

**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5, section 5.7 and Table 5-36

**QUESTION:**

The statistics discuss numbers of residences, but no map in the EIS seems to show the location of the residences. Please refer to, or provide maps, that show in sufficient detail of the location of home sites in the area of the final routing.

**RESPONSE:**

- 1 The Map Folio which provides sufficient detail of the location of home sites along the Final
- 2 Preferred Route is included in the EIS and is located here:
- 3 [https://www.hydro.mb.ca/projects/mb\\_mn\\_transmission/pdfs/eis/mmtp\\_exec\\_vol\\_fpr\\_map\\_f](https://www.hydro.mb.ca/projects/mb_mn_transmission/pdfs/eis/mmtp_exec_vol_fpr_map_folio.pdf)
- 4 [olio.pdf](https://www.hydro.mb.ca/projects/mb_mn_transmission/pdfs/eis/mmtp_exec_vol_fpr_map_folio.pdf)
- 5 Manitoba Hydro also has available on its website GIS files of the Final Preferred Route in both
- 6 Google Earth KML and ESRI Shapefile formats
- 7 [https://www.hydro.mb.ca/projects/mb\\_mn\\_transmission/zip/MMTP\\_final\\_preferred\\_route\\_se](https://www.hydro.mb.ca/projects/mb_mn_transmission/zip/MMTP_final_preferred_route_set_2015.zip)
- 8 [pt\\_2015.zip](https://www.hydro.mb.ca/projects/mb_mn_transmission/zip/MMTP_final_preferred_route_set_2015.zip)
- 9 Manitoba Hydro has also provided a web map viewer with imagery and the Final Preferred
- 10 Route located here:
- 11 [http://mbhydro.maps.arcgis.com/apps/webappviewer/index.html?id=51d43ff967f646d297179](http://mbhydro.maps.arcgis.com/apps/webappviewer/index.html?id=51d43ff967f646d29717996686d07a8c)
- 12 [96686d07a8c](http://mbhydro.maps.arcgis.com/apps/webappviewer/index.html?id=51d43ff967f646d29717996686d07a8c)

**SUBJECT AREA:** Project Description, None

**REFERENCE:** EIS, Chapter 2, section 2.1

**QUESTION:**

Section 2.1 of the EIS contains the following statement: “Subject to regulatory approvals, the proposed in-service date of the Project is 2020.” One of the conditions precedent in the 2013 Term Sheet between Manitoba Hydro and Minnesota Power is that Manitoba Hydro obtain a “final nonappealable license from the Province of Manitoba, on conditions acceptable to Manitoba Hydro, in Manitoba Hydro’s sole and absolute discretion”. Is Manitoba Hydro contractually obligated to proceed with the Project only if the conditions on the Class 3 licence are “acceptable” and, if so, what are the “acceptable conditions”?

**RESPONSE:**

- 1 Manitoba Hydro’s contractual obligations with Minnesota Power are out of the scope of the
- 2 Clean Environment Commission hearing.

**SUBJECT AREA:**      **Routing, None**

**REFERENCE:**        **EIS, Chapter 5**

**QUESTION:**

When did Manitoba Hydro first consider using the EPRI-GTC methodology?

**RESPONSE:**

- 1 Manitoba Hydro first considered using the EPRI-GTC methodology in January 2013.

**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5

**QUESTION:**

What other methodologies did Manitoba Hydro consider?

**RESPONSE:**

1 The primary approach used by Manitoba Hydro in identifying and considering potential siting  
2 methodologies was to consult with utilities in other jurisdictions regarding their practices and  
3 experiences and apply this feedback to the regulatory and other jurisdictional nuances present  
4 in Manitoba. Through these conversations, it became apparent quite quickly that the EPRI-GTC  
5 methodology was the most widely used. Combined with the additional factors that the  
6 methodology was quantitative in nature and could be applied in a way to allow for ongoing  
7 incorporation of feedback resulted in the EPRI-GTC methodology being selected for use. Please  
8 refer to SSC-IR-009 for additional information.

**SUBJECT AREA:**      **Routing, None**

**REFERENCE:**        **EIS, Chapter 5**

**QUESTION:**

When did Manitoba Hydro decide to adopt the EPRI-GTC methodology?

**RESPONSE:**

- 1 Manitoba Hydro decided to apply the EPRI-GTC methodology on the St. Vital to Letellier project
- 2 in March 2013 and subsequently on the Manitoba-Minnesota Transmission Project.

**SUBJECT AREA:**      **Routing, None**

**REFERENCE:**        **EIS, Chapter 5**

**QUESTION:**

Who at Manitoba Hydro made the decision to adopt the EPRI-GTC methodology?

**RESPONSE:**

- 1 The decision to utilize the EPRI-GTC methodology was supported by the Transmission Business
- 2 Unit Management Team at the time.

**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5

**QUESTION:**

When did Manitoba Hydro decide that the EPRI-GTC methodology needed to be modified?

**RESPONSE**

- 1 Manitoba Hydro decided to modify elements of the application of the EPRI-GTC methodology in
- 2 2013, during the application of the methodology on the St. Vital to Letellier Transmission line
- 3 routing. The changes made are not in conflict with but are elaborations on the more general
- 4 EPRI-GTC Methodology.
  
- 5 Please refer to responses SSC-IR-015 and SSC-IR-017.

**SUBJECT AREA:**     **Routing, None**

**REFERENCE:**       **EIS, Chapter 5**

**QUESTION:**

Who at Manitoba Hydro made the decision that the EPRI-GTC methodology needed to be modified?

**RESPONSE:**

- 1 Please see response SSC-IR-015.



**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5

**QUESTION:**

Did Manitoba Hydro retain outside experts to assist in modifying the EPRI-GTC methodology, and if so:

- (a) who did Manitoba Hydro retain and when; and
- (b) what recommendations were provided to Manitoba Hydro.

**RESPONSE:**

- 1 Yes, Manitoba Hydro used the assistance of ‘outside experts’ in modifying elements of the  
2 application of the EPRI-GTC methodology.
- 3 a) Manitoba Hydro retained the services of Photo Science Inc. beginning in March of 2013.  
4 b) Photo Science Inc. was retained to work with Manitoba Hydro staff to develop and apply  
5 the EPRI methodology in Southern Manitoba. The routing and engagement teams, in  
6 collaboration with Photo Science Inc., decided to modify the application of the  
7 methodology. Photo Science Inc. staff were part of the team that developed the EPRI-  
8 GTC methodology and had experience applying the methodology in various jurisdictions  
9 on various projects. Based on this experience, Photo Science Inc. provided advice on  
10 how the process could be modified to align more with the engagement processes to  
11 allow for additional opportunity for feedback and outside input to be considered in the  
12 methodology.
- 13 The EPRI-GTC Methodology has evolved over the past 17 years. Predecessor methods were  
14 implemented at GTC (Georgia Transmission Corporation) as early as 1999. The methodology  
15 was refined from 1999-2006 when EPRI published a report documenting the “state of the art”  
16 methodology at the time. Since that time the methodology has been applied in other  
17 jurisdictions within a variety of physical and social environments. Because of differences

18 between physical and social environments, the methodology has also often been enhanced in  
19 those other jurisdictions. In addition, technology has changed since the methodology was  
20 introduced.

21 The consulting team on this project has been leading the development and implementation of  
22 the methodology since its inception in 1999. This team seeks to refine the methodology with  
23 best practices learned from a variety of implementations in many locations over time.

24 At the start of this project, the consultants (now with Team Spatial) informed Manitoba Hydro  
25 that the EPRI-GTC report is a guideline that explains the methodology that was initially  
26 developed in 2004. Since the report was developed, the methodology has been refined with  
27 each project implementation. The implementation of the methodology varies from one  
28 jurisdiction to the other.

29 Common themes for projects that use the methodology include:

- 30 1. Using a data driven objective process.
- 31 2. Leveraging external stakeholder input from representative organization to help calibrate  
32 the Alternative Corridor model using the AHP and the Modified Delphi processes.
- 33 3. Relying on routing experts to identify alternate routes using the Alternative Corridors as  
34 a guide.
- 35 4. Leveraging internal experts to calibrate the Alternate Route Evaluation Model.
- 36 5. Using the Alternate Route Evaluation Model to help identify the top routes.
- 37 6. Leveraging internal expert judgment to calibrate the Preference Determination Model  
38 (also known as the “Expert Judgment Model”).

**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5

**QUESTION:**

What modifications to the EPRI-GTC methodology were considered but ultimately rejected by Manitoba Hydro, and why?

**RESPONSE:**

- 1 As per the response to SSC-IR-015, the approach taken in developing the Manitoba Hydro EPRI-
- 2 GTC based methodology was a collaboration between the Manitoba Hydro Routing Team,
- 3 engagement staff and the routing consultant. Manitoba Hydro does not recall considering and
- 4 rejecting any modifications.

**SUBJECT AREA:** Routing, None

**REFERENCE:** Chapter 5

**QUESTION:**

Did Manitoba Hydro use the EPRI-GTC methodology to identify the routes for one or both of the transmission lines comprising the St. Vital Transmission Project? If so, what modifications to that methodology were made before it was used for the St. Vital Transmission Project?

**RESPONSE:**

- 1 Manitoba Hydro did not use the EPRI-GTC methodology to identify routes for the La Verendrye
- 2 to St. Vital Transmission Line. This line follows the South Loop Transmission Corridor.
- 3 Manitoba Hydro did use the EPRI-GTC methodology to route the portions of the St. Vital to
- 4 Letellier transmission line that required new right of way.
- 5 The EPRI-GTC (2006) methodology outlines three phases as follows:
  - 6 1. Macro Corridor Development
  - 7 2. Alternative Corridor Generation
  - 8 3. Alternative Route Analysis and Evaluation
- 9 Manitoba Hydro included all three phases in the routing process for the St. Vital to Letellier
- 10 transmission line and did not alter this methodology.
- 11 The response to SSC-IR-015 provides further discussion of EPRI-GTC methodology and its use.

**SUBJECT AREA:**      **Routing, None**

**REFERENCE:**        **EIS, Chapter 5**

**QUESTION:**

What are the differences (if any) between the methodology used by Manitoba Hydro for the St. Vital Transmission Project and the Manitoba-Minnesota Transmission Project? If there are differences, why did Manitoba Hydro make changes to the methodology for the Manitoba-Minnesota Transmission Project?

**RESPONSE:**

- 1 The routing methodology used for both projects was based on the EPRI-GTC Overhead Electric
- 2 Transmission Line Siting Methodology. The main steps of the EPRI methodology were followed
- 3 for both projects.

**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5

**QUESTION:**

What are the differences between the site selection and environmental assessment process for Bipole III and the modified EPRI-GTC methodology for the Manitoba-Minnesota Transmission Project?

**RESPONSE:**

- 1 Conceptually, the routing processes have the same goal which is to find a route that minimizes
- 2 the overall impact on the surrounding environment. Both processes considered potential
- 3 biophysical, socioeconomic, and engineering factors. The use of the EPRI-GTC methodology for
- 4 MMTP provided a more transparent process that allowed enhanced incorporation of
- 5 quantitative data. The CEC recommendations to *“develop a more streamlined, open and*
- 6 *transparent approach to route selection, making more use of quantitative data”* (Bipole III CEC
- 7 Report) reinforced the move to this approach.
  
- 8 The EPRI-GTC process utilizes quantitative models, with criteria and weightings that illustrate
- 9 the tradeoffs made in the decision making process transparently. The application of the EPRI-
- 10 GTC process on MMTP (outlined in SSC-IR-017) allowed for earlier stakeholder input into the
- 11 process and also allowed direct input into *“alternative routes”* in the form of mitigative
- 12 segments (described in Section 5.4.3, page 5-26, 27).

**SUBJECT AREA:** First Nation and Metis Engagement, Routing

**REFERENCE:** EIS, Chapter 5

**QUESTION:**

How does the modified EPRI-GTC methodology comply with Recommendation 7.2 contained in the Clean Environment Commission's Report on the Bipole III Transmission Project to "invite potentially affected public and communities, including First Nations and the Manitoba Metis Federation, to participate in the selection of alternative routes and route selection criteria"?

**RESPONSE:**

1 Manitoba Hydro researched routing methodologies and selected the EPRI-GTC approach  
2 because it had a proven track record, engaged interested parties early in the process, and is  
3 objective and transparent. The EPRI-GTC methodology has been adapted for use in Manitoba  
4 and enhanced to incorporate more opportunity for feedback in its application.

5 Manitoba Hydro invited First Nations, the MMF and interested stakeholder groups (as identified  
6 during pre-engagement) on November 1, 2013, to participate in the workshops. The workshops  
7 began with a presentation that outlined the purpose of the Project and described the  
8 transmission line routing, environmental assessment and engagement processes. These  
9 workshops were opportunities for participants to:

- 10 • provide feedback on route selection criteria considered most important to stakeholder  
11 groups;
- 12 • identify preferences and concerns regarding the alternative routes and preferred border  
13 crossings;
- 14 • address the route selection criteria selected (working groups) and suggest  
15 modifications;
- 16 • determine local issues and concerns; and
- 17 • discuss mitigation strategies.

18 The participants were asked to identify their issues and concerns, particularly those based on  
19 local knowledge of the Project area, and to share concerns regarding the transmission line  
20 routing and the environmental assessment processes. The MMF attended one workshop as  
21 observers in Winnipeg on November 15, 2013.

22 The First Nation and Metis Engagement Process was coordinated with the transmission line  
23 routing process to provide information and gather feedback at key stages. Manitoba Hydro  
24 provided opportunities for First Nations and the MMF to participate in all 3 Rounds of the  
25 routing process.



**SUBJECT AREA:** First Nation and Metis Engagement, Routing

**REFERENCE:** EIS, Chapter 5

**QUESTION:**

What steps were taken by Manitoba Hydro to modify the EPRI-GTC methodology to comply with Recommendation 7.2 contained in the Clean Environment Commission's Report on the Bipole III Transmission Project to "invite potentially affected public and communities, including First Nations and the Manitoba Metis Federation, to participate in the selection of alternative routes and route selection criteria"?

**RESPONSE:**

- 1 Please refer to response SSC-IR-020.

**SUBJECT AREA:** First Nation and Metis Engagement, None

**REFERENCE:** EIS, Chapter 5

**QUESTION:**

Does Manitoba Hydro consider the consultation process mandated by section 35 of the Constitution Act, 1982 to be a “licensing risk”? In particular, is the length of time required for the Province to conclude that consultation process a “licensing risk”?

**RESPONSE:**

- 1 Manitoba Hydro does not consider the Crown Consultation process to be a “licensing risk”.

**SUBJECT AREA:** First Nation and Metis Engagement, Routing

**REFERENCE:** EIS, Chapter 5

**QUESTION:**

Does the modified EPRI-GTC methodology directly or indirectly take the amount of time required for the Province to conclude the consultation process mandated by section 35 of the Constitution Act, 1982 and, if so, how?

**RESPONSE:**

- 1 In the preference determination step, the Manitoba Hydro application of the EPRI-GTC
- 2 methodology considers a criteria of “Schedule Risk”. Please refer to responses SSC-IR-102 and
- 3 SSC-IR-116.

**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5, Table 5-1

**QUESTION:**

Please provide the names and job titles of each of the individuals referred to in “Management Team” section of Table 5-1 and confirm whether or not they are “professionals in the process of route selection” referred to in the paragraph immediately preceding Table 5-1

**RESPONSE:**

- 1 Please refer to response CEC-IR-013 for the updated Management Team table, and for
- 2 additional information on the role of the Management Team in the route selection process.
- 3 The Management Team is charged with high level decision making for the Transmission
- 4 Business Unit. The Manitoba Hydro transmission line routing process is designed to leverage
- 5 collaborative discussion and decision-making, drawing on the expertise of a variety of
- 6 contributing Subject Matter Experts (SME), including input provided by external stakeholders.
- 7 This is a strength of the EPRI-GTC process, as it contributes to balanced and consistent decision-
- 8 making.
- 9 To Manitoba Hydro’s knowledge, there is no formal professional designation for routing
- 10 professionals within the jurisdiction of Manitoba. The Management Team is one of several
- 11 teams involved in the overall transmission line routing process, providing incremental senior-
- 12 level perspectives and input in relation to the specific roles and accountabilities that they hold
- 13 within the Manitoba Hydro organization.

**SUBJECT AREA:**      **Routing, None**

**REFERENCE:**        **EIS, Chapter 5, section 5.3**

**QUESTION:**

Section 5.3 of the EIS states that “Preliminary planning related to the Project began in late 2012”. What specific date did preliminary planning begin?

**RESPONSE:**

- 1 Manitoba Hydro had an introductory conference call with Minnesota Power on July 11, 2012.

**SUBJECT AREA:** Project Description, None

**REFERENCE:** EIS, Chapter 5, section 5.3

**QUESTION:**

When did Manitoba Hydro start work on the System Planning Report/Facility Study?

**RESPONSE:**

- 1 Manitoba Hydro started the Facilities Study in approximately 2010.

**SUBJECT AREA:**     **Routing, None**

**REFERENCE:**       **EIS, Chapter 5, section 5.3**

**QUESTION:**

When was the System Planning Report/Facility Study completed?

**RESPONSE:**

- 1 The System Planning/Facility Study was completed on June 5, 2015.

**SUBJECT AREA:** Project Description, None

**REFERENCE:** EIS, Chapter 5, section 5.3.1

**QUESTION:**

When did Manitoba Hydro and Minnesota Power begin discussions to increase the transfer capability of the Manitoba-Minnesota Transmission Project to 500kV?

When did Manitoba Hydro and Minnesota Power agree to increase the transfer capability of the Manitoba-Minnesota Transmission Project to 500kV?

**RESPONSE:**

- 1 This question is in relation to alternatives for the project and is out of scope for the Clean
- 2 Environment Commission hearing.



**SUBJECT AREA:**     **Routing, None**

**REFERENCE:**       **EIS, Chapter 5, section 5.3.1 and Table 5-2**

**QUESTION:**

When did Manitoba Hydro begin the “constraints and opportunities exercise” and who was involved?

**RESPONSE:**

- 1 Manitoba Hydro and its consultants began the constraints and opportunities exercise with
- 2 Minnesota Power and its consultants in August 2012.

**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5, section 5.3.1 and Table 5-2

**QUESTION:**

When did the “constraints and opportunities exercise” conclude?

**RESPONSE:**

- 1 The constraints and opportunities exercise for border crossing area delineation concluded in
- 2 January 2013.

**SUBJECT AREA:**     **Routing, None**

**REFERENCE:**       **EIS, Chapter 5, section 5.3.1 and Table 5-2**

**QUESTION:**

Was the list of criteria contained in Table 5-2 generated by the “constraints and opportunities” exercise?

**RESPONSE:**

- 1 Yes, the criteria listed in Table 5-2 were generated by the “constraints and opportunities”
- 2 exercise.

**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5, section 5.3.1 and Table 5-2

**QUESTION:**

One of the factors listed in Table 5-2 is “First Nations Lands and lands under nomination for land bases”. Please provide the following information:

- (a) What does “First Nations Lands” mean?
- (b) How did Manitoba Hydro identify “First Nations Lands”?
- (c) What does “lands under nomination for land bases” mean?
- (d) How did Manitoba Hydro identify lands under nomination for land bases?

**RESPONSE:**

- 1 The following definitions are referencing the spatial data used as part of the routing criteria  
2 described in Table 5-2.
- 3 a) First Nations Lands are polygon entities that depict the administrative boundaries  
4 (extent) of lands where the title has been vested in specific Aboriginal Groups of Canada  
5 or lands which were set aside for their exclusive benefit.
- 6 b) Manitoba Hydro identifies First Nations Lands from a geospatial dataset published by  
7 the federal government: [http://geogratis.gc.ca/api/en/nrcan-rncan/ess-sst/815dd99d-  
8 4fbd-47cc-be02-7ad4b03a23ec.html](http://geogratis.gc.ca/api/en/nrcan-rncan/ess-sst/815dd99d-4fbd-47cc-be02-7ad4b03a23ec.html).
- 9 c) Lands under nomination for land bases – The area east of the Piney East potential  
10 border crossing is part of a Community Interest Zone that has been identified in the  
11 Buffalo Point First Nation Treaty Entitlement Agreement.
- 12 d) Treaty Land Entitlement Agreements - [http://www.gov.mb.ca/imr/ir/treaty-land-  
13 entitlement/index.html](http://www.gov.mb.ca/imr/ir/treaty-land-entitlement/index.html).

**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5, section 5.3.1 and Table 5-2

**QUESTION:**

One of the factors listed in Table 5-2 is “Treaty Land Entitlement”. Please provide the following information:

- (a) What does “Treaty Land Entitlement” mean?
- (b) How did Manitoba Hydro identify TLE lands?
- (c) Which Entitlement First Nations are included?
- (d) What is the status of the TLE process for each of those EFNs?

**RESPONSE:**

- 1 a. Treaty Land Entitlement (“TLE”) refers to land owed to certain First Nations under the
- 2 Numbered Treaties in Manitoba signed by the First Nations and the British Crown
- 3 between 1871 and 1910. Treaties 1 to 10 provided that the Crown would set aside a
- 4 certain amount of land as reserve land based on the populations of the “Indian bands”
- 5 at the time of the original surveys for reserve lands. Not all Indian bands received their
- 6 land entitlement as promised in the Numbered Treaties and this is what is referred to as
- 7 “Treaty Land Entitlement”. ([www.tlec.ca](http://www.tlec.ca))
- 8 b. Manitoba Hydro identified TLE lands through a geospatial dataset provided by the
- 9 Province of Manitoba.
- 10 c. Manitoba Hydro has no role in the management of the TLE process. Please refer to
- 11 <http://tlec.ca/> for a list of included Entitlement First Nations in Manitoba.
- 12 d. Manitoba Hydro does not track the status of the TLE process. Please refer to
- 13 <http://www.tleimc.ca/> for the status of the TLE process for each Entitlement First
- 14 Nation.

15      **References**

16            Treaty land Entitlement Committee of Manitoba <http://tlec.ca/>

17            Treaty Land Entitlement Implementation and Monitoring Committee <http://www.tleimc.ca/>

**SUBJECT AREA:** Routing, First Nation and Metis Engagement

**REFERENCE:** EIS, Chapter 5, section 5.3.1 and Table 5-2

**QUESTION:**

Section 5.3.1 of the EIS states that the preliminary planning area boundaries were determined in part by “Buffalo Point First Nation Reserve property and associated lands of interest”. What does “associated lands of interest” mean and are those lands included in the “First Nations Lands and lands under nomination for land bases” or “Treaty Land Entitlement” categories in Table 5-2?

**RESPONSE:**

- 1 “Associated lands of interest” is an encompassing term for “First Nations Lands and lands under
- 2 nomination for land bases” and “Treaty Land Entitlement” categories in Table 5-2.

**SUBJECT AREA:** Routing, None

**REFERENCE:** Section 5.3.2

**QUESTION:**

Section 5.3.2 of the EIS states that the “eastern edge of the route planning area was extended to approximately 20 km east of the Riel to Forbes transmission line (M602F) (with consideration of wetlands along the eastern boundary) to provide further area for alternative route development in this area”. Please provide the following information:

- (a) Why was the eastern boundary extended?
- (b) Why was the extension limited to approximately 20 km?
- (c) Who made the decision to extend the eastern boundary?

**RESPONSE:**

- 1     **a) Why was the eastern boundary extended?**
- 2         As noted in section 5.3.2, the eastern boundary was extended to provide further area
- 3         for alternative route development.
- 4     **b) Why was the extension limited to approximately 20km?**
- 5         See page 5-15, last bullet.
- 6     **c) Who made the decision to extend the eastern boundary?**
- 7         This decision was made by the Project Team.



**SUBJECT AREA:**      **Routing, None**

**REFERENCE:**        **EIS, Chapter 5, section 5.3.3.1 and Appendix 5A**

**QUESTION:**

Did the workshops conducted on May 6 – 8, 2013 take place before or after Manitoba Hydro and Minnesota Power agreed to increase the transfer capability of the Manitoba-Minnesota Transmission Project to 500kV?

**RESPONSE:**

- 1 This question is in relation to alternatives for the project and is out of scope for the Clean
- 2 Environment Commission hearing.

**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5, section 5.3.3.1 and Appendix 5A

**QUESTION:**

Please provide the following information about the “built perspective” workshop:

- (a) The list of organizations and individuals invited to attend;
- (b) The names of the individuals that did attend and which organization they represented;
- (c) Who decided which organizations and individuals to invite?
- (d) Who decided to limit participation in the workshop to “technical data holders”?
- (e) When did the “exhaustive review of organizations that could potentially house data” begin?
- (f) When did the “exhaustive review of organizations that could potentially house data” conclude?
- (g) Who conducted the “exhaustive review of organizations that could potentially house data”?

**RESPONSE:**

- 1 As noted in the response provided to CEC-IR-007, on advice from the routing consultant,
- 2 Manitoba Hydro invited stakeholder groups’ representatives that were technical knowledge
- 3 holders that could bring to the discussions their understanding of the features on the landscape
- 4 and associated values/use, which made it possible for them to participate in discussions that
- 5 examined the relative suitability of routing a transmission line across or in proximity to these
- 6 features.
  
- 7 The process of identifying which organizations that might participate and have knowledge and
- 8 related data to contribute began in April 2013. Staff in the Licensing and Environmental
- 9 Department involved in the PEP, FNMEP and assessment of transmission lines began by
- 10 identifying groups (stakeholder groups, government agencies, and existing citizen-coalitions)
- 11 that typically or recently participated in southern Manitoba transmission projects and in what
- 12 capacity. These organizations were contacted, information provided about the purpose of the

- 13 workshops, and asked if they could identify an individual from their organization to participate
- 14 in the workshops.
- 15 The list of organizations invited and those that participated is indicated in the table below :

Engineering Perspective	Attended
Manitoba Infrastructure Transportation	✓
Manitoba Floodway Authority	□
MH Transmission and Civil Design	✓
MH Line Maintenance	✓
MH Gas Transmission (gas/oil)	✓
MH Transmission Line and Civil Construction	✓
MH Geotechnical	✓
MH System Planning	✓
MH Communications	✓
Natural Perspective	
Fisheries and Oceans Canada	✓
Ducks Unlimited	✓
Nature Conservancy of Canada	✓
Manitoba Conservation - Protected Areas Initiative	✓
Manitoba Conservation - Parks and Natural Areas	✓
Manitoba Conservation - Forestry Branch	✓
Seine - Rat River Conservation District	✓
Manitoba Wildlife Federation	
Manitoba Conservation Wildlife Branch	✓
Manitoba Woodlot Association	✓
Manitoba Trappers Association	✓
Manitoba Bird Atlas	✓
Manitoba Lodges and Outfitters Association	✓

Built Perspective	<input type="checkbox"/>
Keystone Agricultural Producers	<input checked="" type="checkbox"/>
University of Manitoba – Landscape Architecture	<input checked="" type="checkbox"/>
Manitoba Aboriginal and Northern Affairs	<input type="checkbox"/>
Manitoba Agriculture Food and Rural Initiatives	<input checked="" type="checkbox"/>
Manitoba Culture Heritage and Tourism	<input checked="" type="checkbox"/>
Manitoba Lands Branch	<input type="checkbox"/>
Manitoba – Regional Planners	<input checked="" type="checkbox"/>
Manitoba Aerial Applicators Association	<input checked="" type="checkbox"/>
Mining Association of Manitoba Inc.	
Manitoba Hydro Property Department	<input checked="" type="checkbox"/>
City of Winnipeg Planners	<input type="checkbox"/> <input checked="" type="checkbox"/>
Recreational Trails Group	<input checked="" type="checkbox"/>
Association of Manitoba Municipalities	
Manitoba Trappers Association	<input checked="" type="checkbox"/>

16

**SUBJECT AREA:** Routing

**REFERENCE:** EIS, Chapter 5, section 5.3.3.1 and Appendix 5A

**QUESTION:**

With respect to the “Indian Reserves/TLE Selections” area of least preference:

- (a) What type of land is included?
- (b) What information, if any, was provided to the workshop participants about the lands included?
- (c) How does this area of least preference differ from the “First Nations Lands and lands under nomination for land bases” or “Treaty Land Entitlement” categories in Table 5-2?

**RESPONSE:**

- 1 a. First Nations Lands (Indian Reserves) and Treaty Land Entitlement Selections
- 2 b. Participants were provided the definitions of the above.
- 3 c. The area of least preference only includes First Nations Lands (Indian Reserves) and
- 4 Treaty Land Entitlement Selections and does not include lands under nomination for
- 5 land base which is defined as the Community Interest Zone as described in SSC-IR-032.
- 6 Please see SSC-IR-033 for further information.

**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5, section 5.5.4 and Appendix 5D

**QUESTION:**

What “issues” would CN have with 500 kV line along the CN Main Line? Specifically, what impact does a 500kV transmission line have on railway signaling?

**RESPONSE:**

1 When building a transmission line along the railway, interference studies will be conducted to  
2 ensure the public safety and to determine railway equipment susceptibility. In general, two  
3 scenarios need to be examined.

- 4 1. Steady state load condition
- 5 • Inductive Interference
  - 6 • Capacitive Interference
- 7 2. Fault Condition
- 8 • Inductive Interference
  - 9 • Capacitive Interference
  - 10 • Conductive Interference

11 Under steady state load condition, both inductive and capacitive interference are highly  
12 dependent on the separation distance between railway and parallel transmission line. The  
13 inductive and capacitive interference becomes negligible once the separation distance is larger  
14 than 1 km. This is the distance preferred by railway companies for siting any potential  
15 transmission line along the railway.

16 If the separation distance between railway and transmission line is less than 1km, the above  
17 interference studies under steady state load condition shall be conducted to ensure the  
18 following design criteria:

- 19 • Rail Ground Potential Rise Along the Rail Tracks: <25V
- 20 • Touch Voltage on Rail Tracks: IEEE Safety Criteria - IEEE Standard 80-2013 (50kg body  
21 weight)
- 22 • Rail-to-Rail Voltage on Equipment: Equipment Susceptibility (3-12V)
- 23 • Voltage Across The Insulating Joint: < 50V

24 If the separation distance between railway and transmission line is even closer (100m or less),  
25 the fault condition shall be considered in this case as conductive interference and will be the  
26 dominant factor. The following design criteria shall be examined:

- 27 • Touch and Step Voltage on the Rail Track: IEEE Safety Criteria - IEEE Standard 80-2013  
28 (50kg body weight)
- 29 • Longitudinal Current on the Rail Track: Arrestor Rating
- 30 • Rail-to-Ground Potential: >2000V

### 31 ***Railway Signaling***

32 The electromagnetic phenomena that can damage railroad signal equipment fall into one of the  
33 following two categories:

- 34 1. Anything which raises the rail-to-ground potential significantly above the 2000 Volt insulation  
35 breakdown requirement of AREMA 11.5.1 (Note: this should also be enough to trigger the  
36 primary surge protection devices, a.k.a. "lightning arresters".)
  - 37 2. Anything which raises the rail-to-rail potential enough to produce power levels within  
38 components used in the signaling equipment which exceeds their power ratings
- 39 Damage, as the result of exposures in both categories, will be prevented by conducting  
40 electromagnetic studies as mentioned above and applying the mitigation if required.

**SUBJECT AREA:**      **Routing, None**

**REFERENCE:**        **EIS, Chapter 5, section 5.3.3.1 and Appendix 5B**

**QUESTION:**

Who was responsible for preparing the geospatial data layer containing the suitability values assigned to each cell?

**RESPONSE:**

- 1 The routing consultant working for Manitoba Hydro was responsible for preparing the
- 2 geospatial data layers containing the suitability values outlined in the Alternate Corridor Model.



**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5, section 5.3.3.1 and Appendix 5B

**QUESTION:**

What steps were taken to ensure that suitability values were accurately and correctly assigned to each cell?

**RESPONSE:**

- 1 GIS analysis best practices were utilized on this project. It is impractical and unnecessary to
- 2 verify each of the millions of cells with suitability values. As such, samples were verified by
- 3 trained experts at key points in the process.

**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5, section 5.3.3.1 and Appendix 5B

**QUESTION:**

Who was responsible for preparing the suitability surfaces?

**RESPONSE:**

- 1 The routing consultant working for Manitoba Hydro was responsible for creating the suitability
- 2 surfaces.

**SUBJECT AREA:**     **Routing, None**

**REFERENCE:**       **EIS, Chapter 5, section 5.3.3.1 and Appendix 5B**

**QUESTION:**

What steps were taken to ensure that the suitability surfaces were accurately and correctly prepared?

**RESPONSE:**

- 1 Please see the response CEC-IR-074.

**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5, section 5.3.3.2

**QUESTION:**

What ground based field surveys were undertaken to verify the features in the composite corridor, and when did those surveys take place?

**RESPONSE:**

- 1 Since the development of the Route Planning Area in 2013, over 60 ground based surveys were
- 2 conducted for valued components such as avian, reptiles and amphibians, mammals,
- 3 vegetation, wetlands, agriculture, heritage, as well as route planning windshield surveys as
- 4 described in CEC-IR-024. These surveys were conducted between July 2013 to November 2016
- 5 to create and verify features in the composite corridor.

**SUBJECT AREA:**      **Routing, None**

**REFERENCE:**        **EIS, Chapter 5, section 5.3.3.2**

**QUESTION:**

What aerial based field surveys were undertaken to verify the features in the composite corridor, and when did those surveys take place?

**RESPONSE:**

- 1 Since the development of the route planning area in 2013, approximately 10 aerial surveys have
- 2 been conducted for wildlife, vegetation and route planning from October 30, 2013 until
- 3 February 10, 2017 to verify features in the composite corridor.

**SUBJECT AREA:**     **Routing, None**

**REFERENCE:**       **EIS, Chapter 5, section 5.3.3.2**

**QUESTION:**

Who was responsible for updating the geospatial data following the ground and aerial based field surveys?

**RESPONSE:**

- 1 Manitoba Hydro and routing consultant Geographic Information System Analysts updated the
- 2 geospatial data as outlined in SSC-IR-047.

**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5, section 5.3.3.2

**QUESTION:**

What steps were taken to ensure that the updating of the geospatial data following the ground and aerial based field surveys was done accurately and correctly?

**RESPONSE:**

1 All field data collected for a Manitoba Hydro Environmental Impact Assessment project follows  
2 a standard set of guidelines for what must be collected and how data is submitted to Manitoba  
3 Hydro.

4 Field crews utilize mobile computers during the data collection to facilitate field observations  
5 requiring updates to the data being made directly to a database, eliminating the possibility of  
6 potential errors caused by time and field-to-office communication. Once the survey data was  
7 collected and developed by the project team, the project manager and senior staff evaluated  
8 the data sets and utilized their experience with similar projects to identify data anomalies or  
9 processing errors prior to approving this data to advance to the next step. When errors were  
10 detected, the senior staff directed the team to provide an updated data set, or approved  
11 cleanup procedures. The data was then evaluated again. This process was iterated until the  
12 project manager and senior management approved the resulting data. Once approved it was  
13 submitted to Manitoba Hydro's Data Management System. Once submitted the data goes  
14 through a further verification process by the designated Manitoba Hydro Data Custodian, who  
15 checks the data for compliance with Manitoba Hydro Standards. If the Data Custodian rejects  
16 the data, the survey lead that created it must perform the required actions to bring the dataset  
17 up to compliance. Once accepted by the Data Custodian, the data is loaded into the Master  
18 Integrated Database Management (IDM) environment.

**SUBJECT AREA:** Public Engagement, None

**REFERENCE:** EIS, Chapter 5, section 5.3.4

**QUESTION:**

Please provide more details about the “feedback from the Bipole III” that indicated a high level of concern and resistance in the agricultural community regarding the development of transmission lines through prime agricultural and growing rural residential areas.

**RESPONSE:**

- 1 The Bipole III Transmission Project travelled through high value agricultural lands in southern
- 2 Manitoba. Participants indicated concerns related to transmission line development in the
- 3 agricultural community such as;
  - 4 • working around structures,
  - 5     ○ including seeding/insecticide/herbicide/fungicide application,
  - 6 • aerial application,
  - 7 • manure spreading,
  - 8 • biosecurity,
  - 9 • growing size of equipment; and
  - 10 • site specific landowner concerns as collected through the engagement process.
- 11 The feedback collected and the agricultural assessment of the project was filed with regulators
- 12 in the Bipole III Transmission Project Environmental Impact Statement. Manitoba Hydro
- 13 continues to work with landowners as construction progresses relating to concerns raised by
- 14 individual landowners.



**SUBJECT AREA:** Public Engagement, None

**REFERENCE:** EIS, Chapter 5, section 5.3.4

**QUESTION:**

Please provide more details about the “engagement processes for the St. Vital Transmission Complex Project” that indicated a high level of concern and resistance in the agricultural community regarding the development of transmission lines through prime agricultural and growing rural residential areas.

**RESPONSE:**

1 The St. Vital Transmission Complex travelled through high value agricultural lands in southern  
2 Manitoba. Participants indicated concerns related to transmission line development in the  
3 agricultural community such as;

- 4 • working around structures,
  - 5 ○ including seeding/insecticide/herbicide/fungicide application,
- 6 • aerial application,
- 7 • manure spreading,
- 8 • biosecurity,
- 9 • growing size of equipment; and
- 10 • site specific landowner concerns as collected through the engagement process.

11 Feedback was collected through open houses, meetings, one-on-one discussions, a project  
12 information line and email address.

13 The feedback collected and the agricultural assessment of the project was filed with regulators  
14 in the St. Vital Transmission Complex Environmental Assessment Report. Manitoba Hydro will  
15 continue to work with landowners as land acquisition and construction progresses.

**SUBJECT AREA:** Public Engagement, Routing

**REFERENCE:** EIS, Chapter 5, section 5.3.4

**QUESTION:**

What modifications were made to the EPRI-GTC methodology, if any, to reflect and address the high level of concern and resistance in the agricultural community regarding the development of transmission lines through prime agricultural and growing rural residential areas?

**RESPONSE:**

- 1 There were no changes made to the methodology in regards to any given perspective. There
- 2 were adjustments made to the criteria and weightings in the models that are used within the
- 3 methodology, partly in response to feedback from stakeholders. Please refer to response SSC-
- 4 IR-051.

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**SUBJECT AREA:** Routing, Public Engagement

**REFERENCE:** Chapter 5, Section 5.3.4

**QUESTION:**

How does the modified EPRI-GTC methodology used by Manitoba Hydro for the Manitoba-Minnesota Transmission Project reflect and address the high level of concern and resistance in the agricultural community regarding the development of transmission lines through prime agricultural and growing rural residential areas?

**RESPONSE:**

- 1 Feedback related to agricultural land use and values were provided by Manitoba Agriculture
- 2 and Rural Initiatives, Keystone Agricultural Producers and the Aerial Applicators Association in
- 3 the Alternate Corridor Calibration Workshop (May 2013) as outlined in SSC-IR-037. As a result,
- 4 the Soil Capability & Agricultural Use and Land Use layers contain agriculture features that are
- 5 considered in the Alternate Corridor Evaluation Model (Table 5-3, Page 5-17) and, therefore,
- 6 help focus the study area for route identification.
  
- 7 When identifying alternative routes, the routing team developed routes with consideration of
- 8 impact to agriculture communities. For example, routes parallel property lines where possible
- 9 to minimize bisecting cultivated fields.
  
- 10 Agriculture interests are also represented in the Alternate Route Evaluation Model through the
- 11 Current Agriculture Land Use, Land Capability for Agriculture, Proximity to Intensive Hog
- 12 Operations, and Diagonal Crossings of Agriculture Crop criteria. These criteria were informed
- 13 by feedback received during the Stakeholder Workshops (outlined in SSC-IR-072).
  
- 14 Finally, agricultural interests were considered in the Environment (Built) and Community
- 15 criteria within the Preference Determination Model. Therefore, agricultural interests were a
- 16 critical part of each stage of the routing process including the final preference determination.

- 17 Residential considerations are similarly given consideration at each stage of the EPRI process.
- 18 Consideration of residential development are included in: the alternate corridor model
- 19 (proximity to buildings, building density, proposed development); the alternate route
- 20 evaluation model (relocated residences, potential relocated residences (100-400m), proposed
- 21 residential developments within the ROW; and in preference determination in Community and
- 22 Environment (Built).

**SUBJECT AREA:**     **Routing, None**

**REFERENCE:**       **EIS, Chapter 5, section 5.3.4**

**QUESTION:**

Who proposed that the Gardenton West Border Crossing be removed from further consideration, and why? Specifically, to what extent was the removal of this border crossing related to the high level of concern and resistance in the agricultural community regarding the development of transmission lines through prime agricultural and growing rural residential areas?

**RESPONSE:**

- 1 Please see response CEC-IR-068.

**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5, section 5.4.2

**QUESTION:**

Who are the members of the Manitoba Hydro routing team that were involved in developing alternate routes?

**RESPONSE:**

- 1 As indicated in section 5 of the EIS (Table 5-1, page 5-6), the Routing Team consisted of  
2 Manitoba Hydro staff from the Transmission Line and Civil Design department and the Licensing  
3 and Environmental Assessment department. Senior project leads coordinated overall Routing  
4 Team activities, with additional support drawn from a number of individual disciplinary Subject  
5 Matter Experts (SME) within Manitoba Hydro as required. The senior project leads were:
- 6 • Maggie Bratland, Licensing and Environmental Assessment
  - 7 • James Matthewson, Licensing and Environmental Assessment
  - 8 • Rob Kalichuk, Transmission Line and Civil Design

**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5, section 5.4.2

**QUESTION:**

What are the “number of considerations” that are taken into account?

**RESPONSE:**

- 1 As described in Section 5.4.2. page 5-26 *“Planning considerations included the same factors that*
- 2 *determined the alternative corridors but at a much smaller scale (finer level of detail) along with*
- 3 *technical and environmental constraints such as the number and type of tower structures (in*
- 4 *particular the need for larger, more costly angle structures), land use and environmental*
- 5 *features.”* Further details on route planning can be found in CEC-IR-071.

**SUBJECT AREA:**     **Routing, None**

**REFERENCE:**       **EIS, Chapter 5, section 5.4.2**

**QUESTION:**

What policies, procedures and/or protocols applied to the development of alternate routes by the Manitoba Hydro routing team?

**RESPONSE:**

- 1 Please refer to response CEC-IR-071.



**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5, section 5.4.2

**QUESTION:**

What are the biases that affect the development of alternate routes by the Manitoba Hydro routing team?

**RESPONSE:**

1 Please see response CEC-IR-071 that speaks to the specific considerations of the overall route  
2 development approach used by Manitoba Hydro for this project and Manitoba Hydro's  
3 response to SSC-IR-015 that speaks to the application of the EPRI-GTC siting methodology for  
4 the project.

5 There is no list of specific biases that were identified or inventoried as implied by this and other  
6 Information Requests. When referenced, Manitoba Hydro is speaking to the general biases that  
7 all individuals can potentially incorporate into their individual thought-processes, which in turn  
8 has the potential to influence input. This is an aspect of human nature and is one of a number  
9 of potential issues that a collective, multi-disciplinary review team can minimize or overcome.  
10 This concept was discussed by Mr. Matthewson at the January 19<sup>th</sup> routing presentation to the  
11 CEC (Routing Workshop Transcripts, pages 14-15). The process and data-driven nature of the  
12 EPRI-GTC siting methodology used by Manitoba Hydro contributed significantly to reducing  
13 potential issues related to bias of Routing Team members. The concept and use of several types  
14 and levels of multi-disciplinary teams with an equally diverse composition of contributing  
15 Subject Matter Experts (SME) throughout a project will collectively strive to check and minimize  
16 not only any potential influence of individual biases but a number of other factors that, while  
17 important from one perspective, may not be as important to others involved. The overarching  
18 objective of this approach is to fairly and openly consider all input from team members and the  
19 various stakeholders that they represent in order to arrive at comprehensive, balanced and

20 reflective decisions. This approach was applied in all aspects of the development of alternate  
21 routes for the project, where all transmission line routing decisions were made by group  
22 consensus.

**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5, section 5.4.2

**QUESTION:**

What training is provided by Manitoba Hydro to the routing team to deal with these biases?

**RESPONSE:**

- 1 Please refer to response SSC-IR-056.

**SUBJECT AREA:**      **Routing, None**

**REFERENCE:**        **EIS, Chapter 5, section 5.4.2**

**QUESTION:**

What policies, procedures and/or protocols are in place to address biases that affect the development of alternate routes by the Manitoba Hydro routing team?

**RESPONSE:**

- 1 Please refer to response SSC-IR-056.

**SUBJECT AREA:**     **Routing, None**

**REFERENCE:**       **EIS, Chapter 5, section 5.4.2**

**QUESTION:**

What steps are taken by Manitoba Hydro after the development of alternate routes to determine whether or not biases affected some or all of those alternate routes?

**RESPONSE:**

- 1 Please refer to response SSC-IR-056.

**SUBJECT AREA:**      **Routing, None**

**REFERENCE:**        **EIS, Chapter 5, section 5.4.2**

**QUESTION:**

Did Recommendation 7.4 contained in the Clean Environment Commission’s Report on the Bipole III Transmission Project – “Manitoba Hydro discontinue using undeveloped Crown land as a default routing option without appropriate assessment of the impact on ecological, traditional or cultural values of those lands” – affect the development of alternate routes by Manitoba Hydro’s routing team and, if so, how?

**RESPONSE:**

- 1 Recommendation 7.4 did not affect alternate route development by Manitoba Hydro’s routing
- 2 team as undeveloped crown land is not categorized as an Area of Least Preference (Chapter 5,
- 3 Section 5.3.3.1 pg 5-19).

**SUBJECT AREA:**      **Routing, None**

**REFERENCE:**        **EIS, Chapter 5, section 5.4.3**

**QUESTION:**

When did Manitoba Hydro System Planers request the 10 km buffer?

**RESPONSE:**

- 1 Manitoba Hydro's System Planners requested that the 10km buffer be considered in Fall 2012
- 2 during the preliminary planning phase of the Transmission line routing process.

**SUBJECT AREA:** Routing, Project Description

**REFERENCE:** EIS, Chapter 5, section 5.4.3

**QUESTION:**

Why is a 10 km buffer a “key mitigation strategy”?

**RESPONSE:**

- 1 In Section 5.4.2 of the EIS (Page 5-26), the following is stated: “Manitoba Hydro System
- 2 Planners requested that a 10 km buffer of existing 500-kV transmission lines be applied when
- 3 drawing alternative route segments to maintain separation, a key mitigation strategy in the
- 4 reduction of risk to reliability associated with critical system infrastructure such as 500-kV
- 5 lines.”
  
- 6 The existing and proposed 500-kV lines are important to Manitoba Hydro’s ability to supply
- 7 load in times of drought or during HVDC outages. By ensuring sufficient separation distance
- 8 between these two 500-kV lines, they will be less vulnerable to extreme weather events that
- 9 could impact both lines at the same time. Extreme weather events could be wide-front winds,
- 10 tornadoes or ice storms. That is why the 10km buffer was considered a key mitigation strategy.



**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5, section 5.4.3

**QUESTION:**

Can a buffer be less than 10 km and still be as effective? Specifically, what is the smallest buffer that is effective?

**RESPONSE:**

1 As noted on page 5-29 a buffer of less than 10km can be effectively applied on a case specific  
2 basis considering the site specific conditions.

3 Given that the two 500-kV lines are very important to reliability of supply to Manitoba Hydro's  
4 load, the preference is to maintain a 10km separation buffer from existing 500-kV lines to  
5 reduce the likelihood a weather event could affect both lines. The weather study confirmed  
6 that 90% of tornadoes have a path length of 10km or less. The weather study also confirmed  
7 that west-east routed transmission lines are less vulnerable than north-south routed lines to  
8 extreme weather. As the total length of paralleling increases, the risk of a weather event  
9 affecting both lines also increases. Paralleling within the Riel to Vivian transmission corridor  
10 (RVTC) is expected to be roughly 25km. The weather study estimated the return period to be 1  
11 in 93 years for tornado events impacting 25km of west to east parallel transmission line. This  
12 risk was deemed acceptable by Manitoba Hydro's System Planners. Please refer to CEC-IR-19  
13 for further information.

**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5, section 5.4.3

**QUESTION:**

When was the 10 km buffer removed as a routing constraint, and why?

**RESPONSE:**

1 In footnote 3 to Table 5-5, Pg 5-29 in Section 5.4.3, it is stated: "Prior to this point in the  
2 project, system planning constraints required a 10km separation buffer from the D602F.  
3 Consideration of overall reliability by Manitoba Hydro project engineers of risks of common  
4 outage to the overall project led to the relaxing of this constraint and the ability to include  
5 additional parallel options. However, the overall amount of parallel of the existing 500-kV  
6 transmission line is limited, and constrained in areas of higher weather risk." This line is now  
7 known as "M602F".

8 The discussion on the 500-kV parallel is included in Appendix 5A.4.1.

9 Additional segments that were parallel to M602F in the Riel to Vivian corridor were added  
10 starting in the Round 1 Evaluation process based on public input to consider further paralleling  
11 options. The weather study was completed in June 2014. Results were incorporated into the  
12 Engineering Perspective of the Preference Determination Model in December 2014 as  
13 described in Section 5.5.4. The weather study confirmed that 90% of tornadoes have a path  
14 length of 10km or less. The weather study also confirmed that prevailing weather, including  
15 tornadoes, are in a west to east direction, which makes transmission lines sited in a north to  
16 south direction more vulnerable.

17 The 10km buffer was only removed as a routing constraint in the Riel to Vivian corridor because  
18 of the reduced probability of extreme weather affecting both lines (i.e. the corridor is in an

- 19 east-west direction) and proximity to Winnipeg, which would allow for more rapid transmission
- 20 line repairs to be made.

**SUBJECT AREA:**      **Routing, None**

**REFERENCE:**        **EIS, Chapter 5, section 5.4.3.1 and Appendix 5A**

**QUESTION:**

When was the “model calibration meeting for transmission line routing in Southern Manitoba” held?

**RESPONSE:**

- 1 The meeting to calibrate the model referred to took place in June 2013.

**SUBJECT AREA:**      **Routing, None**

**REFERENCE:**        **EIS, Chapter 5, section 5.4.3.1 and Appendix 5A**

**QUESTION:**

Who participated in the “model calibration meeting for transmission line routing in Southern Manitoba”?

**RESPONSE:**

- 1 The Project Team, as described in the EIS (section 5, Table 5-1, page 5-6), participated in the
- 2 referenced model calibration meeting.

**SUBJECT AREA:**      **Routing, None**

**REFERENCE:**        **EIS, Chapter 5, section 5.4.3.1 and Appendix 5A**

**QUESTION:**

How did the participants determine the criteria in the model?

**RESPONSE:**

- 1 The participants used information gathered from the stakeholder workshops to create the
- 2 alternate corridor evaluation model, previous experience, and professional judgment to
- 3 determine the criteria in the model.

**SUBJECT AREA:** Routing, Public Engagement

**REFERENCE:** EIS, Chapter 5, section 5.4.3.1 and Appendix 5A

**QUESTION:**

How did the participants determine the relative weights of each criterion?

**RESPONSE:**

- 1 The participants used information gathered from the stakeholder workshops used to create the
- 2 alternate corridor evaluation model, previous experience, and professional judgment to
- 3 determine the weights in the model. The basis for this model was the model developed by
- 4 Manitoba Hydro for the St. Vital – Letellier project in the same area. On that project, the team
- 5 used the Analytical Hierarchy Process to calibrate the weights. However, since MMTP was
- 6 simply a modification, then the weights were adjusted manually by team consensus. The
- 7 changes to the model are described in Appendix 5A.4.1.

**SUBJECT AREA:** Routing, Engagement

**REFERENCE:** EIS, Chapter 5, section 5.4.3.1 and Appendix 5A

**QUESTION:**

Which previous projects and engagement processes provided feedback that informed the criteria?

**RESPONSE:**

- 1 Experience of staff and feedback received on all recent transmission projects informed the
- 2 criteria, as each project is an opportunity for Manitoba Hydro to build understanding of the
- 3 different perspectives of stakeholders and communities and what factors are most valued.
- 4 Most recently the feedback received on the Bipole III Transmission Project and the St. Vital
- 5 Transmission Complex, each with activities in southern Manitoba, helped inform the criteria.



**SUBJECT AREA:** Public Engagement, Routing

**REFERENCE:** EIS, Chapter 5, section 5.4.3.1 and Appendix 5A

**QUESTION:**

What was the feedback from those previous projects and engagement processes that informed the criteria?

**RESPONSE:**

- 1 Feedback received through past public engagement processes, including the process for MMTP,
- 2 are varied in nature and have contributed to the understanding of the Project team of the key
- 3 considerations (predominant concerns) and the relative importance of the concerns overall.
- 4 Predominant concerns raised by the public include the proximity to homes/buildings and the
- 5 potential impacts to agricultural lands.
  
- 6 The alternative route evaluation model reflects this feedback in the “Built” perspective. The
- 7 “Built” perspective is represented by 12 criteria.
  
- 8 Five criteria represent development on the landscape.

Relocated Residences – Within ROW	27.1%
Potential Relocated Residences (100 m) – Edge of ROW	17.1%
Proposed Developments – Within ROW	15.5%
Proximity to Residences (100-400 m) – Edge of ROW	6.4%
Proximity to Buildings and Structures (100 m) – Edge of ROW	3.2%

- 9 Four criteria reflect agricultural aspects.

Diagonal Crossings of Agriculture Crop Land (km)	9.9%
Current Agricultural Land Use (Value) – ROW	4.4%
Proximity to Intensive Hog Operations (acres) – ROW	3.3%
Land Capability for Agriculture (Value) – ROW	2.2%

10 These nine criteria represent 89.1% of the “Built” perspective.

**SUBJECT AREA:** Public Engagement, [Secondary Subject Text]

**REFERENCE:** EIS, Chapter 5, section 5.4.3.1 and Appendix 5A

**QUESTION:**

How did the feedback from those previous projects and engagement processes inform the criteria?

**RESPONSE:**

- 1 Please refer to response SSC-IR-070.

**SUBJECT AREA:** Public Engagement, Routing

**REFERENCE:** EIS, Chapter 5, section 5.4.3.1 and Appendix 5A

**QUESTION:**

What steps did Manitoba Hydro take to solicit public input on the criteria and relative weights of each criterion? If steps were taken, please provide details of the public input obtained and an explanation of how that input affected the criteria and relative weights.

**RESPONSE:**

- 1 The question is referring to the Round 1 comparative evaluation and hence the answer
- 2 provided relates to the criteria and weightings of the AREM model.
  
- 3 Workshops were held at the onset of the project where stakeholder groups, First Nations and
- 4 the MMF were invited to participate in reviewing criteria and weightings as outlined in Section
- 5 3.4.4.4. Manitoba Hydro invited stakeholder groups identified in the stakeholder identification
- 6 process (Section 3.4.2) that indicated an interest in participating and held two workshops. For
- 7 details of workshop comments, please see Section 3 of the Technical Data Report Round 1.
  
- 8 Feedback received from the workshops that resulted in a change to the AREM criteria was how
- 9 agricultural land use is represented in the model. Participants noted that the criteria from the
- 10 previous model used on St. Vital, which was “Agricultural Crop Land” and was based on
- 11 agricultural land use data, should be broken down into two categories to better reflect the fact
- 12 that the current land use does not fully capture the potential capability of the land. This criteria
- 13 was then split into these following two criteria:
  
- 14     • Current Agricultural Land Use (Value)
- 15     • Land Capability for Agriculture (Value)
  
- 16 Feedback from participants reaffirmed the relative rank-order of the criteria for the Built
- 17 criteria as well with the feedback indicating that proximity to homes should be given more

18 'importance' than agricultural criteria. This feedback supported that the weights associated  
19 with residences are higher than those associated with agricultural criteria.

20 During Round 1, feedback on criteria for transmission line routing was requested from  
21 participants. These were categorized as concerns and preferences for routing a transmission  
22 line and allowed participants to rank their priorities and results are outlined in section 5.4.2.6  
23 and Table 5-2 of the Round 1 Public Engagement Technical Report. In addition, previous public  
24 feedback in transmission line projects has shown a concern for the proximity to residences and  
25 potential impacts to agricultural lands. This feedback was reinforced as the PEP progressed and  
26 was represented in the "Built" perspective criteria and weightings.

**SUBJECT AREA:**      **Routing, None**

**REFERENCE:**        **EIS, Chapter 5, section 5.4.3.1 and Appendix 5A**

**QUESTION:**

Please provide copies of all presentations, participant notes, communications and reports regarding the “model calibration meeting for transmission line routing in Southern Manitoba”.

**RESPONSE:**

- 1 A short introductory presentation describing the EPRI-GTC methodology (see pages 238-279 of
- 2 654, St. Vital Transmission Complex Summary of Public Engagement -
- 3 [http://www.gov.mb.ca/sd/eal/registries/5719hydrostvital/eap/appendix.d.public.engagement.](http://www.gov.mb.ca/sd/eal/registries/5719hydrostvital/eap/appendix.d.public.engagement.process.pdf)
- 4 [process.pdf](http://www.gov.mb.ca/sd/eal/registries/5719hydrostvital/eap/appendix.d.public.engagement.process.pdf) ) was given at the start of the meeting. There are no participant notes or
- 5 communications from the meeting.
  
- 6 The Environmental Impact Statement (Chapter 5) for MMTP and the EA Report for the St. Vital
- 7 Transmission Complex (Chapter 8 -
- 8 ([https://www.hydro.mb.ca/projects/expansion/stvital/environment/ea\\_report/stvital\\_ea\\_repo](https://www.hydro.mb.ca/projects/expansion/stvital/environment/ea_report/stvital_ea_report_part7.pdf)
- 9 [rt\\_part7.pdf](https://www.hydro.mb.ca/projects/expansion/stvital/environment/ea_report/stvital_ea_report_part7.pdf) ) outline the outcome of the meeting.

**SUBJECT AREA:**      **Routing, None**

**REFERENCE:**        **EIS, Chapter 5, section 5.4.3.1 and Appendix 5A**

**QUESTION:**

How was the alternate route evaluation model modified for:

- (a) A 500 kV line?
- (b) the Manitoba-Minnesota Transmission Project?

**RESPONSE:**

- 1 Please refer to response CEC-IR-075.

**SUBJECT AREA:**      **Routing, None**

**REFERENCE:**        **EIS, Chapter 5, section 5.4.3.1 and Appendix 5A**

**QUESTION:**

Who was involved in modifying the alternate route evaluation model for the Manitoba-Minnesota Transmission Project?

**RESPONSE:**

- 1 The Project Team as outlined in the EIS (section 5, Table 5-1, page 5-6) was involved in
- 2 modifying the Alternate Route Evaluation Model (AREM).



**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5, section 5.4.3.1 and Appendix 5A

**QUESTION:**

What are the differences between the alternate route evaluation model modified for the Manitoba-Minnesota Transmission Project and prior projects utilizing this model? Specifically, what are the differences between the criteria used and their relative weights?

**RESPONSE:**

- 1 The Alternate Route Evaluation Model was previously used on the St. Vital to Letellier
- 2 transmission line. The attachment (SSC-IR-076\_Attachment) shows the criteria and weights for
- 3 each project.
  
- 4 “N/A” means not applicable – the criteria was not used.
  
- 5 In some cases a note in the table explains the differences between the criteria from the AREM
- 6 model for St. Vital and the AREM model for the Manitoba-Minnesota project.

<b>Criteria</b>	<b>St. Vital to Lettelier</b>	<b>MMTP</b>
<b>Built</b>		
Relocated Residences	43.4%	27.1%
Potential Relocated Residences	23.5%	17.1%
Proximity to Residences	7.9%	6.4%
Proposed Developments	N/A	15.5%
Agricultural Crop Land (Acres)	3.2%	Became next three
Current Agricultural Land Use (Value)	Agricultural crop land became these three	4.4%
Land Capability for Agriculture (Value)		2.2%
Proximity To Intensive Hog Operations (Acres)		3.3%
Shelter Belts (Acres) – ROW	3.1%	N/A
Diagonal Crossings of Ag Cropland (km)	8.3%	9.9%
Proximity to Buildings and Structures (100 m)	1.6%	3.2%
Public Use Areas (250m) – EOROW	N/A	7.4%
Historic/Cultural Resources (250 m)	9.0%	1.8%
Potential Commercial Forest (Acres)	N/A	1.7%
<b>Natural</b>		
Natural Forests (Acres) – ROW	6.1%	8.0%
Wetland Areas (Acres) – ROW	15.4%	16.4%
Intactness	N/A	25.9%
High Quality Wildlife Habitat (Acres)	21.5%	Became intactness
Native Grassland Areas (Acres)	43.7%	
Stream/River Crossings – Centerline	2.3%	16.4%
Conservation Designated Lands	N/A	33.3%
Floodplain/Riparian Areas (Acres)	11.0%	N/A
<b>Engineering</b>		
Seasonal Construction and Maintenance Restrictions (Value) – ROW	N/A	16.5%
Index of Proximity to Existing 500 kV Lines	N/A	29.5%
Accessibility	39.7%	16.5%
Total Project Costs	7.6%	33.0%
Existing Transmission Line Crossings (#)	9.9%	4.5%
% Parallel Existing T/L	21.4%	N/A
% Parallel Roads	21.4%	N/A

**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5, section 5.4.3.1 and Appendix 5A

**QUESTION:**

How does the alternate route evaluation model modified for the Manitoba-Minnesota Transmission Project reflect and address the high level of concern and resistance in the agricultural community regarding the development of transmission lines through prime agricultural and growing rural residential areas?

**RESPONSE:**

- 1 Please response to SSC-IR-051.

**SUBJECT AREA:** Property, None

**REFERENCE:** EIS, Chapter 2, section 2.20

**QUESTION:**

Order-in-Council 495/2014 was issued by the provincial government on November 19, 2014 and exercised the power under section 9(8) of the Expropriation Act to take away the rights of objecting Bipole III landowners to object to proposed expropriations and participate in inquiries. Has Manitoba Hydro requested the provincial government to exercise that power in relation to the Manitoba-Minnesota Transmission Project and, if so, when? If not, does Manitoba Hydro intend to make such a request?

**RESPONSE:**

- 1 Manitoba Hydro has not made any such request as expropriation is a last resort that would only
- 2 be recommended if voluntary easement agreements cannot be concluded with impacted
- 3 landowners. Discussions with landowners are still on-going. Any decision to expropriate would
- 4 have to be first approved by the Manitoba Hydro Electric Board and subsequent to that the
- 5 Provincial Government.

**SUBJECT AREA:** Property, None

**REFERENCE:** Chapter 2, section 2.20

**QUESTION:**

Does Manitoba Hydro consider the process for objections and inquiries set out in the Expropriation Act to be a “licensing risk”? In particular, is the length of time required to resolve objections and conduct inquiries a “licensing risk”?

**RESPONSE:**

- 1 No. Manitoba Hydro does not consider the expropriation process a “licensing risk”.

**SUBJECT AREA:**      **Routing, None**

**REFERENCE:**        **EIS, Chapter 2, Section 2.20**

**QUESTION:**

Does the modified EPRI-GTC methodology directly or indirectly take into account the time and cost associated with expropriation objections and inquiries and, if so, how? If not, why not?

**RESPONSE:**

- 1 The EPRI-GTC methodology does not directly or indirectly take into account the time and cost
- 2 associated with expropriation objections and inquiries.

**SUBJECT AREA:**      **Routing, None**

**REFERENCE:**        **EIS, Chapter 5, section 5.4.3.1 and Appendix 5C**

**QUESTION:**

Page 5-33 refers to a workshop conducted on February 4 – 6, 2014. Appendix 5C contains notes from only February 5 – 6, 2014. Does page 5-33 contain an error or are meeting notes missing? If meeting notes are missing, please provide them along with an explanation for their omission.

**RESPONSE:**

- 1 Page 5-33 is an error. The workshop took place on February 5-6, 2014.

**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5, section 5.4.3.1 and Appendix 5C

**QUESTION:**

How did Manitoba Hydro decide who should be invited to the workshop?

**RESPONSE:**

- 1 Project Team members were invited to participate in the workshop. As advised by the Routing
- 2 Consultant, this team included subject matter experts who could leverage their understanding
- 3 of the broader project context (technical, regulatory requirements, past stakeholder
- 4 engagement experience for similar projects) to represent and speak on behalf of the feedback
- 5 they received from specific stakeholder groups, the perspectives they worked directly with, and
- 6 the analysis they conducted on the Project.



**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5, section 5.4.3.1 and Appendix 5C

**QUESTION:**

Why did Manitoba Hydro decide to not invite members of the public?

**RESPONSE:**

- 1 The question refers to the Round1 Route evaluation workshop.
- 2 It is not practical or reasonable to invite members of the public to participate in Project
- 3 decisions at this level or stage of decision making, given the level of technical expertise
- 4 required, and the extent and depth of knowledge needed.
- 5 While members of the public were not invited to attend this workshop, the Manitoba Hydro
- 6 staff responsible for the public engagement and the First Nation & Metis engagement
- 7 processes, equipped with a thorough understanding of the broader project context (technical,
- 8 regulatory requirements, past stakeholder engagement experience for similar projects)
- 9 provided input based on their knowledge of the feedback received from external stakeholders.
- 10 See response to SSC-IR-084 for a list of who was invited to the workshop.

**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5, section 5.4.3.1 and Appendix 5C

**QUESTION:**

For each of the Manitoba Hydro attendees listed in Appendix 5C, please provide their job title and identify which perspective they represented.

**RESPONSE:**

- 1 Appendix 5C includes the notes from the Round 1 route evaluation workshop. The table below
- 2 provides the list of attendees and their associated titles. With respect to which specific
- 3 perspectives they represented, this varied. While participants spoke to the perspectives most
- 4 closely related to their area of expertise, they also contributed to discussions related to other
- 5 perspectives as well. Additional details related to general workshop dynamics can be found in
- 6 Manitoba Hydro’s response to SSC-IR-090.

ROUND 1 ROUTING WORKSHOP ATTENDEES		
NAME	TITLE/POSITIONDISCIPLINE	COMPANY/GROUP
James Matthewson	Senior Environmental Assessment Officer	Manitoba Hydro, Licensing and Environmental Assessment Department
Dave Block	Environmental Specialist	Manitoba Hydro, Licensing and Environmental Assessment Department
Ken Ducheminsky	Transmission Line Construction Section Head	Manitoba Hydro, Transmission Line Construction Department
Tim Kirkham	Professional Engineer	Manitoba Hydro, Transmission Line and Civil

ROUND 1 ROUTING WORKSHOP ATTENDEES		
NAME	TITLE/POSITIONDISCIPLINE	COMPANY/GROUP
		Construction Safety and Construction Department
Pat McGarry	Senior Environmental Assessment Officer	Manitoba Hydro, Licensing and Environmental Assessment Department
Eryn Brown	Project Manager	Manitoba Hydro, Transmission Projects Department
Joe Petaski	Transmission Line Design Section Head	Manitoba Hydro, Transmission and Civil Design Department
Jon Kell	Civil Design Section Head	Manitoba Hydro, Transmission and Civil Design Department
Trevor Joyal	Environmental Specialist	Manitoba Hydro, Licensing and Environmental Assessment Department
David Jacobson	Interconnection Grid Supply Section Head	Manitoba Hydro, System Planning Department
Brett McGurk	Environmental Specialist	Manitoba Hydro, Licensing and Environmental Assessment Department
Maggie Tisdale	Senior Environmental Assessment Officer	Manitoba Hydro, Licensing and Environmental Assessment Department
Robin Gislason	Engagement Coordinator	Manitoba Hydro, Licensing and Environmental

ROUND 1 ROUTING WORKSHOP ATTENDEES		
NAME	TITLE/POSITIONDISCIPLINE	COMPANY/GROUP
		Assessment Department
Don Hester	Public Engagement	AECOM
Natalie Henault	Public Engagement	AECOM
Jesse Glasgow	Routing	Quantum Spatial
Patrick Baber	Routing	Quantum Spatial
Joey Siemens	GIS	Stantec
Leane Wyenberg	Biophysical Assessment	Stantec
George Kroupa	GIS	Stantec
Jocelyn Hiebert	Biophysical Assessment/GIS	Stantec
Wara Chiyoka	Socioeconomic Assessment	Stantec
Mike Sweet	Biophysical Assessment	Stantec

7

**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5, section 5.4.3.1 and Appendix 5C

**QUESTION:**

What knowledge, education and/or skills were necessary for a facilitator of the workshop?

**RESPONSE:**

1 The facilitator needed to hold a senior role within the Project Team, understand the Manitoba  
2 Hydro organization and have an intimate understanding of the EPRI-GTC routing methodology.  
3 The ability to organize, coordinate and effectively execute multi-disciplinary meetings was also  
4 required, including the ability to enable and support the need for open debate to occur and to  
5 help guide participants not as familiar with the process. This involves being able to bridge and  
6 align any disconnects in approach and understanding between the workshop process and  
7 Manitoba Hydro organizational practices with workshop participants. Given the highly technical  
8 nature of certain aspects of the workshop and use/interpretation of the deliverables within the  
9 routing methodology, routing consultants (Quantum Spatial) with expertise in the use of the  
10 EPRI-GTC methodology and applying it on other Projects in other jurisdictions, helped to guide  
11 the process to produce the required outputs and helped to provide context and framing to the  
12 discussion. Please refer to Manitoba Hydro's response to SSC-IR-090 for additional details  
13 related to how workshops were run.

**SUBJECT AREA:**      **Routing, None**

**REFERENCE:**        **EIS, Chapter 5, section 5.4.3.1 and Appendix 5C**

**QUESTION:**

How many Manitoba Hydro employees had the knowledge, education and/or skills to facilitate the workshop?

**RESPONSE:**

- 1 Please refer to response SSC-IR-085. Manitoba Hydro has not quantified the number of
- 2 employees who possess those facilitation skills.

**SUBJECT AREA:**      **Routing, None**

**REFERENCE:**        **EIS, Chapter 5, section 5.4.3.1 and Appendix 5C**

**QUESTION:**

Why did representatives from Quantum Spatial facilitate the workshop?

**RESPONSE:**

- 1 Please refer to response SSC-IR-085.

**SUBJECT AREA:**      **Routing, None**

**REFERENCE:**        **EIS, Chapter 5, section 5.4.3.1 and Appendix 5C**

**QUESTION:**

Why didn't representatives from Quantum Spatial facilitate the workshops conducted on May 6 - 8, 2013?

**RESPONSE:**

- 1 A representative from Manitoba Hydro's Routing Consultant did assist in facilitating the
- 2 workshops on May 6-8<sup>th</sup>, 2013.



**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5, section 5.4.3.1 and Appendix 5

**QUESTION:**

Did Manitoba Hydro consider using something other than a route being 120% longer than the shortest route between the start and each border crossing to eliminate routes and, if so, what?

**RESPONSE:**

1 Eliminating all routes greater than 120% longer than the shortest route was one of many steps  
2 used to screen in the top routes. This was supported by experts in the field of route selection,  
3 and is used as a guideline for route viability. Utilities have an obligation to customers to  
4 consider cost when selecting locations for new transmission line construction, and all things  
5 equal, shorter routes are less expensive to build and maintain.

6 Several other methods were used to eliminate routes from further consideration (e.g. review of  
7 route statistics, histograms, segment comparison) as described in the Comparative Evaluation  
8 Sections for each Round (Section 5.4.3.1, page 5-29; Section 5.5.4, page 5-27, Section 5.6.4,  
9 page 5-95).

**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5, section 5.4.3.1 and Appendix 5C

**QUESTION:**

The workshop begins with all present agreeing to the 120% reduction which reduces the number of possible routes to be considered from over 750,000 to 6500 routes. The workshop then proceeds to consider the top ten routes from each perspective for Gardenton and the top five from each perspective for both Piney East and Piney West for a total of 80 possible routes.

Please provide the following information:

- (a) Was the workshop recorded? If so, has a transcript been prepared?
- (b) Why did the workshop focus on only 1.2% of the routes they were tasked with considering?
- (c) Who proposed that the workshop focus on only 1.2% of the possible routes?
- (d) What consideration was given by the workshop to the remaining 98.8% of possible routes and, if any, why is that not reflected in the meeting notes?
- (e) How were the results of the workshop reported to Manitoba Hydro and what steps, if any, did Manitoba Hydro take to address the workshop's failure to consider 98.8% of the possible routes?
- (f) How much time was spent considering each of the 80 routes considered? If that information was not recorded during the workshop, why was it not recorded?

**RESPONSE:**

- 1 While this request refers to the first workshop, from a general perspective, all of the workshops
- 2 follow a similar format and process. Participating Subject Matter Experts (SME) responsible for
- 3 various stakeholder groups and associated perspectives, actively engage in all aspects of
- 4 discussions. Workshop participants leveraged their understanding of the broader project
- 5 context (technical, regulatory requirements, past stakeholder engagement experience for
- 6 similar projects) to not only represent and speak on behalf of the feedback they received from
- 7 specific stakeholder groups and perspectives they worked directly with but also contributed to

8 other viewpoints and issues associated with other perspectives and the analysis they  
9 conducted. Routes and segments were discussed as a group and strengths and weaknesses are  
10 highlighted. Decisions are made as a group and consensus is reached prior to moving on to the  
11 next stage. This open, multi-disciplinary approach contributes to an efficient process where the  
12 contributions of all participants contribute to balanced and unbiased results. Materials and  
13 analysis are prepared and provided ahead of time enabling participants to participate more  
14 effectively.

15 A) The workshop was not recorded.

16 B) The workshop focused on the routes remaining after removing any routes greater than  
17 120% longer than the shortest route (See SSC-IR-089 for further details). After a review  
18 of what was remaining, all route segments were still available, therefore no routing  
19 opportunities were lost.

20 C) The routing consultant recommended removing all routes greater than 120% longer  
21 than the shortest route. All participants were in agreement.

22 D) No further consideration was given to the routes removed (See SSC-IR-089 for further  
23 details).

24 E) Representatives of “Manitoba Hydro” were in attendance at the workshop and were  
25 part of the decision to remove the routes under question. There were no concerns with  
26 this as the decision at this step did not involve the removal of any routes or route  
27 segments beyond the agreed upon 120% threshold.

28 F) When taking into account the pre-work, materials review, feedback, analysis and other  
29 activities, considerable time was spent discussing the routes during the workshop. No,  
30 timeframes were not recorded in the workshop, as it is not reflective or relevant to the  
31 level of consideration of routes.

32 Please refer to response SSC-IR-089 for further information.

**SUBJECT AREA:**      **Routing, None**

**REFERENCE:**        **EIS, Chapter 5, section 5.4.3.1 and Appendix 5C**

**QUESTION:**

Who raised the concern about the way cost was considered at the end of the day on February 6, 2014? The meeting notes do not indicate what the concern was specifically, so please provide that information.

**RESPONSE:**

- 1 There was no 'concern' with the way cost was considered. It was recommend by the
- 2 engineering team to properly represent (scale) the difference in costs between the routes
- 3 relative to the total costs of the project.

**SUBJECT AREA:**      **Routing, None**

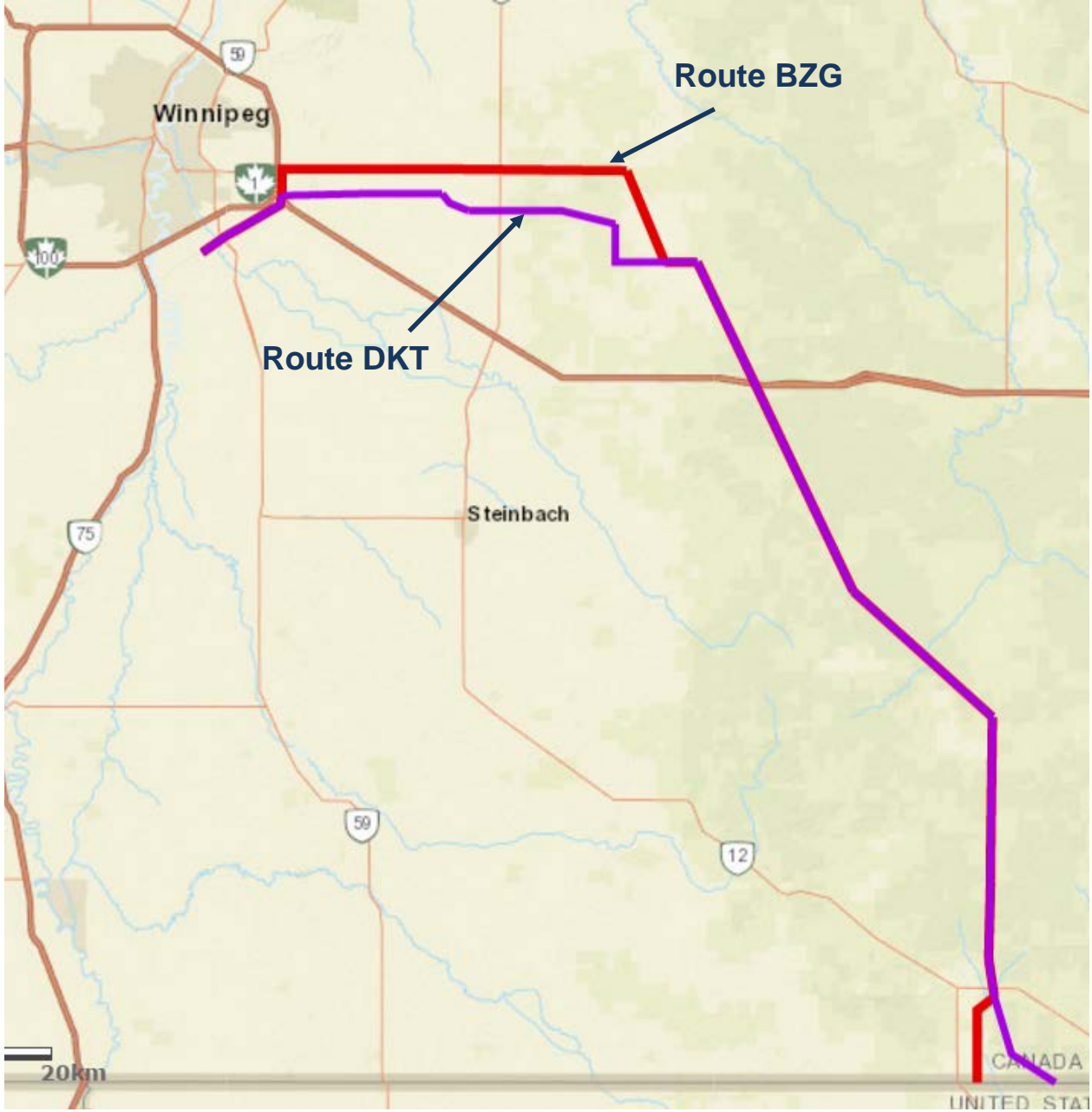
**REFERENCE:**        **Chapter 5, section 5.4.3.1, Appendix 5C and Maps  
5-13 and 5-14**

**QUESTION:**

Routes DKT and BZG appear to be very similar until just before the border. Please explain how the two routes are similar and how they are different.

**RESPONSE:**

- 1 Routes DKT and BZG (SSC-IR-092\_Attachment) differ at two locations as follows:
- 2     1. Heading east from Winnipeg, Route BZG follows M602F, Route DKT does not.
- 3     2. At the south end, Route DKT heads to the Piney East border Crossing, Route BZG heads
- 4       to the Piney West border crossing.



**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5, section 5.4.3.1, Table 5-14 and Appendix 5C

**QUESTION:**

Route DKT was assigned a score of 1.5 for the Community criteria. Route DKT would have been the preferred route to Piney East but for the 1.5 Community score. Neither the meeting notes in Appendix 5C nor the rationale contained in Table 5-14 contain an intelligible explanation for this score, and they are inconsistent with each other. Please explain:

- (a) Which portion of M602F is being referred to?
- (b) Why DKT was assigned a score of 1.5 and why FWZ, EEL and DWM were assigned scores of 1?

**RESPONSE:**

- 1 A) Table 5-14 has an error when describing Routes DWM and EEL. They do not parallel
- 2 M602F as stated. FWZ parallels M602F along the predominantly west – east corridor
- 3 from Riel to near Ross as depicted on Map 5-13 in the yellow line.
- 4 B) The “Community” ranking was influenced by feedback received during public and First
- 5 Nations and Metis engagement processes. Route DKT was rated as 1.5 from a
- 6 Community perspective because it neither paralleled M602F (preferred by the public)
- 7 nor was one of the western routes (preferred by First Nations and Metis).

**SUBJECT AREA:** Routing, FNMEP

**REFERENCE:** EIS, Chapter 5, section 5.4.3.1 and Appendix 5C

**QUESTION:**

What is the “First Nation priority zone” mentioned in connection with BZG, and why was it not mentioned in connection with DKT and FWZ?

**RESPONSE:**

1 This reference is from the Round 1 routing evaluation workshop meeting notes. The “First  
2 Nation priority zone” is not an official designation. It was a term a member of the project team  
3 used in one instance to describe areas of interest highlighted during the FNMEP. The “First  
4 Nation priority zone” term used in this instance referred to an area identified by some First  
5 Nations as a significant concern that was traversed by FWZ, and DKT (Piney East) and BZG (Piney  
6 West). The meeting notes from the Round 1 route evaluation workshop indicate that DKT “has  
7 some eastern portions where First Nation concerns were identified” and that Route FWZ was  
8 the least preferred (amongst the routes compared in preference determination for the Piney  
9 East border crossing) based on input during the FNMEP because of a high number of historic  
10 sites.



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**SUBJECT AREA:** Routing, PDM

**REFERENCE:** EIS, Chapter 5, section 5.4.3.1 and Appendix 5C

**QUESTION:**

Route BZG's two crossings of M602F result in higher scores on two criteria: System Reliability and Risk to Schedule. Route BZG would have been the preferred route to Piney West but for these higher scores. None of the Risk to Schedule scores for SU, SY, TC, UC, UM, DKT, EEL, FWZ and DWM are affected by the number of crossings. Why do the number of crossings affect the System Reliability and Risk to Schedule scores for BZG, AQS and AQO, but only the System Reliability scores for SU, SY, TC, UC, UM, DKT, EEL, FWZ and DWM?

**RESPONSE:**

- 1 As noted on page 5-39 of Chapter 5 of the EIS, the Project Team compares each of the routes in
- 2 the preference determination step against each other, and assigns a relative value between 1
- 3 and 3.
  
- 4 The number and type of transmission lines crossed was a consideration, along with several
- 5 other considerations, for risk to schedule in all preference determination steps for MMTP.
  
- 6 The number of transmission lines crossed and their potential influence on the risk to schedule
- 7 was considered in relation to all of the other potential factors in the risk to schedule for each
- 8 route (e.g. an estimated 3 month schedule risk for crossings compared to 6 months required
- 9 schedule risk for frozen ground conditions). As such, while it may not be listed in tables 5-10 or
- 10 5-14 as a key consideration, the number of transmission lines crossed was in fact considered as
- 11 part of Risk to Schedule for routes SU, SY, TC, UC, UM, DKT, EEL, FWZ and DWM.
  
- 12 This is reflected in Appendix 5C for the associated steps in preference determination for the
- 13 routes noted above.

**SUBJECT AREA:**     **Routing, None**

**REFERENCE:**       **EIS, Chapter 5, section 5.4.3.1 and Appendix 5C**

**QUESTION:**

Who decided that the number of crossings would be used in an inconsistent manner during the preference determination, and why?

**RESPONSE:**

- 1 The number of crossings was not used in an inconsistent manner (please refer to response SSC-
- 2 IR-095).

**SUBJECT AREA:**     **Routing, None**

**REFERENCE:**       **EIS, Chapter 5, section 5.4.3.1 and Appendix 5C**

**QUESTION:**

Who suggested that DKT be reintroduced?

**RESPONSE:**

- 1 Route DKT ranked 2<sup>nd</sup> for Piney East and was within 0.1 of the preferred route for Piney East.
- 2 The project team (as described in Table 5-1, page 5-6) made a consensus decision to include
- 3 this route in the preference determination step.

**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5, section 5.4.3.1 and Appendix 5C

**QUESTION:**

Why are the “risks of a lengthy Crown Consultation process” considered a negative by Manitoba Hydro?

**RESPONSE:**

- 1 Crown Consultation is not considered a negative by Manitoba Hydro. As shown in Appendix 5C
- 2 (reference for this question), activities that may impact schedule are considered in decision
- 3 making.

**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5, section 5.4.3.1 and Appendix 5C

**QUESTION:**

What steps are available to Manitoba Hydro to mitigate the “risks of a lengthy Crown Consultation process”, and at what point does Manitoba Hydro engage in those mitigation steps?

**RESPONSE:**

- 1 The Crown Consultation process is the responsibility of the Provincial government and not
- 2 delegated to Manitoba Hydro. As such, Manitoba Hydro does not control the schedule of Crown
- 3 consultation. Manitoba Hydro has a fulsome First Nations and Metis Engagement Program
- 4 which may assist the parties involved but it is not known whether this mitigates timelines for
- 5 the Crown Consultation process.

**SUBJECT AREA:**      **Routing, None**

**REFERENCE:**        **EIS, Chapter 5, section 5.4.3.1 and Appendix 5C**

**QUESTION:**

What steps does Manitoba Hydro take to obtain information about the status of ongoing consultations from the provincial government?

**RESPONSE:**

- 1 Manitoba Hydro engages in discussions with the Provincial Government from time to time
- 2 during project planning to confirm the current status of the Crown Consultation process.
- 3 Information shared through the consultation process by communities and the final report
- 4 Government produces regarding the consultation outcomes are not shared with Manitoba
- 5 Hydro.

**SUBJECT AREA:** Routing, First Nation and Metis Engagement

**REFERENCE:** EIS, Chapter 5, section 5.4.3.1 and Appendix 5C

**QUESTION:**

Does Manitoba Hydro prepare its own strength of claim analysis for each group participating in consultation and, if not, does Manitoba Hydro obtain a copy of the strength of claim analysis from the provincial government?

**RESPONSE:**

- 1 Manitoba Hydro does not prepare its own strength of claim analysis for each group
- 2 participating in consultation nor does it obtain a copy of any such analysis from the Provincial
- 3 government.

**SUBJECT AREA:** Routing, None

**REFERENCE:** EIS, Chapter 5, section 5.4.3.1, Table 5-20 and Appendix 5C

**QUESTION:**

The Crown's duty to consult is not dependent on a proposed project's impact on Crown land. From Manitoba Hydro's perspective, what is the connection between "higher risk of lengthy Crown consultation process" and the "prevalence of Crown lands along the route alternative"?

**RESPONSE:**

- 1 Generally, Indigenous communities require more time and must engage more broadly with
- 2 their own members where projects will involve more Crown land.
  
- 3 Through engagement activities, Manitoba Hydro representatives heard concerns from
- 4 Indigenous communities regarding the amount of Crown land available to practice traditional
- 5 activities in southern Manitoba. Some communities have shared that in southeastern Manitoba
- 6 is one of the last in southern Manitoba on which to practice traditional activities.
  
- 7 Manitoba Hydro is not responsible for Crown Consultation. However, it is Manitoba Hydro's
- 8 understanding that Crown Consultation occurs on a spectrum, with the length, intensity, and
- 9 scope of the consultation undertaken changing depending on the specific circumstances of the
- 10 matter being consulted on. Therefore, while the Duty to Consult could be viewed as not being
- 11 dependent on a proposed project's impact on Crown land, community perspectives regarding
- 12 the potential impacts of a specific project would be expected to inform the scope, intensity and
- 13 length of the agreed-to process for the related Crown Consultation.
  
- 14 Further discussion on risks to schedule are considered is provided in response SSC-IR-116.