear infrastructure (e.g., pipelines and roads);

³⁵ CH2M Hill Energy Canada Limited and Dillon Consulting Limited, Westover Segment Replacement Project, Environmental and Socio-Economic Impact Assessment, p. 4.1

- locating the pipeline to accommodate future maintenance operations to the extent feasible;
- avoiding wetlands, where feasible; and
- using the shortest route practical.

Eleven environmental assessment route selection factors are also presented by Enbridge as being considered during route evaluations for the Line 10 Replacement Project. Again, HSAL is not able to identify how the factors have been used to compare alternatives or support the choice of the Copetown Diversion. HSAL would have also expected the route selection factors to be presented as part of the ESA study, rather than a response to an Information Request³⁶. The factors presented by Enbridge are:

“consultation with directly affected stakeholders; landowners land use function (row crop agriculture, vegetable agriculture, nursery operation, aquatic agriculture, vineyard operation, etc.); adjacent developments to the proposed pipeline (public or private recreational areas, residential or commercial housing developments, industrial developments, airports, highways, roadways, etc.); existing utilities (number of utilities, types of utilities, material composition, size, etc.) that cross the proposed route; water crossings or wetlands along the proposed route; wildlife habitats; general land topography, surface soil conditions, and localized drainage; adequate work space along the proposed ROW for safely constructing the pipeline; potential pipeline crossovers required to avoid land use activities, permanent structures, and environmental areas; minimizing pipeline direction changes to maintain hydraulic characteristics for optimum flow performance of the pipeline; and adequate easement for any future maintenance activity that maybe required.”

The core part of an environmental assessment study is the application of data against criteria in a manner that allows the proponent to make a rational choice. The factors presented by CH2M Hill and Dillon and Enbridge are acceptable. What is missing from the ESA, is the application of these factors as criteria and the application of the criteria to allow an evaluation of alternative routes.

A. Criteria Used and Weighed

In an environmental assessment study, evaluation criteria can be weighted.

In Section 6.2.2.2 relating to Soil and Soil Productivity, CH2M Hill and Dillon state,

³⁶ The alternative evaluation criteria are minimally discussed by Enbridge in response c) ‘Copetown Woods & Flamborough Hills Golf Clubs – KP 5.9 to KP 12.6’ to NEB IR No. 2.12 a1, NEB IR No. 2.12 a2, NEB IR No. 2.12 a3, and NEB IR No. 2.12 a4.

“Landowners along the replacement pipeline raised concerns about soil drainage since some portions of the land are systematically tilled. No further concerns have been raised to date”.

Given the prominence of the Copetown area as having Class 1 agricultural land and likelihood of soil effects, HSAL would have given greater weight to ‘avoiding agricultural impacts’.

HSAL’s is also concerned that the ‘ability to purchase land at a reasonable cost’ appears to be a *de facto* route selection criteria that has been given significant weight. Based on information gathered through our discussions with both the Copetown Landowner Group and the Copetown Woods and Flamborough Hills Golf Course landowners, HSAL has drawn the conclusion that the ability to negotiate an appropriate land sale or lease agreement was and is a significant evaluation criterion. With regard to EA practice, ‘ability to buy land at a reasonable cost’ is an inappropriate environmental assessment criteria and inappropriate as a determinant of EA outcomes.

‘Avoiding impacts to the golf courses’ is a route selection criterion and appears to have been given considerable weight by Enbridge; particularly over criteria such as avoiding agricultural impacts. For example, HSAL observed that the golf courses are the only biophysical and socio-economic features on Enbridge’s June 2015 PowerPoint presentation regarding the Preferred Route³⁷.

HSAL would have expected to see whether and how all of the criteria were weighted. We would also have expected to see why some criteria, such as “avoid golf courses” appear to have more weight than “avoid creating additional linear corridors” or “avoid impacts to agricultural land”.

a. Uneven weighting of agricultural criteria

HSAL is able to reach the same conclusion as Enbridge that the pipeline will have agricultural impacts; however, insufficient information has been provided by Enbridge on how decisions are made about agricultural effects to allow HSAL to draw the conclusions about the preferred route on this factor.

Enbridge provides an in-depth analysis of the effect on one farm. In response to *NEB IR No. 2.12 a1, NEB IR No. 2.12 a2, NEB IR No. 2.12 a3, NEB IR No. 2.12 a4* Enbridge points out the

³⁷ Appendix 4.8, June 2015 Power Point slides by Ken Hall, Slide 3, Line 10 Westover Replacement Segment Map
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Hardy Stevenson and Associates Limited

negative impact to a the Collins farm as a reason for choosing the Copetown Diversion route. Enbridge states,

“The proposed route filed with the NEB for the Project did not follow the existing Line 10 so as to avoid disruption to both Copetown Woods and Flamborough Hills Golf Clubs, and to minimize the impact to the operation of Collins Farm Produce, north of the golf clubs. The golf clubs are both operating businesses that provide recreational opportunities to the local community (club members and the general public). Collins Farm Produce is a vegetable farm that produces and distributes product to local grocers.

The proposed route reduces restoration and construction mitigation requirements to maintain the farm’s drainage and irrigation systems, and minimizes the loss of production acreage. This route was established through consultation between Enbridge, Collins Farm Produce, and an adjacent landowner (Tract 21). This modification allows Collins Farm Produce to maintain its production contracts with the local grocers, and the adjacent landowner is amenable to the route change which increases the length of the replacement pipeline on that landowner’s property.”

HSAL is unable to trace why the impact on one agricultural property is given a high weight by Enbridge. In response to *CLG IR 1.17 (a)*, Enbridge elaborates on the effects to the Collins Farm and introduces additional effects as being: demolition and reconstruction of a parking lot (location unknown to HSAL); permanent removal of two or more private residential structures (no information provided on location); and disturbance of treed areas south of the Flamborough Hills Golf and Country Club (no information provided on location)³⁸.

If agricultural effects are to be given higher weight, HSAL would have expected to see a comparative analysis of the agricultural impact on the Collins farm vs. the 11 new farms that are affected by the Copetown Diversion. Like the Collins Farm, HSAL is aware that at least one of the farms impacted by the proposed Copetown diversion pipeline has provided high value vegetables in the past to support the wholesale market (Gowland farm).

CH2M Hill states that for effects on soil, and agricultural residual agricultural effects,

“A qualitative assessment was considered the most appropriate method to evaluate the significance of the potential residual effects on soil and soil productivity due to the

³⁸ Enbridge Supplemental Response to Copetown Landowners Group (“CLG”) Information Request (“IR”) No. 1.17.a

*lack of quantitative data and accepted standards, guidelines and ecological thresholds”.*³⁹

CH2M Hill and Dillon conclude that agricultural effects can be mitigated. Given this, HSAL concludes that Enbridge has not clearly identified agricultural impacts and mitigation measures equally. Insofar as agricultural impacts are decided using both quantitative and qualitative judgement, HSAL concludes that taking an additional EA step of weighing these effects would minimize the qualitative nature of the decisions made. Without a transparent and equal weighting, HSAL is not able to reach the same conclusion as Enbridge that agricultural effects of the preferred route are insignificant. HSAL would have expected data to be gathered on agricultural effects of the proposed new alignment vs. paralleling Line 10 at its current location.

4.3.6 Unevenly Applied Mitigation Measures

A. Golf Course Mitigation Measures

In response to *CLG IR No. 1.17 (a)*, Enbridge appears to underestimate their ability to mitigate and avoid impacts to the Copetown Woods and Flamborough Woods Golf courses and appears to overestimate construction effects. Enbridge appears to prefer open cut construction techniques across the golf courses vs Horizontal Directional Drilling (“HDD”). For example, Enbridge points out impacts of completing open cut construction adjacent to the existing corridor as an alternative to the HDD.

*“Enbridge reaffirms its position that the route currently before the NEB is the preferred route for the replacement pipeline, and submits the impacts of completing open cut construction (excluding through roadways) immediately adjacent to the existing corridor as an additional alternative to the sequential Horizontal Directional Drills described in the original IR response narrative”.*⁴⁰

Within the Copetown Diversion, Enbridge is proposing HDD from KP 8.85 to KP 9.27 and KP 11.62 to KP 12.18⁴¹ because they are environmentally sensitive areas and HDD is a less disruptive method for constructing pipelines than open cut construction. Enbridge states they considered HDD for the two golf courses but it is not a viable option because: removal of wooded areas south of the Flamborough Hills Golf Club and the demolition of a private residence and business would be required for easement and workspace at the HDD entry point; impacts to Collins Farm Produce will not be reduced; unintended release of drilling

³⁹ ESA, Section 6.2.2.3 Residual Effects Characterization and Significance Determination for Soil and Soil Productivity, p. 6-21

⁴⁰ Enbridge Supplemental Response to Copetown Landowners Group (“CLG”) Information Request (“IR”) No. 1.17.a

⁴¹ A77227-12 Attachment 1 to Enbridge Response to NEB IR no. 2.9.a – Map of Planned HDD Crossing

fluid may take place; failure of the HDD can require abandonment of the borehole; and golf club businesses would be disrupted as above ground activities would be required to monitor and control the HDD operation.

As the construction impacts of open cut across the golf courses appear to be a significant rationale for selecting a new route across Class 1 tilled agricultural land with specialty crops, HSAL would have expected greater data to be presented on the mitigation of pipeline construction effects across the golf courses.

In response to NEB IR 2.24 *Impact on Golf Course Business*, Enbridge states,

“c) The probability of having construction activities in the vicinity of the golf course in the fall is high. Since both the golf club and restoration activities benefit from warmer weather, Enbridge also considers that the probability of having construction activities in the vicinity of the golf clubs in the spring and summer is very high.”⁴²

The response provided with respect to c) ‘Copetown Woods & Flamborough Hills Golf Clubs – KP 5.9 to KP 12.6’ (p. 33 of 71) states,

“The Copetown Woods & Flamborough Hills Golf Clubs reroute represents the most significant deviation from the existing Line 10 easement for the Line 10 Replacement Project. The preferred routing for the Line 10 Replacement pipeline is to the west of the Copetown Woods & Flamborough Hills Golf Clubs.... The proposed route filed with the NEB for the Project did not follow the existing Line 10 so as to avoid disruption to both Copetown Woods and Flamborough Hills Golf Clubs, and to minimize the impact to the operation of Collins Farm Produce, north of the golf clubs. The golf clubs are both operating businesses that provide recreational opportunities to the local community (club members and the general public).

The Project considered sequential HDDs through the two golf clubs with the longer HDD being approximately 1,850 m; however, new easement would still be required for these operations. Extensive removal of wooded areas south of the Flamborough Golf Club, and the demolition of a private residence and business would be required for easement and workspace at the HDD entry point.

Enbridge prefers to avoid impacting local businesses, and there are risks associated with conducting lengthy HDDs.”

Enbridge appears to have been successful in applying mitigation measures on other pipeline routes to mitigate potential golf course construction effects elsewhere.

⁴² Enbridge Response to NEB IR 2.24

For the Alberta Clipper Expansion Project, Enbridge provided mitigation measures for disturbance to three golf courses. The mitigation measures included: preparation of a detailed Urban Construction Plan for the golf course to address right-of-way and temporary workspace, the construction period, the workday hours, soils handling, fencing and other safety measures, reclamation measures and other special requests of the facility; postpone construction across the golf course until after fall closure, if practical; and minimize temporary workspace and narrow down area of disturbance⁴³. They state, compensation for disrupted activities will further minimize effects on the golf courses⁴⁴.

In the Line 10 ESA, Section 6.1.5., CH2M Hill states,

“Additionally, mitigation measures that have been successful during past Enbridge projects (e.g., Enbridge’s Line 4 Expansion Program [L4EP] and Alberta Clipper Expansion Project [ACEP]) have been included throughout the effects assessment, where applicable.”⁴⁵

In the Edmonton to Hardisty Pipeline Project, Enbridge provided mitigation measures for disturbance and encroachment on a golf course. The mitigation measures included: liaise with the golf club to determine appropriate construction period to reduce disturbance, if practical; Enbridge will consider boring the affected lands or otherwise reduce disturbance; develop agreements with the golf course; protect public safety near the golf course by controlling public access; safety measures; and schedule construction activities between 7:00 a.m. and 7:00 p.m., or as specified by the golf course⁴⁶.

In the Alberta Clipper Expansion and Edmonton to Hardisty Pipeline Projects, Enbridge has adequately assessed the impacts of constructing pipelines through golf courses and have provided the necessary mitigation measures. Thus, given the comparison of Enbridge’s construction and mitigation practices elsewhere, HSAL concludes Enbridge has provided insufficient socio-economic information as to why a golf course route is less preferred to the Copetown Diversion route. Given Enbridge’s past experience with the Alberta Clipper Expansion Project and the Edmonton to Hardisty Pipeline Project, we are unable to conclude that golf course impacts could not be satisfactorily minimized, mitigated and compensated.

⁴³ Alberta Clipper Expansion Project - Volumes II and III (A15645) B-2K Volume II – ESA – Section 6 – Effects Assessment (Table 6.2 page 6-87).

⁴⁴ Alberta Clipper Expansion Project - Volumes II and III (A15645) B-2K Volume II – ESA – Section 6 – Effects Assessment (s. 6.2.11. page 6-25).

⁴⁵ Ch2M Hill and Dillon, ESA, Section 6.1.5. p. 6.6

⁴⁶ Edmonton to Hardisty Pipeline Project B2-5 – Volume II – ESA – Section 6 – Environmental and Socio-Economic Effects Assessment (Table 6.26 page 6-138).

B. Mitigating Agricultural Impacts

On page 68 of 71 Enbridge states,

“Enbridge acknowledges that based on our current construction schedule, timing of construction will overlap with farming activities. Key mitigation measures to reduce the potential effects associated with farming activities is included in Section 6.2.12 of the ESA [NEB Filing ID: A74508-2] and will be included in the preliminary Project EPP.”⁴⁷

Enbridge acknowledges that there will be effects to agricultural land due to construction. Enbridge states,

“(f)armers along the replacement pipeline ROW may experience disruptions to their activities during construction. The scheduling of construction outside the peak agricultural activity period, where feasible, will lessen the effect on construction.”⁴⁸

The effects of construction during the golf season and agricultural season for most crops are both seasonal. There will be an effect for both. HSAL is not able to identify whether similar mitigation measures are being applied consistently to minimize construction effects on golf courses. This is a methodological inconsistency in the ESA process that has the effect of underestimating the Line 10 route in favour of crossing agricultural lands owned by Copetown landowners.

4.3.7 Analysis of Significant Cumulative Impacts

Section 7.0 of the ESA discusses Cumulative Effects. Section 7.1.4, of the ESA Cumulative Effects Assessment states:

“The environmental and socio-economic elements in which likely adverse residual effects are predicted and analyzed in the cumulative effects assessment are:

- physical elements such as soils and soil productivity, water quality and quantity, air emissions, and acoustic environment;*
- biological elements such as fish and fish habitat, wetlands, vegetation, wildlife and wildlife habitat, and species at risk; and*
- socio-economic elements such as HORU, social and cultural well-being, human health, and infrastructure and services”.⁴⁹*

⁴⁷ Enbridge response to NEB IR 2.b.4, page 68

⁴⁸ ESA, Part 1a of 10, p. 6-142

⁴⁹ ESA Section 7.1.4 Cumulative Effects Assessment 7-10

Section 7.16.2 discusses the cumulative effects of infrastructure. HSAL would have expected to see a discussion of the potential significant cumulative impacts created by a third linear corridor the Copetown Diversion will create in the Copetown area.

The effect will be to create new ribbon-like lot parcels, potentially removing farmland from production should landowners sell smaller lots created, further reducing the size and viability of farms.

4.4 Line 10 Paralleling Route in Copetown as the Preferred Route

4.4.1 Paralleling Existing Route Alignments

In considering professional practice, CH2M Hill and Dillon state, and HSAL agrees, that it is important to consider a route parallel to the existing Line 10 and 11 for the new Line 10.

The ESA states,

“the existing Enbridge pipeline ROWs were generally chosen as the preferred alignment due to the reason listed below.

- *The existing Enbridge corridor has been in use for over 50 years and is well known to all parties (i.e., environmental and socio-economic conditions along an existing easement are generally better understood than along a new easement).*
- *Effects associated with widening an existing pipeline corridor would be incremental, while a new route would affect additional lands and increase the amount of land disturbance.*
- *Pipeline surveillance and maintenance activities can be conducted more efficiently for pipeline located within a common ROW than for two ROWs that are geographically separated.⁵⁰*

Given a stronger potential to mitigate effects of crossing the golf courses and minimize other biophysical and socio-economic effects, a route paralleling Line 10 in the Copetown area would be preferred.

HSAL notes that the merit in paralleling an existing route alignment were also presented for Line 11 by Dillon.

For example, Dillon’s Westover Line 11 study concluded that a route paralleling the existing route was the sound environmental choice. The following reasons are also applicable to Line 10. Dillon states,

“the existing corridor was selected for constructing the new pipeline primarily because it:

- *is shorter;*
- *is previously disturbed;*
- *has been used by Enbridge for over 50 years;*
- *has an existing Enbridge easement and was suggested as a feasible and logical approach by landowners;*
- *provides working space and access; and,*

⁵⁰ ESA Section 4.0 Route Selection, p. 4-1 to 4-2

- *potential effects to environmental and socio-economic features can be effectively mitigated.*⁵¹

HSAL concludes that the rationale stated by Dillon for paralleling an existing corridor should have stronger consideration in regards to selecting a Line 10 route paralleling the existing route over a new Copetown Diversion route alignment.

4.4.2 Available Data Points to Lower Impacts

HSAL has not completed an ESA. In reviewing the data available and estimating some data comparing the Copetown Diversion vs. a route paralleling Line 10, HSAL has drawn a preliminary conclusion that a route paralleling Line 10 in the Copetown area could have the least environmental impact in the Copetown area. Please see **Table 1 – High Level Comparison of Copetown Diversion vs. a Route Paralleling Line 10 in the Copetown area.**

⁵¹ Enbridge Line 11 Westover Segment Replacement and Decommissioning Report Project – January 2014, page 80
Peer Review of Enbridge Application for the Line 10 Westover Segment Replacement Project
Hardy Stevenson and Associates Limited

5.0 CONCLUSIONS

Enbridge states that the Copetown Diversion segment replacement approach will minimize disruption to both landowners and the environment by substantially reducing the number of necessary maintenance digs and repairs that would otherwise be required to maintain the existing pipeline⁵².

HSAL examined the ESA data provided by Enbridge and its consultants and we are unable to draw the same conclusion that a Copetown diversion route is environmentally preferred.

The following are our findings.

- HSAL is able to confirm much of the ESA process and findings.
- There are deficiencies in the Enbridge route selection process in relation to the Copetown Diversion. The Copetown Diversion route was selected before ESA data was gathered. Critical environmental assessment and route selection input was not requested from the public and stakeholders nor was it received; the public consultation process falls short of being meaningful.
- Due to deficiencies in the EA process, the environmental assessment is incomplete. A comparative route analysis is required.
- Agricultural effects created by the Copetown Diversion route appear to be more significant than the agricultural effects Enbridge is seeking to avoid.
- We do agree with Enbridge's conclusion that a new pipeline will reduce the number of maintenance digs, however Line 10 will need to be maintained as it crosses agricultural land in its new Copetown Diversion route, resulting in two pipelines needing to be maintained. In addition, the remaining Line 11 across the golf courses will also continue to be maintained even after Line 10 is decommissioned.
- A third linear corridor will be created in the Copetown area and have significant cumulative effects.

Given a high level analysis, and compared to the existing Line 10 route alignment, HSAL has reached the opinion that the Copetown Diversion route alignment may have more significant environmental impacts than an alignment paralleling the existing Line 10 or Line 11.

HSAL cannot draw the conclusion that the Copetown Diversion route alignment is environmentally preferred.

⁵² Section 1.2 – Executive Summary, Project Overview, Adobe Page 1 of 2.

6.0 RECOMMENDATION

In the opinion of HSAL, the NEB should not approve the Copetown Diversion as a future alignment of Line 10.

Table 1 - High Level Comparison of Copetown Diversion vs. a Route Paralleling Line 10 in the Copetown area.				
Criteria	Indicator	Copetown Diversion Indicator	Line 10 Indicator	Preferred Alternative Route
Avoid Wildlife Habitat ⁵³	Breeding Birds Marsh	1	0	Line 10
	Amphibian Breeding Habitat	1	5	Copetown Diversion
Avoid Woodlands ⁵⁴	Number of Woodlands	2	4	Copetown Diversion
Wetlands ⁵⁵	Number of Wetlands	2	10	Copetown Diversion
Construction effects known	Effects known	No	Yes	Line 10
Parallels existing linear infrastructure	Parallels linear infrastructure	No	Yes	Line 10
Shorter Route	Length	~ 6.7 km ⁵⁶	~ 5.6 km ⁵⁷	Line 10
Avoid agricultural impacts	Number of farms ⁵⁸	13	1	Line 10
Soils previously disturbed	New disturbances	1	0	Line 10
Avoid new easements	New easements created ⁵⁹	13	0	Line 10
Avoid golf courses	Golf courses	0	2	Copetown Diversion
Avoid diagonal crossings	Number of diagonal crossings ⁶⁰	4	0	Line 10
PREFERRED ROUTE				Line 10

⁵³ Wildlife Habitat, Appendix 2A, Figure 8-1

⁵⁴ Woodlands, Appendix 2A, Figure 7-2

⁵⁵ Wetlands Map, Appendix 2A, Figure 6-1, Map 3, 4, 5

⁵⁶ Measured from KP 5.9 to KP 12.6.

⁵⁷ Measured from KP 5.9 to KP 12.6.

⁵⁸ Estimate

⁵⁹ Estimate

⁶⁰ Estimate