





SUBJECT AREA: **Property, None**

REFERENCE: **EIS, Chapter 16, section 16.5.2.1**

QUESTION:

Please provide a copy of the econometric analysis conducted by Prairie Research Associates and any updated analysis conducted since that time.

RESPONSE:

- 1 The analysis is provided in the report. Please refer to response SSC-IR-221.

SUBJECT AREA: **Property, None**

REFERENCE: **EIS, Chapter 16, section 16.5.2.3**

QUESTION:

Please provide details of Manitoba Hydro's policy regarding the voluntary purchase option for residences located within 75 metres of the new right of way. Also, please explain why Manitoba Hydro has such a policy/option.

RESPONSE:

- 1 Manitoba Hydro's policy "Rights-of-way - P293" states the following:
- 2 *"In special circumstances, a buy-out can be offered to provide compensation to the landowner*
- 3 *for all related and reasonable relocation costs, where the proximity of the overhead*
- 4 *transmission lines 115 kV and greater is within 75 metres of the landowner's residence."*
- 5 Manitoba Hydro has such a policy to accommodate individual circumstances where a
- 6 landowner expresses significant and legitimate concerns to the transmission line's proximity to
- 7 their residence.
- 8 This policy is applied only to those residences that pre-exist the establishment of the Manitoba
- 9 Hydro right-of-way.

SUBJECT AREA: **Property, None**

REFERENCE: **EIS, Chapter 16, section 16.5.2.4.2**

QUESTION:

Please explain how effects on property values diminish over time.

RESPONSE:

1 As noted in the Agronomic and Land Use Assessment Study - *Phase 3: Analysis of the*
2 *Relationship Between the Proximity to High Voltage Transmission Lines and Urban Residential*
3 *Property Values*, a key conclusion taken from the literature review is that the property value
4 decline associated with proximity to HVTLS is situationally specific. It is difficult to develop a
5 universal and precise rule about the extent of value reduction associated with proximity to
6 transmission lines, since these relationships are contingent on a host of site-specific variables.
7 The thirty years of studies that PRA reviewed shows wide variation in this value adjustment
8 depending on context, the data available, and the specific statistical methodology. The
9 literature suggests that the value reduction declines over time, as the rights-of-way become
10 developed and as the landscaping on new properties matures.

SUBJECT AREA: **Property, None**

REFERENCE: **EIS, Chapter 16, section 16.5.5**

QUESTION:

What impact, if any, do the recent mining lease claims made by 1995302 Alberta Ltd. have on the Manitoba-Minnesota Transmission Project?

RESPONSE:

- 1 The impact, if any, of mining lease claims made by 1995302 Alberta Ltd. is unknown at this
- 2 time.

SUBJECT AREA: Noise & EMF, None

REFERENCE: EIS, Chapter 18, sections 18.3.2.1.4, 18.4.1.4 and 18.5.5

QUESTION:

On May 8, 2001, the current Crown Services Minister made comments in the Legislative Assembly that were critical of the Clean Environment Commission's reliance on work conducted by the EPRI and Exponent during the 2001 Experts Workshop. To what extent are the studies concerning the health impacts of electromagnetic fields relied upon by Manitoba Hydro conducted or funded by utility companies?

RESPONSE:

- 1 Manitoba Hydro retained engineers and public health scientists from Exponent, a scientific and
- 2 engineering firm, to model the electric and magnetic fields (EMF) associated with the operation
- 3 of the MMTP transmission line and to provide the Clean Environment Commission and
- 4 interested parties a comparison of modeled EMF levels to international guidelines and an up-
- 5 to-date summary and evaluation of the status of scientific research on EMF and health.

SUBJECT AREA: Noise & EMF, None

REFERENCE: EIS, Chapter 18, sections 18.3.2.1.4, 18.4.1.4 and 18.5.5

QUESTION:

Has Manitoba Hydro conducted or funded any research into the health impacts of electromagnetic fields?

RESPONSE:

- 1 Manitoba Hydro retained experts in the field of electric and magnetic fields to prepare a report on the
- 2 status of research relating to electric and magnetic fields and health research for the MMTP project (see
- 3 Socio-Economic Technical report filed with the EIS – Research on Extremely Low Frequency Electric and
- 4 Magnetic Fields from Alternating Current Transmission Lines – Summary Evaluation of the Evidence).

SUBJECT AREA: Noise & EMF, None

REFERENCE: EIS, Chapter 18, sections 18.3.2.1.4, 18.4.1.4 and 18.5.5

QUESTION:

Is Manitoba Hydro aware of research published since the May 15, 2015 date of the Exponent report that is inconsistent with the “current consensus” that “there are no known adverse health consequences of exposure to ELF EMF at the levels generally found in residential and occupational environments, including proximity to electric transmission and distribution facilities”?

RESPONSE:

1 The current consensus, as expressed in the comprehensive reviews and assessments published
2 by national health and scientific agencies has not changed since the publication of the review
3 sponsored by the European Commission, “Opinion on Potential Health Effects of Exposure to
4 Electromagnetic Fields (EMF)” SCENIHR, 2015, which was cited in the Exponent 2015 report.
5 Neither has the position of the World Health Organization changed. Its website states “[b]ased
6 on a recent in-depth review of the scientific literature, the WHO concluded that current evidence
7 does not confirm the existence of any health consequences from exposure to low level
8 electromagnetic fields.”

SUBJECT AREA: Noise & EMF, None

REFERENCE: EIS, Chapter 18, sections 18.3.2.1.4, 18.4.1.4 and 18.5.5

QUESTION:

Section 18.5.5.2 states that “Mitigation measures are not required for this Project”. Is Manitoba Hydro aware of mitigation measures implemented by other electric utilities and, if so, why has it not implemented them?

RESPONSE:

- 1 As the EMF levels associated with this project are below industry standards no mitigation
- 2 measures were deemed necessary.

SUBJECT AREA: Noise & EMF, None

REFERENCE: EIS, Chapter 18, sections 18.3.2.1.4, 18.4.1.4 and 18.5.5

QUESTION:

Does the modified EPRI-GTC methodology used for the Manitoba-Minnesota Transmission Project take public concerns regarding EMFs into account and, if not, why? If so, how?

RESPONSE:

- 1 Feedback shared by participants regarding EMF is represented within the “Community” criteria
- 2 in the preference determination model and during route evaluation workshops.
- 3 Manitoba Hydro heard concerns related to the belief that electric and magnetic fields could
- 4 cause effects to the health of adjacent residents and communities. As Manitoba Hydro will
- 5 build this line to meet international guidelines, the concerns regarding EMF are mitigated by
- 6 meeting these guidelines. Further, Manitoba Hydro seeks to further mitigate these concerns
- 7 through ongoing discussions and information sharing.

SUBJECT AREA: Human Health Risk, None

REFERENCE: EIS, Chapter 19, section 19.5.4.1.1

QUESTION:

Is Manitoba Hydro aware of any more recent studies regarding the relationship between the perceived risks associated with transmission lines and adverse health effects?

RESPONSE:

1 The perception by some persons that there are health risks associated with the electric or
2 magnetic fields from transmission lines is largely driven by media attention to human
3 epidemiology studies, particularly of childhood leukemia. While recent studies on this topic
4 have not been given much media attention, the findings have served to raise doubt in the
5 scientific community about previously reported statistical associations between increased long-
6 term exposure to magnetic fields and childhood leukemia. Three studies by investigators at
7 Oxford University report on the continuing investigation of their finding in 2005 of an
8 association between the birth address of children with leukemia and distance to overhead
9 transmission lines (Draper et al., 2005). Bunch et al. (2014) updated and extended the 2005
10 study conducted by Draper et al. (2005). The update extended the study period by 13 years,
11 included Scotland in addition to England and Wales, and included 132-kV lines in addition to
12 275-kV and 400-kV transmission lines. Bunch et al. is the largest study to date and it included
13 over 53,000 childhood cancer cases, diagnosed between 1962 and 2008, and over 66,000
14 healthy children as controls. Overall, the authors reported no association with residential
15 proximity to power lines with any of the voltage categories. In the overall analysis of the
16 updated data, the statistical association that was reported in the earlier study (Draper et al.,
17 2005) was no longer apparent. An analysis by calendar time indicated that the association was
18 evident only in the earlier decades (1960s and 1970s) but not present in the later decades
19 starting from the 1980s (Bunch et al., 2014). This weakens the argument that the associations
20 observed earlier are due to magnetic-field effects. They also reported no association between

21 the addresses of childhood leukemia cases and distance to underground high-voltage
22 transmission lines that led the authors to conclude “*The absence of risk detected in relation to*
23 *UGCs tends to add to the argument that any risks from overhead lines may not be caused by*
24 *magnetic fields.*” (Bunch et al., 2015, p. 695). The most recent investigation by Bunch et al
25 (2016) concluded:

26 *These results seem to suggest that there is a factor that can, in some circumstances, lead*
27 *to raised leukaemia rates in the vicinity of OHLs. This effect can be observed to distances*
28 *of approximately 600 m for the largest power lines and to a lesser distance for smaller*
29 *power lines. It has declined progressively from the 1960s and is now not present at all*
30 *...This definitely cannot be the effect of magnetic fields alone, and it seems unlikely that*
31 *magnetic fields are contributing significantly to the excesses at all (p. 438).*

32 *. . . our own preferred candidate [for the previously reported association] remains some*
33 *link between the presence of the power line and socioeconomic or demographic factors*
34 *in its vicinity (p. 454).*

35 In a fourth study, 5,788 childhood leukemia cases in California were matched to control
36 children and no reliable associations between the child’s birth address and distance to lower
37 voltage or higher voltage transmission lines were reported (Crespi et al., 2016).

SUBJECT AREA: Human Health, Routing

REFERENCE: EIS, Chapter 19, section 19.5.4.1.1

QUESTION:

The three studies cited in section 19.5.4.1.1 indicate that perceived risks have adverse health effects. Does the modified EPRI-GTC methodology used for the Manitoba-Minnesota Transmission Project take adverse health effects from perceived risks into account and, if not, why? If so, how?

RESPONSE:

- 1 Concerns relating to perceived risks associated with EMF and health are heard by Manitoba
- 2 Hydro on all proposed transmission projects that are in proximity to people.
- 3 Manitoba Hydro understands that these concerns and the perceived health risks associated
- 4 with them relate primarily to the proximity of transmission lines to residences and other
- 5 community buildings such as schools.
- 6 Consideration of proximity to people informed many steps of the EPRI-GTC methodology
- 7 including:
 - 8 1) Alternate Corridor Model – areas of least preference include buildings (homes), schools,
 - 9 picnic areas, schools/day care parcels, campground/picnic areas. These are considered
 - 10 in the alternate corridors and in subsequent route development
 - 11 2) Alternate Route Evaluation Model Criteria and Weightings
 - 12 • Criteria and weightings associated with residences (relocated residences,
 - 13 potential relocated residences, proximity to residences)
 - 14 • Criteria and weightings “Proximity to Buildings and Structures”
 - 15 • Criteria and weighting for “Public Use Areas”

- 16 3) Preference determination - feedback shared by participants is represented within the
17 “Community” criteria in the preference determination model and during route
18 evaluation workshops.
- 19 Please refer to response SSC-IR-232

SUBJECT AREA: Access, None

REFERENCE: EIS, Chapter 21, sections 21.1.3 and 21.1.4

QUESTION:

To what extent do Manitoba Hydro's patrols of transmission infrastructure require access to land outside the ROW?

RESPONSE:

- 1 Manitoba Hydro patrol crews require access to land outside of the ROW to gain access to the
- 2 ROW. Crews may also be required to access land outside of the ROW to deal with hazard trees.
- 3 Access points are established during the construction phase.

SUBJECT AREA: **Flooding, None**

REFERENCE: **EIS, Chapter 21, sections 21.2 and 21.4**

QUESTION:

The current FPR will result in towers being placed on land that floods frequently. What steps (if any) will Manitoba Hydro take to ensure that such flooding does not result in tower collapse?

RESPONSE:

- 1 Manitoba Hydro takes the following precautions when spotting structures in flood prone lands;
- 2 1. Foundations in flood prone areas will be design using buoyant soil conditions. This
- 3 assumes that the foundations will support their design loads in soils that are completely
- 4 saturated with water.
- 5 2. All steel structures located in flood prone areas will either be galvanized to prevent
- 6 corrosion or be provided with a corrosion allowance by adding additional steel thickness
- 7 to the structures.
- 8 3. Towers will be placed away from any significant flowing water. Minor ice flows or debris
- 9 (branches, small ice flows) can be resisted by structures.

SUBJECT AREA: **Communication, None**

REFERENCE: **EIS, Chapter 21, section 21.8**

QUESTION:

On November 17, 2015, the Eastman Mutual Aid Fire District sent a letter to Elise Dagdick (with a copy to Trevor Joyal, among others) requesting that “Manitoba Hydro run the hydro lines for the Manitoba Minnesota Transmission Project from north to south through the uninhabited of the Sandilands Forest (crown land) that would create a fire break benefitting communities such as Marchand, Sandilands, Woodridge and Vita when large grass and brush fires occur”. Please provide Manitoba Hydro’s response to this letter and, if no response was sent, please provide a response now.

RESPONSE:

- 1 As Manitoba Hydro was a carbon copy to the letter provided to Ms. Elise Dagdick, no response
- 2 was provided to the Eastman Mutual Aid Fire District.
- 3 In response to this concern being raised by the Fire District, local municipalities and members of
- 4 the public, mitigative segments were developed and were considered in the route selection
- 5 process. This is discussed in Sections 3.10.2, Section 5.6.3 and Table 5-30.

SUBJECT AREA: Environmental Protection, Follow-up and Monitoring, None

REFERENCE: EIS, Chapter 22, section 22.2.5.1 and Appendix 22A

QUESTION:

Please provide a copy of the current draft Construction Environmental Protection Plan.

RESPONSE:

- 1 The current draft Construction Environmental Protection Plan is found in Chapter 22.

SUBJECT AREA: **Biosecurity, None**

REFERENCE: **EIS, Chapter 22, section 22.2.5.1 and Appendix 22A**

QUESTION:

Landowners affected by the Bipole III Transmission Project have been critical of Manitoba Hydro for failing to follow basic biosecurity protocols. Has the Construction Environmental Protection Plan been amended to prevent these failings from occurring if the Manitoba-Minnesota Transmission Project reaches the construction phase?

RESPONSE:

- 1 The Agricultural Biosecurity Standard Operating Procedures for Transmission have been
- 2 updated since the draft Construction Environmental Protection Plan was submitted. The
- 3 revisions reflect feedback from stakeholders.

- 4 In addition, Manitoba Hydro has implemented a third-party biosecurity monitoring program
- 5 along the Bipole III Transmission Project route to address landowner concerns about
- 6 compliance. A similar program will be implemented along the Manitoba-Minnesota
- 7 Transmission Project route.

SUBJECT AREA: Biosecurity, None

REFERENCE: EIS, Chapter 22, section 22.2.5.1 and Appendix 22A

QUESTION:

Landowners affected by the Bipole III Transmission Project have been critical of Manitoba Hydro for failing to follow basic biosecurity protocols. What steps has Manitoba Hydro taken to address these failings, and what policies and procedures will be implemented to ensure Manitoba Hydro's Agricultural Biosecurity Policy is followed if the Manitoba-Minnesota Transmission Project reaches the construction phase?

RESPONSE:

- 1 Compliance with the biosecurity SOP will be written into construction contracts with prescribed
- 2 actions for non-compliance. In addition, Manitoba Hydro will again retain third-party
- 3 biosecurity monitors to document compliance with the SOP during construction. Monitors have
- 4 been deployed along the Bipole III Transmission Project route to address landowner concerns
- 5 about compliance with biosecurity protocols.
- 6 On the Bipole III Transmission Project, the monitors observe all traffic coming on or off
- 7 construction sites located on agricultural land with the purpose of documenting compliance.
- 8 This includes both pedestrians and vehicles/equipment. In those cases where non-compliances
- 9 are documented by the monitor, Manitoba Hydro directs the contractor to carry out corrective
- 10 actions. As an additional step, weekly monitoring reports are shared publicly through the
- 11 Manitoba Hydro website and monthly reports are submitted to the Manitoba Hydro-Electric
- 12 Board.
- 13 A monitoring program incorporating the same steps will be implemented on the Manitoba-
- 14 Minnesota Transmission Project.

SUBJECT AREA: Biosecurity, None

REFERENCE: EIS, Chapter 22, section 22.2.5.1 and Appendix 22A

QUESTION:

What training does Manitoba Hydro provide to its employees, contractors and agents to ensure that they comply with Manitoba Hydro's Agricultural Biosecurity Policy?

RESPONSE:

- 1 The SOP requires staff to take a computer-based training module. External contractors are
- 2 required to view three videos (one on cleaning footwear, a second on cleaning tools and a third
- 3 on cleaning vehicles/equipment) and to incorporate the Agricultural Biosecurity Policy and SOP
- 4 into their orientation prior to starting work. Manitoba Hydro staff will deliver additional training
- 5 to contractors as well.

SUBJECT AREA: Biosecurity, None

REFERENCE: EIS, Chapter 22, section 22.2.5.1 and Appendix 22A

QUESTION:

What remedies are available to Manitoba Hydro if any of its employees, contractors or agents fail to comply with Manitoba Hydro's Agricultural Biosecurity Policy? Has Manitoba Hydro availed itself of these remedies and, if not, why not?

RESPONSE:

- 1 For Manitoba Hydro employees, similar to other policies and procedures, non-compliances are
- 2 subject to discipline up to and including termination of employment.
- 3 For contractors or agents, this would be addressed through the contract by way of
- 4 environmental improvement or stop work orders as well as the contractors own disciplinary
- 5 procedures. The contractor would be required to provide Manitoba Hydro with corrective
- 6 actions for any non compliance events. Manitoba Hydro has issued Improvement Orders for
- 7 biosecurity non-conformance on the Bipole III Transmission Project.

SUBJECT AREA: **Biosecurity, None**

REFERENCE: **EIS, Chapter 22, section 22.2.5.1 and Appendix 22A**

QUESTION:

The out of date Agricultural Biosecurity Standard Operating Procedures found at Appendix F of the draft Construction Environment Protection Plan refers to “existing farm level biosecurity measures”. Please advise what steps are taken by Manitoba Hydro employees, contractors and agents to:

- a) Identify such measures before beginning work?
- b) If they are unable to identify such measures?
- c) Comply with such measures?
- d) Document compliance with such measures?

RESPONSE:

- 1 The existence of farm-level biosecurity measures would be identified through communication
- 2 with landowners prior to the start of construction. Provided that such measures do not pose a
- 3 safety risk, compliance would be expected and documented as required under the SOP. If no
- 4 farm-level biosecurity measures exist, the default action for employees, contractors and agents
- 5 is to follow the current applicable Manitoba Hydro SOP. The latest SOP applicable to the
- 6 current phase of the project can be found here on the project website:
- 7 [https://www.hydro.mb.ca/projects/mb_mn_transmission/pdfs/agricultural_biosecurity_sop_pr](https://www.hydro.mb.ca/projects/mb_mn_transmission/pdfs/agricultural_biosecurity_sop_property_dept_rev05.pdf)
- 8 [operty_dept_rev05.pdf](https://www.hydro.mb.ca/projects/mb_mn_transmission/pdfs/agricultural_biosecurity_sop_property_dept_rev05.pdf)
- 9 [https://www.hydro.mb.ca/projects/mb_mn_transmission/pdfs/agricultural_biosecurity_appen](https://www.hydro.mb.ca/projects/mb_mn_transmission/pdfs/agricultural_biosecurity_appendix1_property_dept_021417.pdf)
- 10 [dix1_property_dept_021417.pdf](https://www.hydro.mb.ca/projects/mb_mn_transmission/pdfs/agricultural_biosecurity_appendix1_property_dept_021417.pdf)

SUBJECT AREA: **Biosecurity, None**

REFERENCE: **EIS, Chapter 22, section 22.2.5.1 and Appendix 22A**

QUESTION:

The out of date Agricultural Biosecurity Standard Operating Procedures (SOP) found at Appendix F of the draft Construction Environment Protection Plan refers to “existing farm level biosecurity measures”. The Agricultural Biosecurity Checklist asks two questions about the affected landowner: first, whether there is a biosecurity procedure in place and, second, whether the landowner requested a copy of the SOP. Why does the Checklist fail to ask questions about compliance with any biosecurity procedure, and instead ask whether the landowner requested a copy of the SOP?

RESPONSE:

- 1 Section 5 of the most current version of the SOP (Rev 05) for the Manitoba Hydro Property
- 2 Department directs surveyors to document compliance with biosecurity procedures through
- 3 the use of field notes, tailboard meeting minutes or other means. There is no requirement to
- 4 document whether the landowner requested a copy of the SOP.

SUBJECT AREA: **Biosecurity, None**

REFERENCE: **EIS, Chapter 22, section 22.2.5.1 and Appendix 22A**

QUESTION:

The out of date Agricultural Biosecurity Standard Operating Procedures (SOP) found at Appendix F of the draft Construction Environment Protection Plan refers to “existing farm level biosecurity measures”. The Agricultural Biosecurity Checklist contains an Equipment Cleaning Record. What steps (if any) does Manitoba Hydro take to ensure that the information requested by Checklist and Record are accurately recorded by Manitoba Hydro employees, contractors and agents?

RESPONSE:

- 1 During construction, Manitoba Hydro will deploy third-party monitors to observe and
- 2 document compliance with the biosecurity SOP. If there are concerns about the cleanliness of a
- 3 particular vehicle or piece of equipment, the monitors have the authority to request
- 4 documentation demonstrating compliance, including equipment cleaning records. If the records
- 5 are not present or not satisfactory to the monitors, Manitoba Hydro staff can then direct that
- 6 the vehicle be cleaned on-site or taken elsewhere for a full cleaning before it is allowed onto
- 7 the construction site.

SUBJECT AREA: Tower Placement, None

REFERENCE: EIS, Chapter 22, section 22.4

QUESTION:

Please provide details of the work being conducted by the surveyors “accessing landowner property along the proposed transmission line” as referred to in the e-mail from Jenni Barnes sent at 12:05 pm on Friday, February 17, 2017. In particular, please:

- a) Explain how this work will “assist in the determination of tower placement” and why it is being undertaken prior to Manitoba Hydro obtaining a Class 3 license;
- b) Explain how this work will “provide Manitoba Hydro with the information necessary to begin discussing tower compensation values with landowners”;
- c) Explain how this work will “will assist discussions with landowners about the acquisition of easements for the right-of-way and with tower placement”;
- d) Identify which subsection of section 63(1)(d) of the Land Surveyors Act this work is being carried out under;
- e) Identify the land surveyors retained by Manitoba Hydro to conduct this work; and
- f) Provide copies of all written agreements entered into between the land surveyors and Manitoba Hydro.

RESPONSE:

- 1 a) The work being performed by surveyors prior to licensing is to determine right-of-way
- 2 boundaries. No tower placement work is being done at this time.
- 3 b) See above.
- 4 c) Determining the right-of-way boundaries often addresses the first two questions asked
- 5 by land owners; “where will the line cross my property” and “how much land is
- 6 required.” Surveys answer those questions.
- 7 d) All subsections (listed below) are typical legal land survey activities and apply to MMTP
- 8 surveys.

- 9 (d) enter onto and pass over any land to
- 10 (i) uncover, locate, relocate, set survey instruments over or upon, install or
- 11 replace a monument,
- 12 (ii) locate a boundary,
- 13 (iii) determine a geodetic position, or
- 14 (iv) obtain any necessary measurement
- 15 (e) Gil Landreville, MLS & Kerry Holberg, MLS – Keystone Surveys – 406 Main St. Steinbach
- 16 and Doug Stevens – Stevens Surveys – 1467 Main St. Winnipeg
- 17 (f) The agreements are confidential and contain commercially sensitive information. They
- 18 are not publically available.

SUBJECT AREA: **Routing, None**

REFERENCE: **Maps 5-18 and 5-22, Table 5-33, Tab 5-27**

QUESTION:

Routes SIL and the final preferred route look quite similar. Please provide a map that has both routes on it, with an indication of where the 3 Existing Crossings are for the FPR and the 11 crossings of the SIL route. Also, please advise how many Existing Transmission Line crossings there are for routes BZG and DKT.

RESPONSE:

- 1 The FPR runs from Dorsey station to the Minnesota border, while SIL starts Southwest of Riel
- 2 station to the Minnesota border. The length difference is approximately 52km.
- 3 The 3 Existing Crossings referenced in the question for the FPR is incorrect, Table 5-36
- 4 references 17 Existing Crossings for the FPR.
- 5 • Existing Crossing count for Route BZG are: 11
- 6 • Existing Crossing count for Route DKT are: 11
- 7 Please refer to SSC-IR-247_Attachment.

SUBJECT AREA: Routing, Index of Proximity

REFERENCE: Page 5A-25, Tab 5-33 (pg 5-116), Table 5-27 (pg 5-86)

QUESTION:

Please provide a detailed explanation of the Index of Proximity to Existing 500 KV Lines. Please include an explanation of how to interpret the values calculated, such as what is a good value, how are they ranked, what is the importance of this value?

Also, are the values for Index of Proximity in Tables 5-33 and 5-27 comparable? And what does M mean in Table 5-27?

RESPONSE:

- 1 Basically this means that “pixels” adjacent to existing 500-kV lines are given the highest “value”
- 2 with values decreasing with increasing distance from the existing 500-kV line(s). Higher values
- 3 indicate that the route spends more time near existing 500-kV lines than routes with lower
- 4 values. There are no good and bad values, they are just considered relative to one another.

- 5 The “importance” of this value relates to system reliability. The MMTP line is a 500-kV export
- 6 line. If it is in close proximity to the existing 500-kV export line(s) the risk of both lines being
- 7 damaged in an extreme weather event is higher, therefore the reliability of “the system” is
- 8 decreased.

- 9 The values for Index of Proximity in Tables 5-33 and 5-27 are not comparable.

- 10 The “M” refers to million (e.g. the Index of Proximity for Route SGZ is 15,837M =
- 11 15,837,000,000; able 5-27, page 5-86).

SUBJECT AREA: **Routing, None**

REFERENCE: **Table 5-22, pg 5-60**

QUESTION:

Please provide the number of home sites in the 100 m – 400 m range for the AQO, AQS, BZG, DKT, DWM, EEL, and FWZ routes. Also, please provide the acres of diagonal Crossings of Prime Agricultural Land for the 7 routes above.

RESPONSE:

- 1 The number of home sites and acres of diagonal crossings are provided in:
- 2 • Table 5-16, page 5-51 for Routes AQO, AQS, and BZG; and
- 3 • Table 5-12, page 5-43 for Routes DKT, DWM, EEL, and FWZ.

SUBJECT AREA: **Routing, None**

REFERENCE: **General**

QUESTION:

Following existing linear disturbances is an important component of routing. Please provide, starting at the Riel Sub-Station, the various lengths and types (i.e. other power lines, etc.) of existing linear disturbances followed by the following routes:

AQS, BZG, DKT, BMY, BOB, BWZ

RESPONSE:

- 1 While Manitoba Hydro agrees paralleling existing linear disturbances is a routing opportunity, it
- 2 has not calculated the information requested as part of the EIS.

SUBJECT AREA: Routing, None

REFERENCE: Appendix 5A-24, Table 5-27, pg 5-85, Table 5-33, pg5-115, Table 5-22, pg 5-60

QUESTION:

Please provide the actual acres for Crop land and Hay land used to generate the value for Current Agricultural Land Use. Please show the calculation as well for the routes for SGZ, AY, URU, URV, SIL, BMX, BMY, BOB, BWZ, and BXP. Are the acres of crop land shown in Table 5-22 comparable to any statistics seen in Tables 5-27, or 5-33? If not, please provide them. Also, are the costs shown in Tables 5-22, 5-27, and 5-33 directly comparable? If not, please provide numbers that can be compared.

RESPONSE:

- 1 Table 5-22 – presents statistics for Round 1 routes
- 2 Table 5-27 – presents statistics for Round 2 routes
- 3 Table 5-33 – presents statistics for Round 3 routes
- 4 The acres of cropland and hayland for Round 1 Routes are:

	Gardenton					Piney West				Piney East		
	SU	SY	TC	UC	UM	AQO	AQS	BZG	DKT	DWM	EEL	FWZ
Cropland	1,177	1028	843	1351	1348	1024	839	617	515	1202	878	526
Hayland	138	153	174	133	163	88	109	35	76	74	110	39

- 5 The acres of cropland and hayland are provided in Table 5-33 for routes BMX, BMY, BOB, BWZ,
- 6 and BXP.

7 The acres of cropland and hayland for routes SGZ, AY, URU, URV, SIL are:

	Route SGZ	Route AY	Route URQ	Route URV	Route SIL
Cropland	745	730	1030	1033	828
Hayland	71	46	124	128	133

8

9 Please see attached replacement for Table 5-27. The original table was an editing error that
10 occurred in the compilation of the EIS.

11 The formula used in calculation of Current Agricultural Land Use is acres of cropland x 0.73 +
12 acres of hayland x 0.27.

13 The information provided in Tables 5-22, 5-27 and 5-33 are not directly comparable. The values
14 shown for routes in these different rounds are not directly comparable because they were
15 measured from different start points along the route path, which related to which portions of
16 the route were common to all routes at the time.

17 It is also noted that the comparative process is specific to the routes being considered or
18 compared in each round and not between rounds. For example, one cannot compare round 3
19 against routes in round 2, and so forth. The comparative evaluation exercise for any given route
20 is conducted at a point in time within a subset, and decisions made are against the options that
21 are under consideration at that time with the information available at that time. As the project
22 progressed through each round of routing, additional information was obtained and further
23 analysis was conducted to inform decisions.

Table 5-27 Route Statistics for Routes SGZ, AY, URQ, URV and SIL

Feature	SGZ	AY	URQ	URV	SIL
Built					
Relocated Residences (Within ROW)	1	0	4	4	1
Potential Relocated Residences (100m from EOROW)	13	6	16	16	15
Proximity To Residences (100m - 400m from EOROW)	113	68	106	108	130
Proposed Residential Developments - Within ROW	26	4	37	39	31
Current Agricultural Land Use (Value) - ROW	562	544	784	788	639
Land Capability for Agriculture (Value) - ROW	1254	1107	1345	1348	1331
Proximity To Intensive Hog Operations (Acres) - ROW	1114	596	1555	1555	1754
Diagonal Crossings of Prime Agricultural Land (Acres) - ROW	176	140	182	182	140
Proximity to Buildings & Structures (100m) - EOROW	58	28	75	81	72
Public Use Areas (250m) - EOROW	15	7	18	19	17
Historic Resources (250m) - EOROW	10	10	9	9	8
Potential Commercial Forest (Acres) - ROW	788	863	530	520	521
Natural					
Natural Forests (Acres) - ROW	1,890	2,064	1,542	1,518	1,656
Intactness	893	1237	826	801	854
Stream / River Crossings - Centerline	20	14	30	30	27
Wetland Areas (Acres) - ROW	452	707	398	369	383
Conservation & Designated Lands (Acres) - ROW	220	475	235	235	243
Engineering					
Seasonal Construction & Maintenance Restrictions (Value)-ROW	662	812	597	588	560
Index of Proximity to Existing 500kV Lines	6,045M	21,365M	8,103M	8,080M	7,695M

Feature	SGZ	AY	URQ	URV	SIL
Existing Transmission Line Crossings	13	11	5	5	13
Accessibility	520,025,181	639,008,096	423,629,914	447,259,186	458,881,766
Total Project Costs ¹	\$136,047,160	\$145,623,192	\$138,565,391	\$136,248,607	\$142,512,023
<i>NOTES:¹ Costs used were high-level estimates of construction costs used for relative comparison</i>					

SUBJECT AREA: Routing, None

REFERENCE: Table 5-22, pg 5-60, Table 5-27, pg 5-87, Table 5-33, pg 5-116

QUESTION:

Do the “high level construction costs” contain estimates for ROW acquisition, include home site buy-outs, relocation costs and so forth? If not, please provide these cost estimates for all the routes shown in the 3 referenced tables.

RESPONSE:

- 1 The question references Table 5-22, pg 5-60, Table 5-27, pg 5-87, Table 5-33,
- 2 pg 5-116, which refer to the following information:
- 3 Table 5-22 - presents route statistics for Round 1 routes (AREM)
- 4 Table 5-27 –presents route statistics for Round 2 routes (AREM)
- 5 Table 5-33 – presents route statistics for Round 3 routes (AREM)
- 6 The high level construction cost estimates in the AREM tables include consideration of
- 7 estimated ROW acquisition costs, such as high level easement estimates and associated
- 8 structure payments.
- 9 The specific costs associated with potential home purchases and relocation are not contained
- 10 within the “high level construction cost” estimates calculated from the Alternate Route
- 11 Evaluation Model. These costs have been indirectly considered and incorporated through the
- 12 consideration of ‘Relocated Residences (Within ROW)’ as a built criterion, which is intended to
- 13 acknowledge and include the consideration of the potential effects associated with relocating a
- 14 residence along with the potential for acquisition and the associated costs.

SUBJECT AREA: Routing, Crown Land

REFERENCE: EIS, Chapter 5, section 5.8

QUESTION:

Section 5.8 states that approximately 30% of the new right of way is Crown land and approximately 70% is private land. In light of Manitoba Hydro's reliance on Crown land as a proxy for the amount of time required for the consultations required by section 35 of the Constitution, please advise:

- a) How long Manitoba Hydro anticipates the consultation process taking, and when it will conclude, if the Clean Environment Commission does not recommend any substantive changes to the FPR?
- b) How long Manitoba Hydro anticipates the consultation process taking, and when it will conclude, if the Clean Environment Commission recommends substantive changes to the FPR?
- c) How long Manitoba Hydro anticipates the consultation process taking if the new right of way consists of:
 - a. 35% Crown land?
 - b. 40% Crown land?
 - c. 45% Crown land?
 - d. 50% Crown land?
 - e. 55% Crown land?
 - f. 60% Crown land?
 - g. 65% Crown land?
 - h. 70% Crown land?

RESPONSE:

- 1 The Crown Consultation process is not delegated to Manitoba Hydro and hence Manitoba
- 2 Hydro is not in a position to answer the specific timelines associated with this process.

SUBJECT AREA: Routing, None

REFERENCE: EIS, Chapters 5 and 16, sections 5.3.3.1, 5.4.3.1 and 16.5.5

QUESTION:

Please explain how the modified EPRI-GTC methodology takes privately owned sand, gravel, mines and mineral rights into account? Specifically, what does “Mines and Quarries (active)” mean and does it include open pit mining of sand and gravel? Also, please explain how Manitoba Hydro compensates private owners for the adverse impacts on those rights?

RESPONSE:

- 1 Manitoba Hydro defines “Mines and Quarries (active)” as those which have active permits as
- 2 issued by Minerals Resources Branch of the Province of Manitoba at the time of route
- 3 evaluation. Privately held mineral rights are taken into account when identified through public
- 4 engagement activities and incorporated into the decision making process during Preference
- 5 Determination. Please refer to CEC-IR-071 for more details on areas of least preference and
- 6 transmission line route development.

- 7 Consistent with Manitoba Hydro’s compensation policy, Manitoba Hydro compensates
- 8 landowners for damages.

SUBJECT AREA: **Surveying, None**

REFERENCE: **EIS Summary, p. 39**

QUESTION:

Page 39 of the Summary of the EIS states: “Manitoba Hydro will construct the transmission line in a manner that aims to limit potential effects. Activities to construct a transmission line are outlined below.” One of those activities is surveying. The Summary goes on to state: “Manitoba Hydro surveyors will determine property boundary accuracy and terrain conditions to assist in the determination of tower placement. Geotechnical exploration may also take place to inform tower foundation design.” Please advise whether the surveying work referred to in the e-mail from Jenni Barnes sent at 12:05 pm on Friday, February 17, 2017 constitutes “construction” for the purposes of section 12(1) of the Environment Act.

RESPONSE:

- 1 The surveying work does not constitute “construction” for the purposes of *The Environment*
- 2 *Act*.

SUBJECT AREA: **Property, None**

REFERENCE: **EIS, Chapter 15, section 15.1.1.4**

QUESTION:

Has Manitoba Hydro acquired any property or easements along the FPR's new right of way, and if so, please advise:

- a) What properties have been acquired and when?
- b) What easements have been acquired and when?
- c) Why Manitoba Hydro has done so before a Class 3 license has been obtained?

RESPONSE:

- 1 Two properties were acquired between September and November of 2016 due to the proximity
- 2 of these properties to the proposed transmission line. Such acquisitions are not prohibited.
- 3 No easements have been acquired.

SUBJECT AREA: Public Engagement, None

REFERENCE: EIS, Chapter 3

QUESTION:

The R.M. of Reynolds sent letters to Trevor Joyal dated July 8, 2014 and March 9, 2015. Please provide a copy of any responses sent (if any) and advise how these letters affected the route selection process (if at all).

RESPONSE:

- 1 A response was provided to Ms. Trudy Turchyn (CAO) on July 16, 2014 and has been attached
- 2 as *Appendix SSC-IR-257_Attachment*.
- 3 The letter of March 9, 2015 reiterated the concerns raised in the July 16, 2014 letter. Manitoba
- 4 Hydro followed up by phone on May 8, 2015 to discuss Fire Guard 13 and whether the RM had
- 5 any information they would like to provide for consideration in route decision making.

2014 16-07

Ms. Trudy Turchyn
Chief Administrative Officer
RM of Reynolds
P.O. Box 46
Hadashville, MB R0E 0X0

Ms. Trudy Turchyn:

Manitoba-Minnesota Transmission Project

Thank you for your letter dated July 8, 2014 regarding the Manitoba-Minnesota Transmission Project.

Manitoba Hydro is currently carrying out a route selection process, which includes public engagement with landowners, local municipalities, First Nations and other stakeholders. Information gained from the environmental assessment and public engagement processes will be used in route selection.

Manitoba Hydro understands your support for the use of Crown land in the RM of Reynolds and to parallel the existing 500kV transmission line for the Manitoba-Minnesota Transmission Project. This information will be considered in the route selection process, however, for reliability reasons, paralleling an existing transmission line of similar purpose and size is not always possible or desirable. A single event such as a fire, tornado or ice storm could affect both transmission lines the closer they are routed to each other.

We will present a preferred route to the public at the end of this year and will request a meeting with council to discuss the Project at that time if the transmission line traverses the Municipality.

If you, council, or any of your constituents would like anything further, please contact me at toll free at 1-877-343-1631

Yours truly,

A handwritten signature in black ink, appearing to read 'A. Patel'.

Environmental Specialist
Licensing & Environmental Assessment Dept.- Transmission Planning & Design Division

SUBJECT AREA: **Public Engagement, None**

REFERENCE: **EIS, Chapter 3**

QUESTION:

The R.M. of Reynolds sent a letter dated September 14, 2016 to a member of the Manitoba Hydro Board (Cliff Graydon, MLA). Please provide a copy of any response sent (if any).

RESPONSE:

- 1 Manitoba Hydro management has no record of receiving a letter from the Rural Municipality of
- 2 Reynolds on September 14, 2016.